Law and Human Behavior
2016, Vol. 40, No. 6, 707–720

0147-7307/16/$12.00 http://dx.doi.org/10.1037/lhb0000212

Wrong or Merely Prohibited: Special Treatment of Strict Liability in Intuitive Moral Judgment

Carly Giffin and Tania Lombrozo
University of California, Berkeley

Most crimes in America require that the defendant have mens rea, Latin for "guilty mind." However, mens rea is not legally required for strict liability crimes, such as speeding, for which someone is guilty even if ignorant or deceived about her speed. In 3 experiments involving participants responding to descriptive vignettes, we investigated whether the division of strict liability crimes in the law reflects an aspect of laypeople's intuitive moral cognition. Experiment 1 ($N = 396$; 236 male, 159 female, 1 other; $M_{age} = 30$) found evidence that it does: ignorance and deception were less mitigating for strict liability crimes than for "mens rea" crimes. Experiments 2 ($N = 413$; 257 male, 154 female, 2 other; $M_{age} = 31$) and 3 ($N = 404$; 183 male, 221 female, $M_{age} = 35$) revealed that strict liability crimes are not treated as pure moral violations, but additionally as violations of *convention*. We found that for strict liability crimes, ratings of moral wrongness and punishment were influenced to a greater extent by the fact that a rule had been violated, even when harm was kept constant, mirroring the legal distinction of *malum prohibitum* (wrong as prohibited) versus *malum in se* (wrong in itself). Further, we found that rules prohibiting strict liability crimes were judged more arbitrary than corresponding rules for "mens rea" crimes, and that this judgment was related to the role of mental states. Jointly, the findings suggest a surprising correspondence between the law and laypeople's intuitive judgments.

Keywords: rule violation, knowledge, decision making, explanations, law

Supplemental materials: http://dx.doi.org/10.1037/lhb0000212.supp

"The first requirement of a sound body of law," wrote Justice Oliver Wendall Holmes, "is that it should correspond with the actual feelings and demands of the community, whether right or wrong" (Holmes, 1881, p. 41). Whether one believes that the law should conform to the feelings of the community, or vice versa, the idea of a correspondence between the legal system and laypeople's intuitive judgments continues to have popular and academic support (e.g., Alicke, 2008). To the extent this correspondence holds, the psychology of moral judgment has important implications for the law, and the law provides a rich source of information about human moral psychology (Hart & Honore, 1962; Mikhail, 2009).

One important correspondence between the law and intuitive judgments can be seen in the legal system's requirements regarding intent. Characteristically, a person cannot be found guilty of a crime in America unless that person had some intent to commit the crime or acted in a way that was negligent or reckless. Legally, this concept is referred to as "mens rea," Latin for "guilty mind," and has been a part of criminal law for centuries (Blackstone, 1769). Psychological research confirms that, in most cases, a person's intent is seen as a crucial variable in assigning moral responsibility and punishment (e.g., Knobe, 2005; Malle & Knobe, 1997). For instance, putting white powder in someone's coffee is judged considerably more harshly when the powder was known to be poison than when it was mistakenly thought to be sugar (Young & Saxe, 2011). Thus, law and psychology agree about the important role of mental states or mens rea, even if legal and intuitive concepts are not perfectly aligned (Malle & Nelson, 2003).

Notably, the law makes an exception concerning the role of mens rea for a specific class of crimes known as "strict liability" crimes. In criminal law, strict liability crimes are crimes for which the prosecution does not have to prove that the defendant had the requisite mens rea with respect to at least one element of a crime, and, in many cases, the defendant is not allowed to present evidence that she made a reasonable mistake or lacked relevant knowledge or intent (Levenson, 1992). For instance, a person who is speeding can be found guilty without the prosecution proving that she intended to speed or knew that she was speeding.

A variety of justifications for the imposition of strict liability have been offered. For example, some have argued that imposing strict liability increases the incentive for the actor to use care or to consider whether the activity should be engaged in at all (Manchester, 1977; Singer, 1989), or that strict liability appropriately apportions risk on the only person who could have benefited from the action (Keating, 2006). These positions are often tied to different justifications for punishment, such as the idea that punish-

This article was published Online First September 15, 2016.

Carly Giffin and Tania Lombrozo, Department of Psychology, University of California, Berkeley.

We thank Elliot Turiel and the Concepts and Cognition Lab at the University of California, Berkeley for helpful comments, as well as Bobbie Spellman and Elizabeth Gilbert for suggesting additional, relevant research. This work was partially supported a James S. McDonnell Foundation Scholar Award in Understanding Human Cognition to Tania Lombrozo.

Correspondence concerning this article should be addressed to Carly Giffin, Department of Psychology, University of California, Berkeley, 3210 Tolman Hall, #1650, Berkeley, CA 94720. E-mail: carly.giffin@berkeley.edu

ment should *deter* the behavior, rather than being imposed in *retribution* (Craswell & Calfee, 1986; Stahlkopf, Males, & Macallair, 2010).

Another explanation for strict liability comes from the Supreme Court case of *United States v. Morissette* (1952), in which Justice Jackson noted that, historically, many strict liability crimes were primarily *malum prohibitum* (wrong *because* they were prohibited) rather than *malum in se* (wrong or evil in themselves). A crime that is wrong merely by law, it was argued, does not require mens rea because the violation of the law, regardless of intent, is part of the harm to be protected against. We will revisit this idea in Experiments 2 and 3.

In the present work, we investigate whether the legal distinction between strict liability crimes and mens rea crimes reflects a psychological distinction as well. One possibility is that strict liability crimes represent a departure from a general correspondence between the law and intuitive judgments. Indeed, many scholars point out how *un*intuitive the imposition of strict liability can seem (e.g., *Mens Rea*, 2013; Stanton-Ife, 2007). But a second possibility is that the distinction between strict liability and mens rea crimes reflects a psychological distinction that has not been adequately recognized within the psychological literature. Based on our findings, this is what we will ultimately suggest.

In Experiment 1, our aim is to establish whether judgments concerning strict liability crimes are—on average—influenced less by the actor's knowledge and intent than are mens rea crimes, thus mirroring the law. Importantly, at no point are participants told or given any indication of which crimes are strict liability, nor do they come to the experiments with this knowledge (see online Supplemental Materials). Nonetheless, Experiment 1 reveals a surprising degree of correspondence between the law's special treatment of strict liability crimes and laypeople's intuitive moral judgments.

In Experiments 1–3, we additionally explore potential bases for differentiation between strict liability and mens rea crimes. Specifically, we investigate whether views about punishment differ for strict liability and mens rea crimes, including the roles of retribution (Experiment 1 and S1 in the Supplemental Materials; contact authors for full report), deterrence (Experiments 1 and S1), and incapacitation (Experiment S2; contact authors for full report). We also investigate whether strict liability and mens rea crimes tend to license different inferences about the actor's mental states (Experiments 1, 2, and S1), and whether relative to mens rea crimes, strict liability crimes are to a greater extent *malum prohibitum* (Experiments 2 and 3). We find support for only one of these proposals: that relative to mens rea crimes, strict liability crimes are treated as more *malum prohibitum*, and that this is because they tend to have more arbitrary elements.

Experiment 1

Experiment 1 investigated whether laypeople judge strict liability and mens rea crimes differently. Research in moral psychology suggests that mens rea is critical to moral judgment (e.g., Inbar, Pizarro, & Cushman, 2012; Rai & Fiske, 2011), but there is also evidence that a person's knowledge and intentions are not equally influential in evaluating all types of transgressions (Barrett et al., 2016; Graham et al., 2011; Young & Saxe, 2011). Specifically, knowledge and intentions may be more important for "harm" violations than for "purity" violations, and many—but not all—offenses that have been historically treated as strict liability arguably involve some element of purity (e.g., statutory rape, incest, bigamy, food adulteration). We therefore consider both *public welfare* strict liability offenses that involve potential harm (speeding, selling drugs to minors) as well as *moral-purity* strict liability offenses that violate purity (statutory rape, incest). We compare judgments concerning these crimes against those for closely matched mens rea crimes that we likewise classify as public welfare (reckless driving, drug distribution) or as moral-purity (seducing a minor, first cousin marriage).

To investigate the role of mens rea in judging perpetrators of these crimes, we presented participants with vignettes involving a transgression and varied whether the actor knew the fact that rendered an action illegal—for example, that he was driving over the speed limit, or that a sexual partner was underage. When the actor was ignorant, we additionally varied whether the ignorance resulted from inadvertent bad information or from intentional deception; based on prior work, we expected that deception would be more mitigating (Murray & Lombrozo, 2016; Phillips & Shaw, 2015). Finally, we also included a condition in which mental states were unspecified.

One primary hypothesis (Hypothesis 1) was that judgments concerning moral censure and punishment would depend on the actor's mental state, with the harshest judgments when the actor transgressed knowingly. We also anticipated that being deceived would be more mitigating than mere ignorance (Hypothesis 1a) and that these effects would be found for all crimes (Hypothesis 1b).

Our secondary hypotheses concerned possible reasons why mens rea and strict liability crimes could receive different treatment. We tested the following predictions: (Hypothesis 2) that the mental state manipulation would influence judgments concerning public welfare crimes more strongly than those concerning moral-purity crimes, (Hypothesis 3) that deterrence would be regarded as a more central reason for punishing strict liability crimes than for punishing mens rea crimes, and (Hypothesis 4) that when an agent's mental states were not specified, participants would more often infer that the transgressor knew the key fact for strict liability crimes than for mens rea crimes.

Method

Participants. Three hundred ninety-six adults (236 male, 159 female, one other/prefer not to specify, M_{age} = 30, SD = 10) participated in the study through Amazon Mechanical Turk. An additional 140 participants were tested, but were excluded for failing catch questions (92) and due to a data collection error (52).

In all studies, participation was restricted to workers with Internet protocol addresses in the United States and with an approval rating of 95% or higher on previous Mechanical Turk tasks. Only U.S. citizens above the age of 18 were allowed to participate, to better mimic the composition of an actual jury. Participants were given $0.30 for their participation.

Materials and procedure. Participants were randomly assigned to one of 32 distinct vignettes, about which they answered several questions (detailed below). Eight different crimes were chosen, four of which are strict liability crimes in a majority of states (statutory rape, incest, speeding, and selling drugs to minors)

and four of which are mens rea crimes (seducing a minor, first cousin marriage, reckless driving, and drug distribution; see Table 1). We chose mens rea crimes that were as similar as possible to the corresponding strict liability crimes to make it more likely that differences, if found, would not reflect idiosyncratic properties of the selected examples. Four of the crimes involved moral purity (statutory rape, seducing a minor, incest, first cousin marriage) and four involved public welfare (speeding, reckless driving, selling drugs to minors, drug distribution).

Each of the eight crimes was presented to a participant in one of four versions, which varied the principal actor's mental states. In the *knowing* condition, participants were told that the actor knew the relevant fact that made a crime illegal (e.g., the age of an underage sexual partner). In the *unspecified* condition, participants were not given any information about the actor's knowledge. In the *unknowing* condition, participants were told that the actor received false but well-intentioned information about the relevant fact (e.g., in the statutory rape vignette, another person honestly believed the underage victim to be an 18-year-old college student and said so). In the *deceived* condition, the actor was deliberately deceived by another person (e.g., the victim lied about her age).

Examples of the different mental state conditions for speeding are excerpted below (see online supplement for all materials):

> *Knowing:* . . . Alan knew the speed limit was 55 miles per hour and that he was driving over the speed limit, but Alan didn't slow down as the speedometer crept up to 70 miles per hour.
>
> *Unspecified:* Alan was driving along a two lane highway . . . A police officer was parked alongside the highway with a speed gun pointed towards oncoming traffic . . . the officer . . . noticed that Alan was going 70 miles per hour.
>
> *Unknowing:* . . . Alan knew the speed limit was 55 miles per hour and was careful to check the speedometer periodically to make sure the car wasn't going faster than the speed limit . . . Alan had never had any reason to suspect the speedometer was broken but later found out that it was.
>
> *Deceived:* . . . Alan knew the speed limit was 55 miles per hour and was careful to check the speedometer periodically to make sure the car wasn't going faster than the speed limit . . . Alan was surprised to hear [he had been speeding] . . . Alan had never had any reason to suspect the speedometer was broken but later found out that his mechanic had intentionally tampered with it after Alan disputed a bill.

After reading the assigned vignette, it was removed and participants answered questions. First, participants rated our variables of interest, moral censure and punishment, in a randomized order:

> *Moral censure:* How morally wrong were [Actor's] actions?

Participants indicated their answer on a scale from 1 (*not at all morally wrong*) to 7 (*very morally wrong*).

> *Punishment:* How much punishment does [Actor] deserve?

Participants indicated their answer on a scale from 1 (*none at all*) to 7 (*very much*). We did not ask participants to evaluate guilt, as in each vignette it was stipulated.

Second, to ensure that strict liability and mens rea vignettes were well matched along other dimensions that could impact judgments, participants rated the following questions on a separate screen, in randomized order, from 1 (*not at all/none*) to 7 (*very/a great deal*):

> *Disgust:* How disgusting did you find [Actor's] actions?
>
> *Anger:* How angry did [Actor's] actions make you?
>
> *Harm:* How much harm did [Actor's] actions cause?

Third, to test whether differences in the evaluation of strict liability and mens rea crimes stem from commitments about why punishment is appropriate for each crime type (Hypothesis 3), participants rated the statements below in a randomized order, from 1 (*completely agree*) to 7 (*completely disagree*):

> *Deterrence:* Punishing people who [commit this crime] is critically important to preventing acts of [this crime] in society in general.
>
> *Retribution:* Even if it won't prevent future [instances of this crime], a person who [commits this crime] deserves to be punished for this action.

Fourth, to ensure that participants were attending to the task and reading materials carefully, participants answered two "catch questions," easy true/false questions that assessed having read the vignette. Participants who answered either question incorrectly were excluded from further analyses. This screen included a third question about the actor's knowledge (e.g., whether Alan knew he was driving over the speed limit), which served as a mere comprehension question for participants in the knowing, unknowing,

Table 1
Crimes Used in Experiment 1

Moral classification	Strict liability crimes	Mens rea crimes
Moral	Statutory rape (age of sexual partner)	Seducing a minor (age of person receiving material)
	Incest (relatedness of sexual partner)	First cousin marriage (relatedness of spouse)
Public welfare	Speeding (vehicle speed)	Reckless driving (speed and attendant circumstances)
	Drugs to minors (age of customer)	Drug distribution (nature of substance)

Note. For each crime, participants were assigned to one of four mental state levels: knowing, unspecified, unknowing, or deceived. Each crime is followed in parentheses by the relevant knowledge that was varied across the mental state manipulation.

and deceived conditions, where knowledge or ignorance of the vital fact—speed of the car, and so forth—was stipulated. It also allowed us to test for differences in baseline inferences across crime types for the unspecified condition (Hypothesis 4).

Finally, participants justified their reaction to the story, received another attention check based on Oppenheimer, Meyvis, and Davydenko (2009), and answered demographic questions. (Neither the justifications nor the demographic information was analyzed for this article.)

Results

Disgust, anger, and harm. To ensure that our strict liability and mens rea vignettes did not differ systematically in judged harm or elicited anger and disgust, we performed a series of one-way analyses of variance (ANOVAs) with legal category (strict liability, mens rea) as a between-subjects variable and with each rating as a dependent variable. No significant differences were found for harm, $F(1, 394) = 0.20$, $p < .66$, $d = .04$, 95% confidence interval (CI) [–.296, .469], anger, $F(1, 394) = 1.74$, $p < .19$, $d = .13$, 95% CI [–.126, .635], or disgust, $F(1, 394) = 1.35$ $p < .25$, $d = .12$, 95% CI [–.169, .658], suggesting that the effects of legal category we report below are unlikely to result from these potential confounds.

Moral censure and punishment. Do mental states play different roles in intuitive judgments concerning strict liability and mens rea crimes? And if so, does the relationship hold across moral-purity and public welfare crimes? To address these questions we performed a series of 2 (Legal Category: strict liability, mens rea) × 2 (Moral Classification: moral, public welfare) × 4 (Mental State: knowing, unspecified, unknowing, deceived) ANOVAs for moral censure and punishment.

These analyses revealed a significant main effect of mental state for both moral censure, $F(3, 380) = 29.34$, $p < .000$, $\eta_p^2 = .188$, and punishment, $F(3, 380) = 20.52$, $p < .000$, $\eta_p^2 = .139$ (see Figure 1). Independent samples t tests revealed that ratings for each of these dependent variables were significantly higher in the knowing condition than in any of the other three conditions (ps < .003, ds > .43), consistent with most previous work on the effects of intent on moral judgments, and supporting Hypothesis 1. We also found that ratings for the unspecified condition were significantly higher than for the unknowing and deceived conditions (ps < .09, ds > .38), but that ratings for the unknowing and deceived conditions were not significantly different from each other for either dependent variable (ps > .30, ds < .15), challenging Hypothesis 1a. This suggests that misinformation had a mitigating effect, but that the source of the misinformation was not relevant.

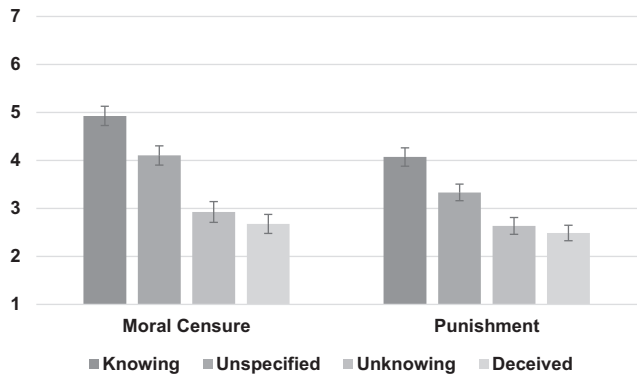

Figure 1. Effect of mental state on moral censure and punishment. Higher values correspond to greater amounts of moral censure and punishment. Error bars correspond to 1 *SEM* in each direction.

We also found significant effects of legal category for both moral censure and punishment, with higher ratings for strict liability crimes ($M_c = 3.87$, $SD_c = 2.20$; $M_p = 3.38$, $SD_p = 1.81$) than for mens rea crimes ($M_c = 3.44$, $SD_c = 2.16$; $M_p = 2.89$, $SD_p = 1.84$; see Table 2). We hesitate to draw strong conclusions from these differences, as they could simply reflect our choice of stimulus materials rather than the classes of crimes. Moreover, our primary predictions concern an *interaction* between mental state and legal category, and this main effect was indeed qualified by an interaction for punishment, $F(3, 380) = 3.40$, $p < .018$, $\eta_p^2 = .026$: ignorance of the vital fact was more mitigating for mens rea crimes than for strict liability crimes.

To confirm this interpretation statistically, we repeated our analysis with only the knowing and unknowing conditions (see Figure 2), which revealed that for mens rea crimes, punishment ratings were significantly higher for the knowing condition than for the unknowing condition, $t(80) = 6.24$, $p < .000$, $d = 1.40$, 95% CI [1.48, 2.86] (corrected for violating Levene's test), but that for strict liability crimes, there was no significant difference between the two conditions, $t(98) = 1.89$, $p < .061$, $d = .38$, 95% CI [–.033, 1.39]. The corresponding interaction for moral censure was not significant, $F(3, 380) = 2.33$, $p < .074$, $\eta_p^2 = .018$, but trended in the same direction. These findings challenge Hypothesis 1b: Contrary to our initial expectations, and contrary to common assumptions in legal scholarship, our data support an intuitive basis for the special treatment of strict liability crimes. Moreover, this pattern was robust across crime pairs: for each of our four pairs, and for both moral censure and punishment, the difference between the knowing and unknowing conditions was greater for the mens rea crime than for the strict liability crime, with a single exception: for moral censure, the difference between ratings in the knowing and unknowing conditions was the same for statutory rape as for seducing a minor.

Finally, for moral censure, there was a two-way interaction between mental state and moral classification, $F(3, 380) = 3.12$, $p < .026$, $\eta_p^2 = .024$: for moral-purity crimes, moral censure did not differ across the knowing and unspecified conditions, $t(94) = .548$, $p < .585$, $d = .11$, 95% CI [–.546, .963], nor across the unknowing and deceived conditions, $t(98) = .548$, $p < .548$, $d = .11$, 95% CI [–.853, .455], but was significantly higher for both of the former conditions than for either of the latter conditions. In contrast, for public welfare crimes, moral censure was significantly higher for the knowing condition than all others, $p < .001$, $d > .75$, which did not differ from each other, ps ranged from .09 to .53, ds ranged from .13 to .35.

Bases for punishment: Deterrence and retribution. To test whether punishment was justified differently across legal categories, deterrence and retribution ratings were each subjected to a 2 (Legal Category: strict liability, mens rea) × 4 (Mental State: knowing, unspecified, unknowing, deceived) ANOVA. For deterrence, this analysis revealed a main effect of legal category, $F(1, 388) = 9.50$, $p = .002$, $\eta_p^2 = .24$, with higher ratings for mens rea

Table 2
Means as a Function of Legal category

Experiment	Dependent Measure	Legal Category	Knowing	Unspecified	Deceived	Unknowing
Exp. 1	Moral censure	Strict liability	4.78 (1.96)	4.50 (1.78)	2.82 (2.12)	3.44 (2.34)
		Mens rea	5.14 (1.93)	3.71 (2.06)	2.51 (1.67)	2.43 (1.80)
	Punishment	Strict liability	3.96 (1.64)	3.60 (1.55)	2.71 (1.87)	3.28 (1.94)
		Mens rea	4.27 (2.07)	3.06 (1.82)	2.16 (1.18)	2.10 (1.30)
Exp. S1	Moral censure	Strict liability	4.04 (2.00)	4.04 (1.83)	3.50 (2.08)	3.71 (2.18)
		Mens rea	6.02 (1.30)	4.50 (1.81)	3.04 (2.20)	3.54 (2.12)
	Punishment	Strict liability	4.29 (1.66)	4.21 (1.76)	3.44 (1.90)	4.15 (1.74)
		Mens rea	4.92 (1.57)	3.69 (1.53)	2.58 (1.67)	3.21 (1.88)

Note. *SD* in parenthesis.

crimes ($M = 4.82$, $SD = 1.88$) than for strict liability crimes ($M = 4.22$, $SD = 1.95$), contrary to Hypothesis 3 and what one might expect on the basis of legal scholarship, which sometimes justifies the imposition of strict liability on utilitarian grounds related to deterrence. This surprising result is unlikely to be a simple artifact of our stimulus materials: recall that moral censure and punishment were both *lower* for mens rea crimes than for strict liability crimes, and we did not find main effects for anger, disgust, or harm across legal category. No significant results were found for retribution ($ps > .215$; $\eta_p^2 s < .008$).

Inferring knowledge and intent. Responses to the true/false knowledge question were checked to confirm that participants correctly responded "true" for the knowing condition and "false" for the unknowing and deceived conditions. Accuracy was high, ranging from 93% for the deceived condition to 95% for the knowing condition and 99% for the unknowing condition.

For the unspecified condition, we were interested in whether assumptions about knowledge would differ for mens rea and strict liability crimes. We therefore conducted a chi-squared test comparing rates of inferred knowledge. This analysis revealed no difference, challenging prediction Hypothesis 4: in both cases, participants inferred knowledge 54% of the time.

Discussion

In Experiment 1, we sought to establish whether moral and punitive judgments concerning strict liability crimes reflect their treatment by the legal system, according to which knowledge is irrelevant. While we found that mental states did have a significant impact on judgments (supporting Hypothesis 1), with ignorance having a mitigating effect (regardless of its source, challenging Hypothesis 1a), the effect of mental states was not uniform across legal category. Contrary to our prediction (Hypothesis 1b), participants did differentiate between strict liability and mens rea crimes: ignorance was significantly less mitigating for strict liability crimes than for closely matched "mens rea" crimes.

We also tested, but failed to find support for, three hypotheses about why mental states might have different effects across legal categories. First, we considered the possibility (Hypothesis 2) that mental states would be less important for intuitive judgments of moral-purity crimes relative to public welfare crimes, consistent with both psychological data (Barrett et al., 2016; Russell & Giner-Sorolla, 2011) and the historical association between strict liability and purity (*United States v. Morissette*, 1952). While we did find that mental state interacted with moral classification—with the unspecified conditions patterning differently—we did not find the anticipated difference between the knowing and unknowing conditions, nor an interaction with legal category. It thus appears that violating purity is neither necessary nor sufficient to explain the attenuated role for mental states observed in strict liability cases.

Second, we tested the idea (Hypothesis 3) that for strict liability crimes, punishment may be warranted for reasons of deterrence, if not retribution. However, we found no global differences in retribution ratings, and *lower* deterrence ratings for strict liability crimes than for mens rea crimes. This is surprising given that

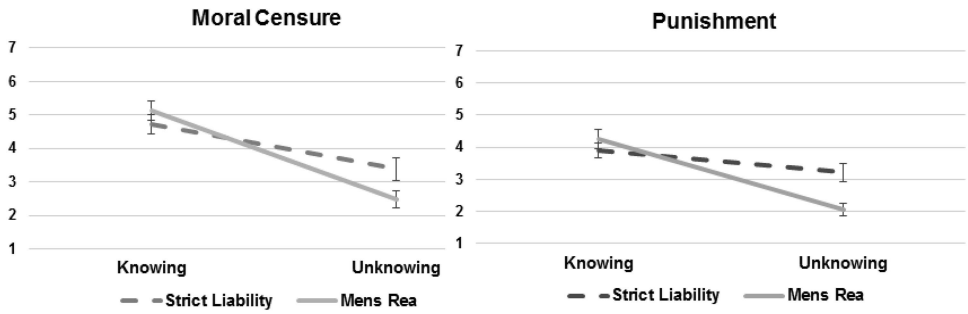

Figure 2. Interaction between mental state and legal category for moral censure (not significant) and punishment (significant). Error bars correspond to 1 *SEM* in each direction.

punishment ratings were *higher* for strict liability crimes than for mens rea crimes, even though crime types did not differ in perceived harm. This is not to say that deterrence might not still furnish some justification for the imposition of strict liability, but our data do suggest that for the crimes tested, laypeople do not associate punishment with deterrence more strongly for strict liability crimes than for mens rea crimes.

Finally, we also failed to find support for the idea (Hypothesis 4) that inferences about mental states might differ across legal category, with mental states being more likely to be inferred (or perhaps more difficult to ascertain) for strict liability: In our unspecified condition, rates for inferred knowledge did not differ across strict liability and mens rea crimes.

In sum, the results of Experiment 1 suggest that laypeople's intuitive moral judgments mirror the law in reserving strict liability crimes for special treatment, but do not shed light on why this might be. Before moving on to Experiments 2 and 3, in which we find support for one possibility, it's worth addressing some open questions from Experiment 1, which we investigated in supplementary experiments.

First, one concern is that the results from Experiment 1 could be driven by the particular crimes that we happened to test. Moreover, by selecting crimes that were so closely matched *across* legal categories (e.g., speeding paired with reckless driving), we could have inadvertently selected crimes that are not representative of strict liability or mens rea crimes in general. To address this possibility, we ran an additional experiment which we refer to as Experiment S1 (contact authors for a full report). In Experiment S1, we selected strict liability and mens rea crimes based on how frequently they are charged, as represented by Federal Bureau of Investigation (FBI) crime statistics (FBI, 2012) and consultation with attorneys. The strict liability crimes selected were statutory rape, selling drugs within 1,500 ft of a school, speeding, and driving under the influence. The mens rea crimes selected were sexual battery, burglary, theft, and (nonsexual) battery. Other than crime selection, the methods and procedure mirrored those of Experiment 1. Our key findings from Experiment 1 were replicated with these new crimes: ignorance significantly mitigated moral censure and punishment ratings for mens rea crimes, but had no significant effect for strict liability crimes. Ratings for deterrence were again higher for mens rea crimes.

A second concern is that the judgments concerning punishment in Experiment 1 may have been insufficiently fine-grained. In supplementary Experiment S2 (contact authors for full report), participants separately specified the appropriate levels for *fines* and for *jail time*. We also included a third possible basis for punishment: incapacitation. Experiment S2 supported the interpretation of Experiment 1: we found the same pattern of responses concerning the role of mental states across legal categories, and we found that incapacitation was rated a significantly better basis for punishing mens rea crimes than strict liability crimes.

In conjunction with the findings from Experiment 1, these supplementary experiments provide support for the idea that people mirror the law in their treatment of mens rea versus strict liability crimes, but the findings do not (yet) reveal the basis for this special treatment.

Experiment 2

Experiment 1 found support for the idea that laypeople's intuitive judgments mirror the law in the following way: for mens rea crimes, judgments are sensitive to differences in mental states (knowing vs. unknowing), while for strict liability crimes, judgments are less sensitive (or even indifferent). The data also revealed high levels of punishment assigned to strict liability offenders, despite the fact that strict liability offenses were judged no worse than mens rea crimes (in terms of overall harm or elicited anger and disgust), and despite the fact that three common justifications for punishment—retribution, deterrence, and incapacitation (tested in S2)—were not endorsed more strongly for strict liability crimes than for mens rea crimes.

Experiment 2 considers an explanation for these results with roots in the Supreme Court case of *United States v. Morissette* (1952). In *Morissette*, Justice Jackson noted that historically many strict liability crimes were regulatory in nature, with the aim of improving public safety and welfare. He further suggested that strict liability crimes were therefore primarily *malum prohibitum* rather than *malum in se*, meaning that transgressions were considered wrong *because they were prohibited* (i.e., violated a regulation), not wrong or evil *in themselves*. For instance, while it isn't intrinsically wrong to drive a car at 50 mph, it is wrong to do so in a 25-mph zone. To quote Justice Jackson's Supreme Court opinion (*United States v. Morissette*, 1952),

> While such offenses do not threaten the security of the state in the manner of treason, they may be regarded as offenses against its authority, for their occurrence impairs the efficiency of controls deemed essential to the social order as presently constituted. In this respect, whatever the intent of the violator, the injury is the same . . . Hence, legislation applicable to such offenses . . . does not specify intent as a necessary element. (pp. 255–256)

The legal distinction between *malum prohibitim* and *malum in se* mirrors a cognitive distinction explored in developmental research. Studies have found that children as young as six are able to distinguish between actions that are "rule contingent," or wrong because an authority figure or rule says they are wrong, and actions that are *intrinsically* wrong, and would therefore be wrong even if no rule or authority prohibited them (Nucci & Turiel, 2009; Turiel, 2008). For example, if there is a rule against wearing pajamas to school, then doing so might be wrong and merit detention, no matter that the action would be perfectly acceptable on pajama day. Similarly, it could be that participants judged our strict liability crimes wrong and deserving of punishment in large part because they violated rules, even though they did not regard the actions themselves as more harmful, angering, or disgusting than the mens rea crimes, and even though retribution, deterrence, and incapacitation were rated more appropriate reasons for punishing commissions of mens rea crimes.

To test these ideas, participants evaluated vignettes written in the style of our unspecified condition from Experiment 1. Then, subsequent to reading and evaluating the original vignettes, participants were told that the relevant statute had been changed. For example, participants in the statutory rape vignette were told, after initial judgments, that the age of consent had been lowered to 15, meaning that the action described in the vignette was no longer a crime. Participants then provided a second set of ratings for moral

censure and punishment, allowing us to assess how much the change in statute affected these judgments, and therefore how "rule contingent" (or *malum prohibitum*) they regarded the original wrong.

Finally, we also added a question about whether the offender had a responsibility to acquire the knowledge relevant to the crime (e.g., the speed at which he was driving). If people believe that strict liability crimes have higher demands in this regard, then ignorance may be treated as a form of negligence, deserving of punishment despite an absence of bad intent.

In sum, Experiment 2 was designed to test two hypotheses. The central hypothesis (Hypothesis 5) was that punishment and moral censure ratings would decrease after participants learned of the statute change (such that the action was no longer prohibited), and that this decrease would be greater for strict liability crimes than for mens rea crimes. A secondary hypothesis (Hypothesis 6) was that participants would believe offenders had a greater responsibility to avoid ignorance for strict liability crimes than for mens rea crimes.

Method

Participants. Four hundred thirteen adults (257 male, 154 female, two other/prefer not to specify, $M_{age} = 31$, $SD = 10$) participated in the study through Amazon Mechanical Turk. An additional 77 participants were tested, but were excluded for failing catch questions. Only U.S. participants who indicated they were older than 18 were allowed to participate, to approximate a real jury pool. Participants were given $0.50 for their participation.

Materials and procedures. In an effort to view strict liability and mens rea crimes broadly, we included all the crimes used in Experiments 1 and S1 and added three new strict liability and three new mens rea crimes. The new strict liability crimes were illegal dumping, possession of an unregistered firearm, and hunting a migratory bird. The new mens rea crimes were disturbing the peace, public drunkenness, and minor in possession of alcohol (see Table 3). As in Experiment S1, these new crimes were chosen as the next most frequently charged according to FBI statistics and consultation with attorneys. The resulting design had 20 conditions, one for each crime.

After reading a vignette describing a crime, participants were asked the moral censure, disgust, harm, and anger questions used in Experiment 1. Participants were also asked two punishment questions—about fines and jail time:

> *Jail time:* How much jail time should [Actor] receive?

Participants indicated their answers on a continuous slider that ranged from 0 to twice the maximum penalty that could actually be assigned for the most harshly punished crime, assuming a first offense. The maximum value for jail time was 36 years.

> *Fines:* How much should [Actor] be fined?

Participants indicated their answers on a continuous slider that ranged from 0 to twice the maximum penalty that could actually be assigned for the most harshly punished crime, assuming a first offense. The maximum value for fines was $100,000. We did not ask the deterrence, retribution, or incapacitation questions in this experiment.

We added two new dependent variables about the actor's knowledge and responsibility to acquire that knowledge. Examples from the speeding story are below:

> *Inference:* Did Alan know that he was driving over the speed limit?

This was rated from 1 (*no, definitely not*) to 7 (*yes, definitely*).

> *Responsibility:* Did Alan have a responsibility to check whether he was going over the speed limit?

Rated from 1 (*no, definitely not*) to 7 (*yes, definitely*).

After participants answered these questions, we presented them with a statute change that stated that the law had been changed such that the actor's action was no longer illegal. In each case, we were clear that the statutory change was due to a technicality, not due to any change in the harm caused by the action. The participants then provided moral censure and punishment ratings in light of the new statutory information. An example from the migratory bird story is below:

> After Alan's arrest, the officer was informed that the statute had been changed. Due to a technicality (not to a change in the bird species' status), the bird Alan shot was no longer on the list of protected birds. Alan's actions were therefore no longer technically a crime. Please answer the following questions based on the change in statute.

One concern with including this statute change as a within-subjects factor is that participants' initial ratings (before the statute change) could anchor or otherwise influence their second ratings (after the statute change). We were not overly worried by this possibility because our key hypothesis (Hypothesis 6) concerned a

Table 3
Crimes Used in Experiments 2 and 3 in Addition to Those Used in Experiment 1

Strict liability	Mens rea
Illegal dumping (distance from waterway)	Disturbing the peace (unlawful to fight in public)
Unregistered firearm (registration status of firearm)	Public drunkenness (intoxication level prevented taking care)
Hunting migratory bird (bird's protected status)	Minor in possession (beverage contained alcohol)
Selling drugs within 1,500 ft (distance from nearest school)	Sexual battery (consent for the touching)
Driving under the influence (level of intoxication)	Burglary (owner's intent to keep the vase)
	Theft (whether saw had been discarded)
	Battery (whether friend was genuinely in danger)

Note. Each crime is followed in parentheses by the relevant knowledge that was varied across the mental state manipulation in Experiment 3.

differential drop in ratings across strict liability versus mens rea crimes, not the values of the ratings themselves. But if anything, this methodological choice works against our hypotheses.

Results

Moral censure and punishment: Ratings under statutory change. To test Hypothesis 5, that the wrong associated with strict liability crimes is more contingent on the presence of a rule than that of mens rea crimes, we created difference scores for moral censure, fines, and jail time by subtracting each participant's rating after the statute change from that participant's corresponding initial rating. An independent samples *t* test on moral censure difference scores revealed a significant difference in the predicted direction, $t(411) = 3.16$, $p < .002$, $d = .31$, 95% CI [.155, .665]: ratings dropped an average of .914 points ($SD = 1.41$) on a 7-point scale for strict liability crimes, but only .504 points ($SD = 1.23$) for mens rea crimes.

To analyze punishment ratings, we transformed fines and jail time differences into *z* scores and computed a repeated measures ANOVA with punishment type as a within-subjects factor and legal category as a between subjects factor. While the main effect of legal category was not significant, $F(1, 398) = 2.26$, $p = .103$, $\eta_p^2 = .007$, there was a nearly significant interaction between punishment type and legal category, $F(1, 398) = 3.70$, $p = .055$, $\eta_p^2 = .009$. For fines only, the predicted effect was significant, $t(303) = 2.36$, $p < .019$, $d = .28$, 95% CI [449.9, 496.9] (corrected for violating Levene's test): for strict liability crimes, there was a fine drop of \$4,844 ($SD = \$13{,}595$), versus only \$2,134 ($SD = \$8{,}637$), for mens rea crimes. Jail time also dropped a larger amount for strict liability crimes ($M = 0.364$, $SD = 1.09$) than for mens rea crimes ($M = 0.339$, $SD = 1.35$), but not significantly, $t(411) = .198$, $p < .843$, $d = .03$, 95% CI [−.217, .266].

Inferred knowledge and responsibility. Responses to the question about the actor's responsibility for obtaining reliable information differed significantly between strict liability ($M = 5.23$, $SD = 2.04$) and mens rea crimes ($M = 5.61$, $SD = 1.83$) crimes, $t(378) = 1.98$, $p < .049$, $d = .20$, 95% CI [−.759, −.002] (corrected for violating Levene's test), with higher responsibility in the mens rea case. If anything, this goes counter to our expectation (Hypothesis 6) that people might be held more responsible in strict liability cases, rendering ignorance akin to a form of negligence deserving punishment.

We also found that participants were significantly more likely to believe that the principal actor possessed the relevant knowledge for mens rea crimes ($M = 3.74$, $SD = 2.04$) than for strict liability crimes ($M = 2.61$, $SD = 1.62$), $t(410) = 6.27$, $p < .000$, $d = .62$, 95% CI [−1.48, .774]. This differs from what we found in Experiment 1 in relation to Hypothesis 4; in that experiment, we found no differences in inferred knowledge across mens rea and strict liability crimes. It is possible that the difference revealed here is the result of a more sensitive, continuous measure, or to the inclusion of additional crimes. Whatever the cause, it raises the question of whether the greater drop in ratings for strict liability crimes than for mens rea crimes after the statutory change was a consequence of differences in inferred knowledge, or an independent effect. To test this, we computed partial correlations between legal category and each of our three difference scores (moral censure, fines, and jail time), controlling for inferred knowledge. The relationship between legal category and moral censure remained significant, $r = -.165$, $p < .001$, as did that for legal category and fines, $r = -.126$, $p = .012$.

Analyses across crimes. Not surprisingly, there was considerable variation across crimes for all of our measures (see Appendix A for additional data by crime). Figure 3 plots the moral censure difference scores for each crime. The figure makes it clear that while the means for mens rea and strict liability crimes differed, their distributions were overlapping. In the general discussion we return to some of the outlying cases.

Discussion

Experiment 2 had several aims. Most importantly, we found support for one account of what differentiates strict liability crimes from mens rea crimes. For the crimes we tested, the mere act of violating a prohibition played a larger role in judgments of moral censure and punishment for strict liability crimes than for mens rea crimes. Specifically, a change in statute led to a significantly greater decrease in moral censure and fines for strict liability crimes than for mens rea crimes, supporting Hypothesis 5. This is consistent with the idea that strict liability crimes are wrong to a greater extent *because* they are prohibited; they are more *malum prohibitum* than mens rea crimes, which are, to a greater extent, *malum in se.*

Experiment 2 also found a difference in the knowledge imputed to offenders of different crimes: the modal response for strict liability crimes was to infer an absence of knowledge; the modal response for mens rea crimes was the midpoint of our scale. This difference does not appear to have driven the greater "rule contingency" of strict liability crimes. However, it may nonetheless be

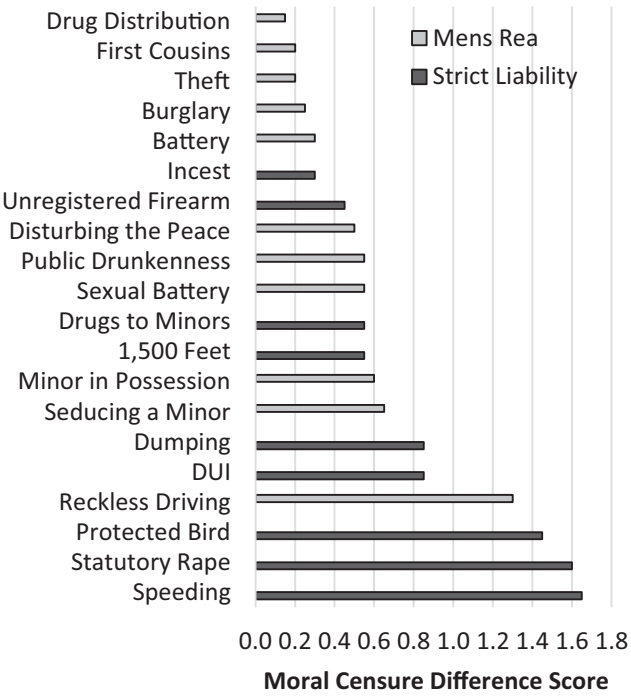

Figure 3. Moral censure difference scores (rating before statute change minus rating after statute change) by crime in Experiment 2.

related. To the extent that strict liability crimes hinge on the precise specification of a rule (e.g., whether a bird or substance is on an official list), ignorance may be plausible, yet still fail to mitigate: because the crimes are *malum prohibitum*, the guilty mind is less relevant.

Experiment 3

Experiment 1 found that ignorance was less mitigating for strict liability crimes than for mens rea crimes, but failed to identify a potential basis for this differential effect. In Experiment 2, we found support for one relevant difference between strict liability and mens rea crimes: on average, the former were treated as more "rule contingent" in the sense that censure and punishment dropped to a greater extent after a rule change. This is consistent with the suggestion that strict liability crimes are somewhat akin to conventional violations, or *malum prohibitum*. A remaining question, however, is *why* strict liability is treated in this way. The historical examples cited by Justice Jackson in *United States v. Morissette* (1952) were largely public safety regulations, but many contemporary strict liability crimes address other domains of human behavior. What is it, then, about strict liability crimes that renders their evaluation more contingent on the presence of a rule, and less contingent on mens rea?

While not all contemporary strict liability crimes involve public safety or welfare regulations, many seem to involve a somewhat *arbitrary* element. Returning to an earlier example, it is not in itself wrong or illegal to drive a car 50 mph, but it is illegal to do so in a 25-mph zone. But why is the zone's speed limit designated as *25* mph, and not 24 or 26? Similarly, it is not in itself wrong or illegal to have sex, but in our country it is illegal for an adult to do so with a person who is below a certain age. But why is that age 18 in some states, and 16 in others? Of course, there are very good reasons why driving too quickly or having sex with a child could be considered wrong in themselves—the rules are not merely a matter of convention. But the specific line that is drawn between legal and illegal actions—the specific age, speed, distance, and so forth, specified in a prohibition—is somewhat arbitrary and may therefore render strict liability crimes a hybrid of *malum in se* and *malum prohibitum*, whereas most mens rea crimes are more cleanly *malum in se*.

To test this idea, Experiment 3 investigated whether participants consider strict liability crimes to be more arbitrary than mens rea crimes. Our first prediction (Hypothesis 7) was that, on average, the rules corresponding to strict liability crimes would be judged more arbitrary than those corresponding to mens rea crimes. We also obtained a measure reflecting the role of mental states for each crime by presenting unknowing and knowing conditions to each participant. We predicted that the effect of mental states would be smaller for strict liability crimes than for mens rea crimes. We also predicted an association between arbitrariness ratings and the magnitude of the effect of mental state (Hypothesis 8): The more arbitrary the rule, the smaller the influence of mens rea.

Method

Participants. Four hundred four adults (183 male, 221 female, M_{age} = 35, SD = 12) participated in the study through Amazon Mechanical Turk. An additional 80 participants were tested, but were excluded for failing catch questions. Only U.S. participants who indicated they were older than 18 were allowed to participate, to approximate a real jury pool. Participants were given $0.65 for their participation.

Materials and procedures. Participants were randomly assigned to one of 20 conditions, representing each of the 20 crimes from Experiment 2. Each participant initially read the *unknowing* vignette of the assigned crime. Most of the unknowing versions had been used in previous experiments, but for the crimes added in Experiment 2, new unknowing versions were created (see online supplement for the six new vignettes). After reading their unknowing vignette, participants were asked the moral censure, fine, and jail time questions used in Experiment 2.

Next, participants were presented with a knowledge change. Participants were asked to imagine that the actor had in fact known the vital fact, and they then provided the moral censure, fine, and jail ratings again. This manipulation allowed us to obtain a within-subjects measure of the effect of mental states. An example from the migratory bird vignette is presented below:

> Suppose that Alan had actually realized, when he shot the bird, that his actions broke the law—that is, that he was shooting a protected bird. And suppose that he decided to shoot the bird anyway. In this case, where Alan knowingly violated the law, how would you respond to the following questions? *(Your responses may be the same as those you just provided, or they may differ.)*

Next, all participants, regardless of which crime they initially evaluated, rated the arbitrariness of all 20 crimes. The crimes were preceded by the following instructions:

> Below you will see a list of laws. We'd like you to give your intuitions about how arbitrary each law seems to you. That is, do you believe that there's a good reason for the law to draw the line where it does in terms of which actions are legal versus illegal? Or does it seem like the law is somewhat arbitrary in the sense that it could reasonably have drawn the line differently?
>
> Please do not consult any outside resources, like other people or websites. We are interested in your own intuitions, whether or not they correspond to the current legal system. Even if you think all laws are somewhat arbitrary or not at all arbitrary, please take note of which seem more or less arbitrary and respond accordingly.

The 20 crimes were then presented in a randomized order. Each crime was presented as true to its statutory language as possible, with minor adjustments in wording to facilitate comprehension. Providing the full statutory language ensured that participants were not operating with different, common sense definitions of each crime. Below is the text for migratory bird:

> *Migratory birds:* It is illegal for anyone to pursue, hunt, take, capture, or kill any migratory bird, or any part, nest, or egg of any such bird.

Participants indicated their agreement on a scale of 1 (*not at all arbitrary*) to 7 (*completely arbitrary*). Finally, participants answered the demographic and catch questions used in previous experiments.

Results

Arbitrariness ratings. A primary aim of Experiment 3 was to test whether strict liability crimes are considered more arbitrary

than mens rea crimes (Hypothesis 7). To do so, we computed the average arbitrariness rating for strict liability crimes and for mens rea crimes for each participant. We then ran a paired-samples *t* test on mean arbitrariness ratings as a function of legal category. Consistent with our prediction, participants rated strict liability crimes significantly more arbitrary ($M = 2.99$, $SD = 1.61$) than mens rea crimes ($M = 2.93$, $SD = 159$), $t(403) = 1.87$, $p < .031$, $d = .04$, 95% CI [–.122, .003] (one-tailed test). (Mean arbitrariness ratings for each crime can be found in Appendix B.)

Moral censure and punishment: Ratings under mental state change. This experiment was the first in which we manipulated mental states within subjects. Thus, we were able to create difference scores for each participant for moral censure, fines, and jail time by subtracting each participant's initial, *unknowing* ratings from the rating given after participants were asked to assume that the perpetrator acted knowingly. An independent samples *t* test comparing moral censure difference scores as a function of legal category failed to find a significant effect, $t(402) = .126$, $p < .899$, $d = .01$, 95% CI [–.356, 406]. This departure from our previous findings could be due to the within-subjects design or to the addition of six crimes that were not included in Experiment 1 or in the supplementary experiments, and which were much less familiar than those used in our initial studies. We ran the same independent samples *t* test on difference scores for the original 14 crimes from Experiments 1 and S1 and found a significantly greater effect of mental state for mens rea than for strict liability crimes on moral censure, $t(273) = 4.08$, $p < .000$, $d = .49$, 95% CI [.475, 1.36] (corrected for violating Levene's test), replicating the original effect.

For punishment, however, we did find the predicted effect when considering all 20 crimes. A repeated measures ANOVA with legal category as a between subjects factor, and *z* scores of difference scores for fines and jail time as a within subjects fact or, revealed a significant effect of legal category, $F(1, 398) = 3.88$, $p = .050$, $\eta_p^2 = .008$.

Correlation between mental state effects and arbitrariness of assigned story. Finally, we tested whether the arbitrariness of a crime would relate to the magnitude of a mental state effect for that crime. If part of what differentiates strict liability crimes from mens rea crimes is their more conventional or arbitrary nature, and this difference is partially responsible for the relative unimportance of mens rea, then we would expect arbitrariness ratings to be negatively correlated with the magnitude of a mental state effect. We ran a bivariate correlation between each participant's *knowing-unknowing* difference score and her arbitrariness rating for the specific crime she read. Consistent with our prediction (Hypothesis 8), we found that moral censure scores were significantly negatively related to arbitrariness, $r(404) = -.13$, $p < .010$. We found no significant correlations with either punishment measure.

Discussion

Experiment 3 confirmed our prediction (Hypothesis 7) that strict liability crimes are considered more arbitrary than mens rea crimes. This prediction was motivated in part by arguments developed in *Morissette* and the findings from Experiment 2: If an action is wrong merely because it is prohibited, then the prohibition must not be grounded in intrinsic harm or other moral considerations. To be clear, our contention is not that strict liability crimes are not wrong in themselves, but merely that many also have a conventional element, and that the role for such arbitrary or conventional elements is greater, on average, for strict liability crimes than for mens rea crimes.

We also found a significant, though small, correlation between participants' arbitrariness ratings and the extent to which their judgments varied across knowing and unknowing violations. Specifically, the perpetrator's mental states (mens rea) had a greater impact on ratings the less arbitrary the rule. We return to this relationship in the general discussion.

General Discussion

In the work reported here, we set out to test whether the legal distinction between strict liability and mens rea crimes reflects (and potentially reveals) aspects of intuitive moral judgment. Here, we summarize and discuss our key findings.

Experiment 1 revealed that judgments concerning mens rea crimes were in fact more sensitive to the actor's knowledge and intent than were those concerning strict liability crimes. When an actor transgressed *knowingly*, punishment and censure were greater for mens rea crimes than for strict liability crimes, but when the actor transgressed *without knowledge and intent* (whether merely ignorant or deceived), this pattern was reversed. As a result, judgments for mens rea crimes were strongly influenced by the actor's knowledge and intent, whereas those for strict liability crimes were about the same. Put differently, ignorance was treated as a mitigating factor for mens rea crimes, but not for strict liability crimes.

In Experiments 2 and 3, we found support for a possible explanation: that strict liability crimes have more features that are *malum prohibitum,* or wrong because prohibited, while *mens rea crimes* are largely *malum in se*, or wrong in themselves. Experiment 2 found that judgments for strict liability crime were more dependent on the presence of a rule: when a statute was revoked, ratings for moral censure and punishment decreased more for strict liability crime than for mens rea crimes. These findings have analogues in social and cognitive development, where research differentiates between moral and "conventional" wrongdoing (Nucci & Turiel, 2009; Turiel, 2008). Experiment 3 focused on another aspect of conventionality: the potentially arbitrary nature of the rule involved. We found that rules prohibiting strict liability crimes were on average judged more arbitrary than rules for mens rea crimes, and that the more arbitrary the rule, the more attenuated the role of mental states.

The relationship between strict liability and arbitrariness can help explain why strict liability crimes involve an attenuated role for mental states. First, the more arbitrary nature of strict liability crimes means that the intentions associated with a knowing violation are not necessarily *intrinsically* bad. For instance, intentionally driving at 55 mph is not itself wrong; it only becomes so in the context of a law that specifies an area as a 50-mph zone. When a law is *not* arbitrary, by contrast, the intention is reprehensible even absent a law: intentionally hitting another person is unacceptable whether or not a law is in place. Relatedly, crimes that involve arbitrary thresholds are likely to impose a looser coupling between the legal status of an action and the "wrongness" of the act. Dumping a chemical a few feet outside a recognized zone, for example, could be regarded as only *slightly* less harmful than

dumping the chemical just inside the zone. Yet crossing the threshold to illegal status will make the act wrong not just by an incremental increase in harm, but by virtue of having violated a prohibition. For mens rea crimes, in contrast, harm may track legal status more closely: taking something that doesn't belong to you is both wrong and illegal; not doing so is neither. For these reasons, the evaluation of strict liability crimes—relative to mens rea crimes—could be less sensitive to mental states, and also more dependent on the presence of a rule.

In light of these considerations, we can revisit our specific crimes. Reckless driving, seducing a minor, and minor in possession—all mens rea crimes—also involve a potentially arbitrary threshold or contingency. And in fact, in Experiment 2, reckless driving had the greatest drop in moral censure after the statute change of any mens rea crime, while seducing a minor had the second greatest drop in moral censure and the highest for fines and jail time of any mens rea crime (see Figure 3 and Appendix A). Minor in possession had the third greatest reduction in moral censure and a complete erasure of fines. In Experiment 3, minor in possession was also judged the second most arbitrary crime. On the other hand, the strict liability crimes of incest and unregistered firearm showed the smallest drops in moral censure in response to a statute change, and both arguably lack an arbitrary threshold beyond which they become legal.

Considering these "exceptions to the rule" helps make a valuable point. We do not mean to suggest that strict liability crimes form a special psychological kind, or that they have clear-cut necessary and sufficient conditions. Rather, a variety of different factors that come in degrees may be more likely to be found in strict liability crimes, and these features can potentially help explain their legal origins as well as the way they're evaluated by both experts and laypeople. The surprise, perhaps, is that the strict liability designation has *any* counterpart in intuitive moral judgments; that the match is imperfect is to be expected, especially given the recognized heterogeneity of strict liability crimes within the law (Levenson, 1992; Sayre, 1933).

One lingering concern is that our findings could reflect American citizens' knowledge of their own legal system, and not their untutored moral intuitions. Arguing against this possibility, an additional study confirmed that participants sampled from the same population as that in our studies were no more likely to think that knowledge was required for the conviction of our mens rea crimes than of our strict liability crimes (see online supplement for details).

Implications for the Law

Finding that the legal category of strict liability mirrors a cognitive distinction is exciting, but also potentially surprising: some of strict liability's most vocal criticism is rooted in the belief that defendants' mental states *should* and *would* have an effect on their legal outcomes. That is, there is often an implicit assumption that jurors care about a defendant's knowledge or intent, and that presenting evidence for the absence of either would mitigate a defendant's penalty in strict liability cases. For instance, Justice Jackson in *United States v. Morissette* (1952) said,

> The contention that an injury can amount to a crime only when inflicted by intention is no provincial or transient notion. It is as universal and persistent in mature systems of law as belief in freedom of the human will and a consequent ability and duty of the normal individual to choose between good and evil. (p. 250)

In contrast, we found that our participants' judgments were surprisingly consistent with the law, finding mental states less relevant for strict liability crimes than for other crimes. We are not arguing that mental states play *no* role for strict liability crimes, but our results do suggest that the (putative) counterintuitiveness of this aspect of strict liability has been overstated, and might not be the most compelling basis for arguments by its opponents. Indeed, recent work in the realm of torts has found that laypeople may endorse strict liability more strongly than scholars (Sanders, Kugler, Solan, & Darley, 2014).

Our studies also bear on more general questions about the role of explanations in legal judgment. We found evidence that offering an *explanation* for an actor's mental states can be more mitigating than the mere absence of knowledge. Specifically, Experiments 1 and S1 found that participants in the unspecified condition gave significantly higher ratings on every dependent measure than participants in either of the conditions that offered explanations for false beliefs: unknowing or deceived. Experiment S1 also found that deception was more mitigating than bad information. Our studies thus go beyond prior work about the importance of knowledge and intent by showing that while mental states are undeniably important, *explanations* for those mental states are as well.

Limitations and Future Directions

One major concern with the present research is its lack of ecological validity. Certainly, our participants were making judgments in a much less formal and demanding environment than actual jurors judging a real case. Moreover our participants did not engage in group deliberation, and had less information than would be available at trial. However, these limitations do not undercut the central aim of the present research, which was to investigate whether laypeople's intuitive moral judgments discriminate between strict liability and mens rea crimes in the absence of specific instructions to do so, and if so, why.

Our results support the idea that the relative arbitrariness of a crime, and therefore its status as *malum prohibitum*, is intuitively recognized and influences judgments. However, open questions remain concerning how participants were interpreting and evaluating arbitrariness. In addition, the relationship between arbitrariness and the role of mental states was significant, but small. This suggests that a variety of additional factors influence the relative importance of mental states in legal judgment, and identifying these factors is an important direction for future research.

Another concern is the number of participants who failed our attention check questions. Using an Internet sample necessitates stringent attention checks, as participants cannot be monitored as they would be in a lab. Despite our multiple checks, however, our exclusion rates were comparable to those for other studies run on Mechanical Turk (e.g., Downs, Holbrook, Sheng, & Cranor, 2010). One advantage of using a Mechanical Turk sample is that it is more representative of a jury than a sample of university undergraduates. That said, extending this line of research to jury-eligible participants who engage in deliberation over more detailed and realistic cases has clear value.

Conclusion

In sum, our studies are the first (to our knowledge) to relate the strict liability designation to laypeople's intuitive moral judgments. We find that strict liability and mens rea crimes differ in two potentially related ways: mens rea crimes are more sensitive to the presence or absence of relevant knowledge, but strict liability crimes are more contingent on the presence of a rule. Our studies suggest that people find strict liability crimes to be more arbitrary and *malum prohibitum,* while mens rea crimes appear to be, to a greater extent, *malum in se*. This is good news for those, like Justice Holmes, who believe that the law should reflect community standards, but it may still be troubling for those who believe the law should maintain the highest standard of justice, even when the community does not demand it.

References

Alicke, M. (2008). Blaming badly. *Journal of Cognition and Culture, 8,* 179–186. http://dx.doi.org/10.1163/156770908X289279

Barrett, H. C., Bolyanatz, A., Crittenden, A. N., Fessler, D. M., Fitzpatrick, S., Gurven, M., . . . Scelza, B. A. (2016). Small-scale societies exhibit fundamental variation in the role of intentions in moral judgment. *Proceedings of the National Academy of Sciences of the United States of America, 113,* 4688–4693. http://dx.doi.org/10.1073/pnas.1522070113

Blackstone, W. (1769). *Commentaries on the laws of England: Public wrongs*. Oxford, United Kingdom: Clarendon Press.

Craswell, R., & Calfee, J. (1986). Deterrence and uncertain legal standards. *Journal of Law Economics and Organization, 2,* 279–314.

Downs, J. S., Holbrook, M. B., Sheng, S., & Cranor, L. F. (2010, April). Are your participants gaming the system? Screening Mechanical Turk workers. *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems* (pp. 2399–2402). New York, NY: ACM.

Federal Bureau of Investigation. (2012). *Crime in the United States*. Uniform Crime Reports. Retrieved from https://ucr.fbi.gov/crime-in-the-u.s/2012/crime-in-the-u.s.-2012

Graham, J., Nosek, B. A., Haidt, J., Iyer, R., Koleva, S., & Ditto, P. H. (2011). Mapping the moral domain. *Journal of Personality and Social Psychology, 101,* 366–385. http://dx.doi.org/10.1037/a0021847

Hart, H. L. A., & Honore, A. M. (1962). *Causation in the law* (1st ed.). Oxford, United Kingdom: Oxford University Press.

Holmes, O. W. (1881). *The common law*. Boston, MA: Little, Brown, and Company.

Inbar, Y., Pizarro, D. A., & Cushman, F. (2012). Benefiting from misfortune: When harmless actions are judged to be morally blameworthy. *Personality and Social Psychology Bulletin, 38,* 52–62. http://dx.doi.org/10.1177/0146167211430232

Keating, G. (2006). Strict liability and the mitigation of moral luck. *Journal of Ethics & Social Philosophy, 2,* 1–33.

Knobe, J. (2005). Theory of mind and moral cognition: Exploring the connections. *Trends in Cognitive Sciences, 9,* 357–359. http://dx.doi.org/10.1016/j.tics.2005.06.011

Levenson, L. (1992). Good faith defenses: Reshaping strict liability crimes. *Cornell Law Review, 78,* 401–469.

Malle, B. F., & Knobe, J. (1997). The folk concept of intentionality. *Journal of Experimental Social Psychology, 33,* 101–121. http://dx.doi.org/10.1006/jesp.1996.1314

Malle, B. F., & Nelson, S. E. (2003). Judging mens rea: The tension between folk concepts and legal concepts of intentionality. *Behavioral Sciences & the Law, 21,* 563–580. http://dx.doi.org/10.1002/bsl.554

Manchester, C. (1977). The origins of strict criminal liability. *The Anglo-American Law Review, 6,* 277–283.

Mens Rea: The Need for a Meaningful Intent Requirement in Federal Criminal Law: Hearing before the Over-Criminalization Task Force of the Committee on the Judiciary, House of Representations, 113th Cong. (2013).

Mikhail, J. (2009). Is the prohibition of homicide universal? Evidence from comparative criminal law. *Brooklyn Law Review, 75,* 497–516.

Murray, D., & Lombrozo, T. (2016). Effect of manipulation on attributions of causation, free will, and moral responsibility. *Cognitive Science: A Multidisciplinary Journal*. Advance online publication. http://dx.doi.org/10.1111/cogs.12338

Nucci, L., & Turiel, E. (2009). Capturing the complexity of moral development and education. *Mind, Brain, & Education, 3,* 151–159.

Oppenheimer, D. M., Meyvis, T., & Davydenko, N. (2009). Instructional manipulation checks: Detecting satisficing to increase statistical power. *Journal of Experimental Social Psychology, 45,* 867–872. http://dx.doi.org/10.1016/j.jesp.2009.03.009

Phillips, J., & Shaw, A. (2015). Manipulating morality: Third-party intentions alter moral judgments by changing causal reasoning. *Cognitive Science: A Multidisciplinary Journal, 39,* 1320–1347. http://dx.doi.org/10.1111/cogs.12194

Rai, T. S., & Fiske, A. P. (2011). Moral psychology is relationship regulation: Moral motives for unity, hierarchy, equality, and proportionality. *Psychological Review, 118,* 57–75. http://dx.doi.org/10.1037/a0021867

Russell, P. S., & Giner-Sorolla, R. (2011). Moral anger, but not moral disgust, responds to intentionality. *Emotion, 11,* 233–240. http://dx.doi.org/10.1037/a0022598

Sanders, J., Kugler, M., Solan, L., & Darley, J. (2014). Must torts be wrongs? An empirical perspective. *Wake Forest Law Review, 49,* 1–45.

Sayre, F. (1933). Public welfare offenses. *Columbia Law Review, 33,* 55–89. http://dx.doi.org/10.2307/1115413

Singer, R. (1989). The resurgence of mens rea: The rise and fall of strict criminal liability. *Boston College Law Review Boston College Law School, 30,* 337–408.

Stahlkopf, C., Males, M., & Macallair, D. (2010). Testing incapacitation theory: youth crime and incarceration in California. *Crime and Delinquency, 56,* 253–268. http://dx.doi.org/10.1177/0011128707307227

Stanton-Ife, J. (2007). Strict liability: Stigma and regret. *Oxford Journal of Legal Studies, 27,* 151–173. http://dx.doi.org/10.1093/ojls/gql033

Turiel, E. (2008). Thought about actions in social domains: Morality, social conventions, and social interactions. *Cognitive Development, 23,* 136–154. http://dx.doi.org/10.1016/j.cogdev.2007.04.001

United States v. Morissette, 342 U.S. 246 (1952).

Young, L., & Saxe, R. (2011). When ignorance is no excuse: Different roles for intent across moral domains. *Cognition, 120,* 202–214. http://dx.doi.org/10.1016/j.cognition.2011.04.005

Appendix A

Difference Scores and Mental State Correlations by Crime from Experiment 2

Crime	Moral censure difference score	Fines difference score	Jail difference score	Mental state and moral censure correlation	Mental state and fines correlation	Mental state and jail correlation
Speeding	1.65	273.06	.000	.403	.051	–.019
Statutory rape	1.60	4,645.07	.945	.031	.298	N/A
Migratory bird	1.45	4,580.59	.255	.481*	.415	.092
Reckless driving	1.30	–1,600.95	.130	.067	.104	.091
Driving under the influence	.85	3,330.82	.360	.187	.025	.13
Dumping	.85	10,094.39	.285	.666**	.192	.532*
Seducing a minor	.65	13,246.42	1.395	.083	.031	−.195
Minor in possession	.60	116.40	.000	.112	−.384	N/A
1,500 ft	.55	6,143.78	.596	−.086	−.047	−.084
Drugs to minors	.55	6,264.11	.435	.364	−.148	.296
Sexual battery	.55	3,560.32	.965	.402	.356	.233
Public drunkenness	.55	54.49	.005	.301	.100	.515*
Disturbing the peace	.50	683.41	.070	.484*	.141	.449*
Unregistered firearm	.45	6,421.05	.410	.137	.420	.304
Incest	.30	307.06	.090	.111	.168	.128
Battery	.30	1,526.40	.185	.054	−.164	.099
Burglary	.25	859.47	.300	.549*	−.014	.132
Theft	.20	614.03	.120	.560*	.207	.39
First cousins	.20	2,326.00	.265	.211	−.064	−.099
Drug distribution	.15	716.17	.220	.698**	.493*	.524*

Note. N/A = not applicable.
* $p < .05$. ** $p < .01$.

(*Appendices continue*)

Appendix B

Arbitrariness by Crime from Experiment 3

Crime	Arbitrariness rating
Theft	2.37 (2.06)
Burglary	2.38 (2.15)
Sexual battery	2.54 (2.20)
Battery	2.61 (2.12)
Dumping	2.63 (2.07)
Reckless driving	2.74 (2.06)
Driving under the influence	2.82 (2.07)
Seducing a minor	2.84 (2.15)
Drug distribution	2.87 (2.07)
Unregistered firearm	2.87 (2.14)
Drugs to minors	3.03 (2.15)
Speeding	3.03 (1.90)
Migratory birds	3.05 (1.83)
Incest	3.09 (2.21)
Statutory rape	3.17 (2.14)
1,500 ft	3.19 (2.23)
Disturbing the peace	3.20 (1.84)
Public drunkenness	3.43 (1.87)
Minor in possession	3.50 (2.08)
First-cousin marriage	3.70 (2.08)

Note. Arbitrariness ratings from Experiment 3. Mean ratings are followed in parentheses by standard deviations. Strict liability crimes are italicized.

Received November 15, 2015
Revision received July 11, 2016
Accepted July 16, 2016 ■