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MOTIVATED COGNITION IN CRIMINAL LAW JUDGMENTS: EXPERIMENTAL ILLUSTRATIONS, LEGAL RAMIFICATIONS, AND A PATHWAY TO REMEDIES

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MOTIVATED COGNITION IN CRIMINAL LAW JUDGMENTS: EXPERIMENTAL ILLUSTRATIONS, LEGAL RAMIFICATIONS, AND A PATHWAY TO REMEDIES

Avani Mehta Sood

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Abstract

This dissertation applies the psychological theory of motivated cognition to explain and address the ways in which people make judgments in two charged areas of criminal law: the use of "harm" as a dividing line between law and morality, and the suppression of "tainted" evidence obtained through illegal means. Legal decision makers in high stakes criminal justice contexts—be they lay jurors or professional judges—are committed to following the law. What happens, however, when people's intuitions about the "right" outcome in a case clash with the requirements of a legal rule? I suggest that decision makers in such situations will neither relinquish their own sense of justice, nor blatantly flout the law. Instead, they will less-than-consciously engage in the motivated construal of "facts" to achieve their desired punishment outcomes ostensibly *within* the terms of the given legal doctrine. However, the factors that drive people's own justice intuitions may be legally irrelevant or impermissible to consider, leading to the erosion of fundamental constitutional and rule of law values.

The dissertation proceeds as follows: Chapters I-III provide overviews of the theory of motivated reasoning, previous literature investigating this phenomenon in legal contexts, and the goals of the present research. Chapter IV then presents three experimental studies that use a hypothetical legal constraint based on the harm principle to investigate how punishment goals can motivate judgments about harm. I show that when people are told that a finding of harm is required to criminalize certain offensive conduct, they will impute harm to scenarios in which harm is not otherwise reported. I analyze the psychological and constitutional implications of the findings, and consider their relevance to real legal decision making by jurors, voters, lawyers, and judges.

Chapter V then follows with a doctrinal demonstration of how and why motivated cognition can influence applications of a real law, the "exclusionary rule," which prohibits the use of wrongfully obtained evidence in criminal cases regardless of the defendant's crime. I show that participants who are motivated to see a morally repugnant crime brought to justice will construe the facts of the case in a manner that enables them to invoke an exception to the exclusionary rule and admit the tainted evidence. I discuss these experimental results in regard to public and judicial responses to the exclusionary rule, and the evolution of the Supreme Court's jurisprudence on this controversial doctrine of criminal procedure.

Chapter VI turns to the critical question of how to address the problem of motivated cognition in legal decision making. I present the results of a final experiment that succeeds in curtailing the effect. I then consider ways in which to operationalize the remedy in real legal contexts, and highlight some shortcomings and alternatives to this route. Finally, Chapter VII notes the theoretical contributions of this work, discusses the challenges of using experimental methodologies to study and reform the legal system, and proposes some future directions for research.

The findings presented in this dissertation demonstrate that the legal system's assumptions about how people reach judgments under the law are not always psychologically tenable, which creates difficulties in enforcing important legal principles. This program of research therefore strives toward making legal decision making more compatible with both human cognition and the rule of law.

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Chapter I. Introduction

In October 1980, NBC aired a three-and-a-half minute news story that led to "the largest punitive damages verdict in American libel history" (*Newton v. National Broadcasting Company*, 1990, p. 666). The story suggested that legendary Las Vegas entertainer Wayne Newton had been involved in illegitimate dealings with the mafia. Newton responded to the broadcast by filing a defamation lawsuit against NBC and three of its journalists. The case was tried before local Las Vegas jurors, who awarded Newton over $19 million in damages.

The trial court turned down the portion of the jury's award that was for lost income and damage to reputation—amounting to approximately $6 million of the total award—because there was no evidence that Newton had suffered either of these consequences due to NBC's broadcast (*Newton v. National Broadcasting Company*, 1987). Upon additional review, an appellate court then reversed the jury's entire award, finding that there was "almost no evidence of actual malice [by NBC], much less clear and convincing proof" as required by the legal standard for defamation of a public figure (*Newton*, 1990, p. 697). Highlighting the subjective nature of an "actual malice" determination, the appellate court observed: "Wayne Newton's case poses the danger that First Amendment values will be subverted by a local jury biased in favor of a prominent local public figure against an alien speaker who criticizes the local hero" (p. 671).

Assuming the jurors in *Newton* reached their conclusion based on what they perceived to be an objective evaluation of the evidence, this case raises questions about the capacity of legal decision makers to make cognitively neutral determinations of "fact," especially in the face of ambiguous or subjective legal standards. To what extent

might desired punishment outcomes drive the perception and reasoning processes of jurors, or even judges, without their full awareness?

Social psychologists have demonstrated the covert operation of this general phenomenon, known as motivated reasoning or motivated cognition, in various types of judgments—including evaluations and beliefs about the self, others, and the nature, cause, or likelihood of events (Kunda, 1990). Furthermore, experimental studies across various other disciplines have demonstrated motivated cognition driving political decisions (Fischle, 2000; Redlawsk, 2002; Taber, Cann, & Kucsova, 2009; Taber & Lodge, 2006), business judgments (Boiney, Kennedy, & Nye, 1997), moral behavior (Bersoff, 1999), and even the interpretation and use of empirical research itself (MacCoun, 1998). And now, given its ramifications for the enforcement of constitutional values and other legal principles, motivated reasoning has become a primary focus of scholars conducting experimental research at the intersection of psychology and law.

In this dissertation, I apply the theory of motivated cognition to explain people's judgments in two charged areas of criminal law: the use of "harm" as a dividing line between law and morality, and the suppression of "tainted" evidence obtained through illegal means. Chapters I-III provide overviews of the theory of motivated reasoning, previous literature investigating this phenomenon in legal contexts, and the goals of the present research. Chapter IV then presents three experimental studies that use a hypothetical legal constraint based on the harm principle to investigate how punishment goals can motivate judgments about harm. I show that when people are told that a finding of harm is required to criminalize certain offensive conduct, they will impute harm to scenarios in which harm is not otherwise reported. I analyze the psychological

and constitutional implications of the findings, and consider their relevance to real legal decision making by jurors, voters, lawyers, and judges.

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Chapter VI turns to the critical question of how to address the problem of motivated cognition in legal decision making. I present the results of a final experiment that succeeds in curtailing the effect. I then consider ways in which to operationalize the remedy in real legal contexts, and highlight some shortcomings and alternatives to this route. Finally, Chapter VII notes the theoretical contributions of this work, discusses the challenges of using experimental methodologies to study and reform the legal system, and proposes some future directions for research at this intersection of psychology and law.

Chapter II. The Psychological Theory of Motivated Reasoning

Motivated cognition was recognized as far back as the 1600s, when Sir Francis Bacon wrote: "The human understanding when it has once adopted an opinion draws all things else to support and agree with it." (1620, as quoted in Lord, Ross, & Lepper, 1979, p. 2098). The modern day psychological theory of motivated reasoning holds that when decision makers have a desire or preference regarding the outcome of an evaluative task, they are more likely to arrive at that desired conclusion by engaging in inadvertently biased processes for "accessing, constructing, and evaluating beliefs" (Kunda, 1990, p. 480).

A. Cognitive Mechanisms

There are several cognitive mechanisms through which motivated reasoning can operate. In her seminal review of the social psychology literature on this phenomenon, Kunda (1990) noted that people may conduct either a selective internal search through their memory or an external search through available information to find existing facts, beliefs, or rules that support the outcome they prefer. Alternatively, people may "creatively combine accessed knowledge to construct new beliefs that could logically support the desired conclusion" (p. 483). Decision makers take longer to process preference-inconsistent information, because they intuitively evaluate it in a more critical manner (Ditto & Lopez, 1992; Jain & Maheswaran, 2000). And, given that motivated reasoners are more likely to see or search for information that is consistent with their desired outcomes, the effect is seen more among people who are knowledgeable about the issues at hand (Taber et al., 2009; Taber & Lodge, 2006).

Motivated cognition can involve not only active construal and reasoning processes, but also more immediate forms of acquiring knowledge and understanding, such as visual perception. People might automatically search for desired features during the perception process, or their visual systems might "lower the threshold" required for a perceptual determination to be consistent with their desired outcome (Balcetis & Dunning, 2006, p. 614). Motivated cognition can also entail outcome-driven construal of facts, which is not quite as immediate as perception, nor as effortful as reasoning. Thus, although the terms motivated reasoning and motivated cognition are used interchangeably, I favor the latter for its more broadly inclusive scope.

B. The Illusion of Objectivity

The word "motivated" may seem to imply a conscious process, but motivated cognition operates under an "illusion of objectivity," which protects the integrity of decisions makers both in their own eyes and in the eyes of others (Pyszczynski & Greenberg, 1987, pp. 302, 333). As Kunda (1990) explained:

> People do not realize that the process is biased by their goals, that they are accessing only a subset of their relevant knowledge, that they would probably access different beliefs and rules in the presence of different directional goals, and that they might even be capable of justifying opposite conclusions on different occasions. (p. 483)

This differentiates the phenomenon from more deliberate forms of outcome-driven decision making seen in legal contexts, like jury nullification or the purposeful pursuit of an ideological agenda.

The less-than-conscious nature of motivated cognition is supported by the finding that motivational states can shape even basic visual processing—i.e., "people literally are prone to see what they want to see" (Balcetis & Dunning, 2006, p. 613). One series of experiments demonstrated that when participants were presented with an ambiguous figure that could be interpreted as either a seal or a horse, they were more likely to report the interpretation that assigned them to drink a delicious beverage as opposed to a foul smelling one (Balcetis & Dunning, 2006). Implicit eye tracking measures (that are not influenced by conscious processing) and lexical decision data provided evidence that this motivated perception was not deliberate.

An added experimental twist provided further evidence against the possibility that the participants saw both interpretations and deliberately chose the one that led to their preferred outcome. The preferred outcome was paired with one interpretation when participants first viewed the ambiguous stimulus (e.g., seal-delicious drink), but the experimenters then switched that outcome to the alternative interpretation (e.g., horse-delicious drink) before the participants reported what they observed. Nevertheless, the participants reported the original interpretation they had seen (e.g., seal), even though it would now lead to the non-preferred outcome (e.g., foul drink). Based on these results, the researchers suggested that "the impact of motivation on information processing extends down into preconscious processing of stimuli in the visual environment and thus guides what the visual system presents to conscious awareness" (p. 612).

Neuroscientists using fMRI to investigate the neural bases of motivated cognition have also found that it is associated with regions of the brain that are not involved in "cold reasoning tasks" or "conscious (explicit) emotion regulation" (Westen, Blagov,

Harenski, Kilts, & Hamann, 2006, p. 1947). Specifically, the pattern of brain activity associated with the implicit affect regulation seen in motivated cognition is different from the pattern seen in people's more conscious attempts to regulate their feelings when evaluating negative stimuli.

Consistent with this psychology and neuroscience data, experimental political scientists have described the operation of motivated cognition in law and policy judgments as "driven by automatic affective processes" (Taber & Lodge, 2006, p. 756), and have reported that "nothing we have found suggests a conscious effort to twist the law to serve one's preferences" (Braman & Nelson, 2007). Rather, Braman (2006) pointed out that legal decision makers are particularly likely to strive for legal accuracy when making judgments due to "strong socialization emphasizing the importance of following stylized rules of decision making" (p. 310).

Yet, due to the illusion of objectivity under which motivated cognition operates, motivated decision makers are just as certain about the accuracy of their decisions as those who reason without directional goals. Moreover, one set of studies demonstrated not only that decision makers engaged in an "internal rationalization process" to bolster their outcome driven judgments, but also that they confidently transferred their motivated reasoning to other decisions that were independent of the original motivated judgments (Boiney et al., 1997, p. 20).

C. Constraining Limits

The motivated cognition process is not, however, without limits. Kunda (1990) observed:

> People do not seem to be at liberty to conclude whatever they want to conclude merely because they want to. Rather . . . people motivated to arrive at a particular conclusion attempt to be rational and to construct a justification of their desired conclusion that would persuade a dispassionate observer. (pp. 482-483)

Correspondingly, motivated cognition does not lead decision makers to their desired outcomes if there is clear and sufficient evidence to the contrary—a boundary that then bolsters people's ability to maintain an illusion of objectivity about motivated judgments in more ambiguous circumstances (Boiney et al., 1997; Klein & Kunda, 1992). The process thus "reflects a compromise" between desired outcomes and the relevant information at hand (Pyszczynski & Greenberg, 1987, p. 333).

Another boundary of motivated cognition is that it operates only to the extent necessary; motivated decision makers do not bias their judgments more than what is needed to achieve their desired outcomes. Emphasizing the instrumental and "systematic" nature of this phenomenon, Boiney et al. (1997) explained: "rather than simply slanting one's information processing arbitrarily in favor of the preferred outcome, the degree of bias is roughly calibrated to need." (p. 20). Finally, motivated cognition seems to be quite robust to variations in argument complexity and credibility (Taber et al., 2009), which suggests that motivated judgments do not occur due to reduced levels of attention or cognitive elaboration.

Chapter III. Motivated Cognition in Law[1]

Prior work on motivated cognition in legal contexts has uncovered various procedural avenues through which this psychological process can infiltrate legal decision making—including through the resolution of threshold questions, the application of precedent, and the evaluation of scientific evidence in legal cases. Previous studies have also identified some of the legally extrinsic factors that can motivate legal judgments. Below, I review this literature before introducing my own research goals.

A. Legal Avenues

i. Resolution of Threshold Questions

Judges often have to resolve threshold questions—such as whether or not the court has jurisdiction to hear a dispute, or whether the plaintiff has legal standing to bring a lawsuit—before getting to the substance of a case. The determination of these questions should not be influenced by the judge's views on substantive issues in the case, let alone by legally extrinsic factors that should not influence even the substantive issues. But in reality, a decision maker's desired outcome, which may be motivated by a legally irrelevant factor, can drive critical judgments about whether a plaintiff is even eligible to litigate a case (Braman, 2006, p. 308).

To investigate the operation of motivated cognition in this context, Braman (2006) presented law student participants with a legal case involving a firefighter who had been threatened with disciplinary action because his wife posted a campaign sign on

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[1] This chapter is based largely on a forthcoming publication: Sood, A.M. (2013). Motivated cognition in legal decision making—An analytic review. *Annual Review of Law and Social Science, 9*.

their personal property in alleged violation of a city ordinance that prohibited public employees from participating in political activity. The wife challenged the ordinance as a restriction on her right to free expression, but the defense argued that she did not have legal standing to bring the case.

All the participants in the experiment were presented with the same facts of the case with one key difference: Half of them were told that the wife's campaign sign had expressed support for a pro-life candidate, the other half were told that she had supported a pro-choice candidate. Thus, the critical question in the experiment was whether the decision makers would be more likely to reason that the plaintiff had legal standing to bring the case when her expressed view on abortion was consistent with their own view on the issue. Moreover, the boundaries of motivated cognition were tested with the following additional experimental manipulation: the participants were told that the legal circuit in which the case was being decided either had clear authority in favor of the plaintiff or no legal authority directly on point.

As predicted, the respondents were significantly more likely to conclude that the plaintiff had legal standing to bring her case when they agreed with her position on abortion. However, within the expected limits of motivated cognition, this effect was seen only when the decision makers were not constrained by legal precedent. When the participants were faced with clear legal authority in favor of the plaintiff, their personal views on abortion did *not* motivate their judgments of legal standing. Braman (2006) suggested that these results illustrate "very human psychological processes rather than any conscious decision to flout the law" (p. 320).

ii. Application of Precedent

The above-described experiment indicates that the availability of clear legal precedent can provide a constraint upon unconscious cognitive influences in legal decision making. Indeed, the doctrine of *stare decisis* calls for judges to follow legal rulings made in previous cases that are similar to the one at hand in order to structure and legitimize their decisions, provide fair expectations and equal treatment for all litigants, and facilitate measured evolution of law. However, the process of evaluating the legal relevance of prior cases could actually provide another covert entry point for motivated cognition.

In an experiment testing this theory, Braman and Nelson (2007) presented participants with a legal case involving discrimination by the Boy Scouts against a gay male, and then provided them with examples of prior legal precedents that varied both in their outcome (i.e., whether or not there was a finding of discrimination) and in their factual similarity to the case at hand (i.e., close, medium, and far cases). As expected, the participants' judgments about whether or not prior cases applied to the case at hand revealed an interaction between their own policy preferences and the outcomes of those prior cases. Respondents who held positive attitudes toward gay scout leaders, and were therefore motivated to uphold the plaintiff's discrimination claim, saw prior cases that resulted in findings of discrimination as being more similar to the present dispute than prior cases with findings of no discrimination; whereas the opposite was true of participants who disapproved of gay scout leaders.

This effect was only present, however, in the "medium" range of precedents that were neither clearly similar nor clearly dissimilar to the case at hand. Consistent with the

theory of motivated cognition, "objective case facts constrained motivated perceptions" (p. 954). Notably, a variation of this experiment conducted upon a mixed sample of undergraduate and law students found that the motivated cognition effect was significantly stronger among legally trained participants (p. 952).

iii. Evaluation of Social Science Evidence

Motivated cognition can enter the legal process not only through judgments about threshold questions and legal precedents, but also through decision makers' evaluations of evidence in legal cases. In one of the earliest experimental illustrations of this phenomenon in a realm relevant to law and policy, Lord and colleagues (1979) showed that both proponents and opponents of the death penalty differentially evaluated the same empirical studies—on how well the research had been conducted and on how convincing the results were—in favor of whichever studies confirmed their own initial attitudes toward the death penalty. "Decisions about whether to accept a study's findings at face value or to search for flaws and entertain alternative interpretations seemed to depend far less on the particular procedure employed than on whether the study's results coincided with their existing beliefs," the researchers observed (p. 2106).

Extending this paradigm to the context of the courtroom, Redding and Reppucci (1999) examined whether the sociopolitical views of law students and state court judges would motivate their judgments about the legal relevance, admissibility, and dispositive weight of social science evidence in death penalty cases. They found that when the evidence was being used to establish law regarding the death penalty, law student participants evaluated data that was consistent with their own position on capital punishment more favorably in all their legal judgments. The judges also exhibited this

effect in their judgments about how much weight to accord the evidence once it was admitted in the case.

B. Motivating Factors

Having highlighted some of the procedural avenues through which motivated cognition can influence legal decision making, I now review existing research on factors that can motivate legal judgments—specific either to the wrongdoer (e.g., motive or moral character) or to the decision makers themselves (e.g., ideological, cultural, or group commitments).

i. Defendant's Moral Character

Experimental research on the psychology of blame has demonstrated that assignments of legal responsibility may be motivated by factors that the legal system does not recognize or condone. The culpable causation model, for example, posits that people are more likely to blame a person whose actions inadvertently lead to harm when that person had a bad motive for engaging in the actions, even if the resulting harm was entirely unintended (Alicke, 2000). In one experiment, Alicke (1992) showed that participants were more likely to see a speeding driver as the cause of a car accident if he was speeding home to hide a vial of cocaine that he had left out in the open than if he was speeding home to hide his parents' surprise anniversary gift that he had left out—even though all the other features of the accident were held constant in both scenarios. When the driver had an unsavory reason for speeding, people were motivated to see him as having greater control over the negative consequences of his speeding, and therefore blamed him more severely for its repercussions.

Expanding upon this theory, Nadler and McDonnell (2011) hypothesized that negative legal judgments about blame are driven not only by the actor's reasons for acting, but also by his or her moral character independent of the action in question. The criminal law, however, generally aims to "purge" judgments about a defendant's character from the blaming process (p. 291). In one study demonstrating this discrepancy, Nadler and McDonnell (2011) presented participants with the case of a woman whose dogs mauled a child to death, and then represented the moral character of the woman as either "good" (sociable, generous, and healthy) or "bad" (antisocial and unhealthy) in ways unrelated, and therefore legally irrelevant, to the incident. The experimental scenario also varied whether or not the woman was aware of her dogs' tendency to misbehave.

The participants rated the woman as having higher overall responsibility and intentionality in the child's death if she had a negative character, even if she was entirely unaware of the risk her dogs posed. In fact, the effect of the woman having a bad character (a legally irrelevant factor) was comparable to the effect of her being aware of the dangerousness of the dogs (which is legally relevant). Explaining how such blaming tendencies are rooted in the theory of motivated cognition, Nadler and McDonnell (2011) suggested that people's motivation to punish a disliked person "leads them to interpret the defendant's transgression in a way that makes it more legally blameworthy" (p. 291).

ii. Decision Maker's Social Identity

As seen by the use of partisan issues like abortion or the death penalty in some of the above-described experimental manipulations, the ideological preferences of decision makers themselves can also be an inadvertent and inappropriate motivating factor in legal

judgments. Using a general political ideology (liberal vs. conservative) as an independent variable, one study asked law students to determine whether a change in a school district's tax rate would violate a state constitutional provision (Furgeson, Babcock, & Shane, 2008). Half the participants were told that the change would raise taxes, whereas the other half was told that the change would lower taxes. Meanwhile, all the legally relevant materials the participants read—the legislative history of the proposal, the relevant legal precedents, and the parties' briefs—were the same across both conditions.

After evaluating the information, liberal law students were more likely to reject the proposal as unconstitutional if it lowered taxes, whereas conservative law students were more likely to reach that conclusion if the proposal increased taxes. This was so even though the participants' decisions in this hypothetical scenario held no real consequences for their policy preferences, and they had been financially incentivized to select the ruling best supported by the evidence (i.e., by being told that they would receive a bonus payment if they arrived at the same conclusion as a panel of legal experts) (p. 225). Suggesting that the motivated judgments did not therefore seem to be deliberate, the researchers noted: "Policy preferences and legal reasoning may be so cognitively intertwined that lawyers and judges have difficulty fully realizing what factors have influenced their conclusions" (p. 227).

Moving beyond the liberal/conservative ideological divide, the cultural cognition model applies a more specific categorization of individual differences to examine "the unconscious influence of individuals' group commitments on their perceptions of legally consequential facts" (Kahan, Hoffman, Braman, Evans, & Rachlinksi, 2012, p. 1). This

theory predicts that people's judgments are motivated by where they fall on two spectrums of cultural values: egalitarian versus individualistic, and hierarchical versus communitarian. Scholars have provided experimental evidence for the cultural cognition model in a number of contexts relevant to legal decision making, including the resolution of factual ambiguities in self-defense cases (Kahan & Braman, 2008); interpretations of a high-speed police chase video used in a real Supreme Court case (Kahan, Hoffman, & Braman, 2009); and perceptions of consent in acquaintance rape cases (Kahan, 2010).

One recent study supporting the cultural cognition model illustrated the role of motivated cognition in the application of First Amendment law, under which unruly "speech" is constitutionally protected whereas unruly "conduct" is not (Kahan et al., 2012). Participants watched video footage of a political demonstration and were told that the demonstrators were protesting either against abortion or against the military's anti-gay "don't ask, don't tell" policy. They were then asked to answer factual questions to determine whether the protestors' actions constituted speech or conduct.

Participants who had been assigned to the same protest condition but held *opposing* cultural positions on the subject matter of the protest (e.g., supporters and opponents of abortion who believed the protest was against abortion rights) significantly disagreed in their perception of legally critical facts about the video footage, such as whether the protesters had blocked, obstructed, or intimidated pedestrians—which would turn the protest from legally protected speech into legally liable conduct. Moreover, participants who shared *similar* cultural worldviews (e.g., egalitarian individualists, who supported both abortion rights and gay rights) but were assigned to different conditions (either the anti-abortion or the pro-gay rights protest) also disagreed with each other

about the facts of the case. In short, people's motivation to reach an outcome that was congruent with their own cultural outlook "eviscerated the line between speech and conduct" (Kahan et al., 2012, p. 30).

Researchers have also provided evidence for how justice-related judgments can be motivated by other social identity factors, like race. One study showed that individuals who highly identified with their racial in-group (i.e., Caucasian American citizens) were motivated to think highly of their group for the sake of their own social identity, so they shifted the standard of justice they used to evaluate their group's past bad actions (i.e., slavery) (Miron, Branscombe, & Biernat, 2010). In particular, the participants required more evidence of their in-group's wrongdoing in order to conclude that group members had acted unjustly, and this motivated their judgments of harm and guilt (p. 777).

Highlighting the "particularly subversive effect" that motivated cognition can have on constitutional law, legal scholars and psychologists have noted:

> The Free Speech, Equal Protection, and Due Process Clauses . . . each forecloses the state from privileging particular affiliations, ways of life, or points of view and mandates that law be justified by its contribution to secular interests . . . valued by all citizens. But if decisionmakers (particularly adjudicators) unconsciously apply these provisions to favor outcomes congenial to favored ways of life, citizens who adhere to disfavored ones will suffer the same array of disadvantages for failing to conform that they would in a regime expressly dedicated to propagation of a sectarian orthodoxy. This distinctively psychological threat to constitutional ideals . . . has received relatively little attention from commentators or jurists. (Kahan et al., 2012, p. 854)

The program of research presented in this dissertation aims to provide a much-needed exception to this observation. The upcoming experiments reach beyond the existing literature to identify and explain why specific areas of criminal law are particularly vulnerable to motivated decision making, and to suggest a potential pathway toward remedying this effect.

C. Goals of Present Research

While previous work has focused on the factors that trigger motivated cognition in legal judgments and the procedural avenues through which it operates, the present research offers a novel demonstration of *how* and *why* motivated cognition drives judgments in two specific areas of criminal law that have been the subject of much legal discourse: the use of the "harm principle" in regulating criminal punishment, and the suppression of illegally obtained evidence through the "exclusionary rule." To answer the "how" question, I suggest that people will cognitively construe the "facts" of a case in a motivated manner that enables them to achieve their desired punishment outcomes without violating the given law—especially when the relevant legal constraint leaves room for ambiguity or interpretation. To answer the "why" question, I propose that decision makers engage in this process in order to reconcile conflicts between their own justice intuitions and the demands of the law.

People are generally motivated to follow legal rules (Tyler, 1990), especially in the high stakes contexts of criminal justice and courtroom decision making (Braman, 2006). But what happens when the requirements of a law clash with decision makers' internal sense of what would be the "right" outcome? Prior psychology research has suggested that utilitarian legal constraints that fail to reflect the public's intuitions of justice bear a risk of overt defiance (Mullen & Nadler, 2008; Robinson & Darley, 1997; Tyler, 2006). Drawing upon the theory of motivated cognition, I propose a less deliberate but equally significant response: Instead of either relinquishing their own sense of justice or blatantly flouting the law, legal decision makers will inadvertently engage in

motivated cognition to achieve their desired outcomes ostensibly *within* the terms of the given law.

One might presume that the conscious aim of judges and jurors to reach the "correct" conclusion under the law (i.e., accuracy goals) would minimize the influence of less conscious urges to reach a particular outcome (i.e., directional goals). However, my prediction to the contrary is consistent with Kunda's (1990) speculation that "accuracy goals, when paired with directional goals, will often enhance rather than reduce bias . . . because the more extensive processing caused by accuracy goals may facilitate the construction of justifications for desired conclusions" (p. 487). Indeed, recent research has demonstrated that people who score high in cognitive reflection are more likely to engage in motivated cognition (Kahan, unpublished). Moreover, "accuracy motivation, or the motivation and ability to think, does not necessarily lead to correction [of biases,] because even highly thoughtful people are not necessarily aware of the impact of any biasing variable(s)" (Petty, Wegener, & White, 1998, p. 95).

Renowned legal scholar Robert Cover (1975) described the choices of the "judge caught between law and morality" as follows:

> He may apply the law against his conscience. He may apply conscience and be faithless to the law. He may resign. Or he may cheat: He may state that the law is not what he believes it to be and, thus preserve an appearance (to others) of conformity of law and morality. Once we assume a more realistic model of law and of the judicial process, these four positions become only poles setting limits to a complex field of action and motive. (p. 6)

My proposed application of motivated cognition in this context adds a fifth pole. Legal decision makers may less-than-consciously apply the law in a way that preserves the appearance not only to others, but also to themselves, of conforming to the legal rules while adhering to their own sense of justice.

The covert operation of motivated cognition in this context is problematic, because the legal system assumes that its decision makers reason forward: neutrally evaluating relevant facts and then applying the given law to reach an "objective" outcome. Describing the "scientifically unsustainable" distinction that the law thus draws between intuitive/emotional and rational decisions, Judge Andras Sajo (2011) noted, "Law intends to create a sterile mental environment for its own application because it considers the dictates to emotions misleading and impermissible. Legal decisions are designed to be purely cognitive—above all, deductive and subject to cognitive control" (p. 3). The present work predicts a very different reality, in which intuition can drive cognition. The reasoning process is thereby "backwards," with desired outcomes shaping the perception and construal of relevant "facts."

Motivated cognition is also worrisome for the legal system because the factors driving people's own justice intuitions may be legally irrelevant or impermissible to consider, thereby undermining fundamental constitutional principles and eroding the rule of law. Moreover, that this psychological phenomenon operates under an illusion of objectivity and produces decisions that *appear* to have been made within the parameters of the law makes its legal implications all the more insidious.

This dissertation presents six studies that illustrate the covert operation and significant ramifications of motivated cognition in the realm of criminal law, and a

seventh study that provides evidence for a proposed remedy. Studies 1-3 use a hypothetical legal constraint based on the harm principle and its restriction on the criminal enforcement of morality. Studies 4-5 use a real law, the exclusionary rule, which bars the use of illegally obtained evidence in criminal cases. These two legal doctrines were selected because they have been at the center of contentious debates and decision making in the legal world, and my findings provide a new psychological explanation for why their enforcement is so problematic. The present work also extends beyond previous literature to experimentally explore a potential solution to the problem. Study 6 draws upon the findings of Studies 1-5 and the flexible correction model of bias correction (Wegener & Petty, 1997) to propose a specific means by which to curtail motivated legal decision making.

Chapter IV. The Plasticity of Harm in the Service of Criminalization Goals[2]

Famously articulated by John Stuart Mill one and a half centuries ago, the harm principle suggests that the State should use its powers to regulate individual conduct only if doing so is necessary to prevent harm to others (Mill, 1859). However, the evolving applications of harm arguments in debates about criminal regulation give rise to questions about the stability of people's judgments about harm, which the present studies seek to explore.

A. The Harm Principle in the Law and Courts

The harm principle has long been at the center of discourse about the legal enforcement of morality, often referred to as the Hart–Devlin debate (Hart, 1963; Devlin, 1965), with the central question: "Should the criminal law be limited, as Mill and (with qualification) H.L.A. Hart had argued, by the harm principle . . . or could the criminal law in principle be used to enforce any of the important moral convictions of the community—even if the targeted conduct . . . was not in any obvious way rights-violative or harmful to others?" (Murphy, 1995, p. 74). In the course of this debate, the harm principle has historically been converted into a "trusty weapon in the arsenal of liberalism" (Smith, 2006, p. 1), invoked to support the conclusion that behavior the majority considers to be immoral should not be criminalized unless it causes harm to others. Legal moralists, on the other hand, have favored greater state regulation of individual conduct based on Lord Devlin's argument that "society may use the law to

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[2] Studies 1-3 were conducted in collaboration with John Darley, and large portions of this chapter were published in: Sood, A. M. & Darley, J. M. (2012). The plasticity of harm in the service of criminalization goals. *California Law Review, 100*, 1313-1357.

preserve morality in the same way as it uses it to safeguard anything else that is essential to its existence" (Devlin, 1965, p. 11).

The Model Penal Code, promulgated in 1962 to help standardize criminal codes across the states, reflects the harm principle in its definition of crimes. The Code strives "to forbid and prevent conduct that unjustifiably and inexcusably inflicts or threatens substantial harm to individual or public interests," as well as "safeguard conduct that is without fault from condemnation as criminal" (Model Penal Code, 1962, § 1.02(a)(c)). Following this lead, numerous states have incorporated harm-based definitions of crime into their penal codes, and criminal law casebooks have accorded the harm principle a prominent role as well. Gradually, harm has become "*the* critical principle used to police the line between law and morality within the Anglo-American philosophy of law" (Harcourt, 1999, p. 131).

The Supreme Court "effectively constitutionalized the harm principle" (Smith, 2006, p. 13) in *Lawrence v. Texas* (2003), a case that applied the Constitution's Due Process Clause to strike struck down a Texas statute criminalizing sexual intercourse between individuals of the same sex. Holding that a "governing majority's" condemnation of this conduct as immoral is not a sufficient basis for prohibiting it by law, the Court cited to the Model Penal Code's recommendation against imposing criminal penalties for private, consensual sexual acts—which was justified, among other reasons, on the ground that such acts are not harmful to others (*Lawrence*, 2003, pp. 577-578).

Notwithstanding these attempts by lawmakers and the Court to establish "a general secular harm principle" (Kahan, 2011, p. 50), the concept of harm has been

difficult to pin down. In fact, the rhetoric of harm has also been deployed to counter the very anti-criminalization stance that the harm principle once supported (Harcourt, 1999). For example, Kelling and Wilson's (1983) "broken windows theory" transformed the perception of "untended behaviors," like loitering and panhandling, from mere nuisances into acts that can cause serious harm by making an area "vulnerable to criminal invasion" (p. 4). This theory was operationalized in New York City's "quality-of-life" initiatives in the 1990s to broaden aggressive policing of minor misdemeanors in order to reduce more serious crime (Harcourt & Ludwig, 2006; Kelling & Coles, 1996). Commenting on the shifting conceptions of harm in the discourse on criminalization, leading critical theorist Bernard Harcourt (1999) observed: "[T]oday the debate is no longer structured. It is, instead, a harm free-for-all: a cacophony of competing harm arguments without any way to resolve them." (p. 119)

The three experimental studies that follow show that when it comes to criminalizing morally offensive conduct, motivated cognition can create a certain plasticity in people's perceptions of harm. First, a pilot study sought to identify scenarios that induce defiance of the harm principle, such that people want to criminalize the acts even if they do *not* think the behaviors cause harm to others. Study 1 then used these acts to test the central research query: Is the concept of harm cognitively malleable, such that people who want to penalize such acts will impute harm to the conduct if told that the law requires a finding of harm in order to criminalize? We hypothesized that the participants would, without full awareness, recruit harm to achieve their end punishment goals ostensibly within the terms of the given legal constraint. Study 2 was designed to rule out a non-motivational alterative for the findings and to provide evidence that people on

both sides of the ideological spectrum exhibit this effect. Finally, Study 3 sought to confirm the non-deliberate nature of motivated cognition in this context and thereby uncover a potential means of curtailing the phenomenon.

B. Study 1: The Plasticity of Harm

i. Participants

The 90 respondents were Princeton University students who participated in Study 1 for partial credit toward a course requirement.[3] They were 52% female and ranged in age from 18 to 23, with a mean age of 20.

ii. Methodology

Study 1 was designed to demonstrate the plasticity of harm in the context of criminalizing morally offensive conduct. We sought to show that when people are presented with a legal constraint that requires harm in order to punish, and are then asked to judge an act that they want to penalize regardless of whether it causes harm to others, they will less-than-consciously impute harm to the conduct in order to legitimately criminalize it within the terms of the given law.

(a) Pilot study

Prior to Study 1, we conducted a pilot study to identify acts so contrary to widespread social values that people would want to criminalize them even if they

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[3] To test whether the participants carefully and comprehensively read the instructions and information presented at the beginning of the questionnaire, which included the experimental manipulation, we inserted a manipulation check asking them to "write today's date" after reading the material. We excluded 11 respondents who failed to write the date. We also excluded one participant who indicated during debriefing that he did not believe the manipulation.

regarded the conduct as harmless to others.[4] The participants read short descriptions of 14 types of socially offensive conduct and were asked to answer three questions about each scenario: (1) Does this conduct violate deeply held social values? (2) Does this conduct cause any harm? (3) Should this conduct be criminalized?[5] For conduct that indisputably causes harm to others, such as committing a murder, one would expect people to answer all three questions in the affirmative. However, with our examples, we were seeking to identify scenarios that the respondents would say did violate social values, did *not* cause harm, but should nevertheless be criminalized.

The pilot study revealed that when a conduct violated deeply held social values, one of two patterns emerged in the respondents' judgments about harm and crime. In most of the scenarios, the participants' responses were in line with the harm principle: reports of harm and decisions to criminalize seemed to go hand in hand. The dominance of this pattern shows that, as reflected in the Model Penal Code and traditional debates on criminalization, the harm principle is quite robust in people's intuitions about when the State should intervene to punish someone's conduct.

Of primary interest for purposes of Study 1, however, were two scenarios that "defied" the harm principle, such that people criminalized the acts even while acknowledging that the conduct caused no harm to others: a public nudity case ("A man goes to the supermarket in the nude") and a flag-defiling case ("A man intentionally uses

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[4] The 98 respondents in the pilot study were students at Princeton University who participated for partial credit toward a course requirement (we excluded the data of four respondents because they neglected to answer all of the questions). The participants were 59% female and ranged in age from 18 to 40, with a mean age of 21.

[5] The questions were presented in a fixed order for all of the scenarios, but the scenarios were presented in a counterbalanced order. The definition of harm was intentionally left wide open in this exploratory study.

the national flag to wipe mud off the pavement in front of his house on a Sunday afternoon"). Regardless of their knowledge of the law, a majority of the participants in the pilot study criminalized the public nudity conduct—which would, in fact, be punishable in many jurisdictions (e.g., *Barnes v. Glen Theater*, 1991); whereas a small minority criminalized the flag-defiling conduct—which would be protected under the First Amendment (*Texas v. Johnson,* 1989; *United States v. Eichman*, 1990). Either way, those who punished these acts were divided on the question on whether or not the behaviors actually caused any harm. The public nudity and flag-defiling scenarios were therefore of primary interest for Study 1, in which we investigated whether people would impute harm to these acts in order to punish them within the terms of an added legal constraint.

(b) Manipulation and measures

The participants in Study 1 were randomly assigned to either a Constraint condition in which they received a necessity-of-harm manipulation, or a Control condition in which no manipulation was introduced. Specifically, those assigned to the Constraint condition were presented with the following information at the start of the study, and once again as a reminder halfway through the survey: "U.S. courts have decided that the government can impose a criminal penalty only upon conduct that is shown to cause harm." This manipulation essentially imposed the harm principle as a legal constraint upon the participants' criminalization decisions. Although the statement is not accurate, we introduced a check during debriefing to confirm that the participants believed that this "law" existed, and only one respondent was excluded for not finding it credible. The participants assigned to the Control condition were under no legal restraint

in their decision making; they did not need to find harm in order to criminalize a disfavored act.

We gave all the respondents across both the Constraint and Control conditions the following definition of harm, in order to capture thoughtful and legally relevant measures of the variable: "Harm, for these purposes, is defined as injury to a person or persons that can be clearly demonstrated. There could be types of conduct that are wrong, but do not cause harm." By imposing these parameters, we anticipated that the overall reports of harm would go down as compared to the pilot study, in which the definition of harm had been left entirely open-ended. The greater specification of harm in this experiment thus created a more conservative test of the plasticity hypothesis. If, despite this heightened definition, those participants faced with the legal constraint imputed harm to conduct that they wanted to criminalize, such a finding would provide compelling evidence that people do in fact recruit harm to achieve their punishment goals.

After this initial information, the participants were presented with short descriptions of different types of conduct, including the public nudity and flag-defiling scenarios that the pilot study had identified as defying the harm principle. To keep judgments about harm and crime in perspective, the participants were also asked to rate various calibration scenarios, including socially deviant acts in which people's harm/crime judgments tend to comply with the harm principle (as shown by the pilot study), as well as more typical crimes that are clearly harmful and punishable (e.g., physical assault). All the scenarios were presented in counterbalanced order, using a Latin square design.

Following each scenario, the respondents were asked to indicate, among other things, whether or not the government should punish the conduct through a criminal penalty; whether or not the conduct caused clearly demonstrable harm to others (a dichotomous yes/no measure); and how much harm, if any, the conduct caused (a continuous measure on an eight-point scale ranging from "no harm" to "a lot" of harm).[6]

iii. Hypotheses

The participants in the Constraint condition, who were presented with the target scenarios (acts that people criminalize even without finding harm) and the necessity-of-harm constraint (the legal instruction to criminalize conduct only if it causes harm), could be expected to respond in one of three ways: (1) they could abide by the legal constraint and not punish the offensive acts when they perceived no harm, thereby causing the rate of criminalization to go down as compared to in the Control condition; (2) they could ignore the legal constraint and continue to punish the offensive acts at the same rate even when they reported no harm, which would lead to no difference in the ratings of criminalization and harm between the two conditions; or (3) they could recruit harm in order to meet their criminalization goals, ostensibly within the terms of the legal constraint.

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6. These questions were posed in a fixed order after presenting each of the scenarios. While the participants in the pilot study had been asked first about harm and then about criminalization, the respondents in Study 1 were asked first about criminalization and then about harm. Study 2 (which follows) then counter-balanced the order of these questions. We did not expect any differences to arise based on the order in which the questions were asked, and the data from the Control condition of Study 1 (which mirrored the methodology of the pilot study, but flipped the order of the harm/crime measures) as well as Study 2 (which counterbalanced the order) confirmed this expectation.

We predicted the third outcome. Given people's general desire to comply with the law, and Study 1's finding that people tend to intuitively subscribe to the harm principle, we did not expect respondents to entirely ignore the principle when it was presented in the form of a legal constraint. Nor did we expect them to ignore their own justice intuitions. The theory of motivated cognition predicts that people reach for ways to justify outcomes that feel right to them. We therefore expected that those participants who wanted to criminalize the target acts would impute harm to the conduct in order to support their desired punishment outcomes within the terms of the legal constraint. That is, we expected the number of harm reports to be higher in the Constraint condition as compared to the Control condition, while punishment recommendations stayed constant—thereby demonstrating the plasticity of harm in the service of people's criminalization goals.

iv. Results

(a) The rigidity of criminalization

As predicted, the necessity-of-harm manipulation did not reduce the extent to which participants penalized the offensive conduct in the target scenarios. When we averaged the criminalization scores for the nudity and flag-defiling scenarios, there was no statistical difference between the Constraint and Control conditions ($t(88) = .80$, $p = .43$). Chi-square analyses of the relationship between condition and criminalization scores were also non-significant in both scenarios (χ^2 (1, $N = 90$) = .50, $p = .64$ (nudity scenario); χ^2 (1, $N = 90$) = .28, $p = .79$ (flag-defiling scenario)), indicating that any slight variation in the criminalization count between the two conditions was attributable to chance, and not the experimental manipulation.

These results show the perseverance of people's criminalization judgments. Even though we knew from the pilot study that approximately half of the people who want to punish acts like public nudity and flag defiling do so despite reporting them as non-harmful, telling people that the law requires a finding of harm in order to impose a criminal penalty on these behaviors did not reduce the rate at which they were criminalized.

(b) The plasticity of harm

Yet, the participants who had been presented with the necessity-of-harm manipulation did not simply ignore the legal constraint either. Instead, they found a way to penalize the disliked conduct while seemingly complying with the law: by recruiting harm on an as-needed basis. For both scenarios, the participants who wanted to punish the conduct in question were significantly more likely to report harm in the Constraint condition (where the law required a finding of harm to punish), as compared to in the Control condition (where there was no legal constraint) (χ^2 (1, N = 65) = 11.20, p = .001 (nudity scenario); χ^2 (1, N = 18) = 7.90, p = .005 (flag-defiling scenario)).

Figure 1 illustrates the key findings that the percentage of participants who recommended criminalizing the acts (averaged across the nudity and flag-defiling scenarios) remained statistically constant across the Constraint and Control conditions, whereas the percentage of criminalizing participants who reported harm rose dramatically in the Constraint condition. This discrepancy illustrates the rigidity of people's criminalization goals, as compared to the plasticity in their reports of harm to achieve those goals within the terms of the given legal constraint.

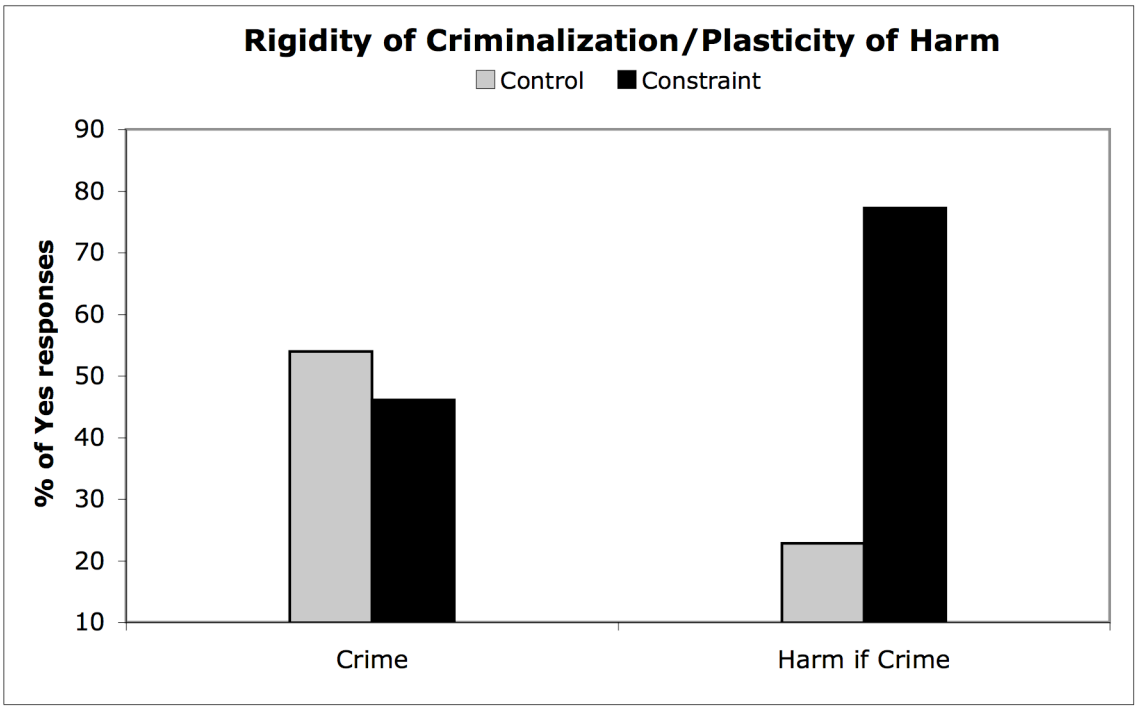
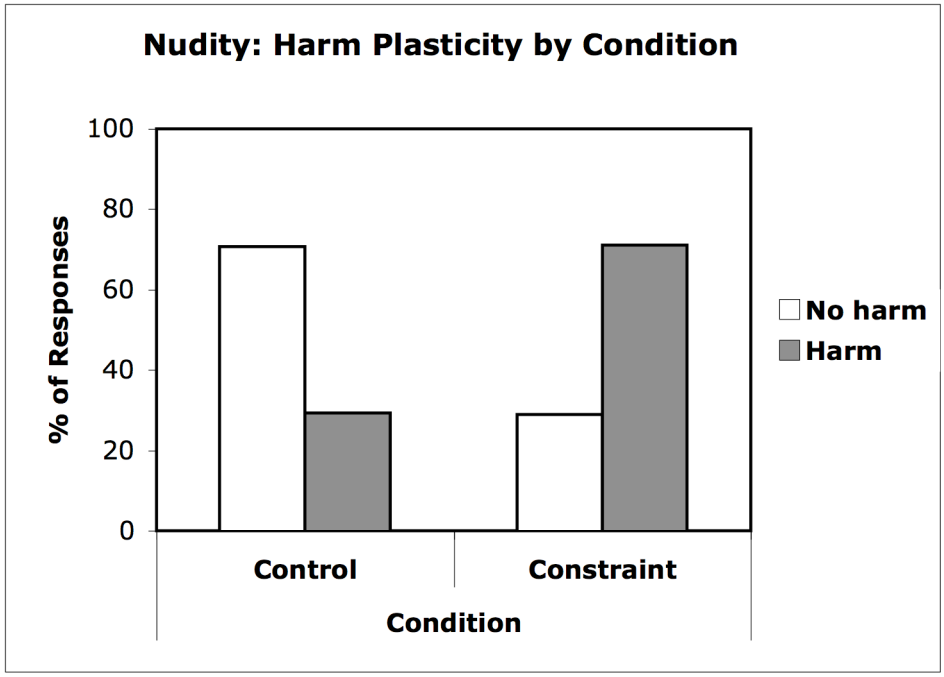


Figure 1. Study 1: Percentage of criminalization recommendations (among all of the participants) and harm reports (among the participants who criminalized), averaged across the nudity and flag-defiling scenarios, by condition (Control vs. Constraint).

More specifically, among the respondents who wanted to punish the act of public nudity (which the majority of the participants did), reports of harm more than doubled in the Constraint condition: 22 of these 31 participants reported harm, as compared to 10 of the 34 respondents in the Control condition who wanted to criminalize. Although far fewer participants wanted to punish the act of flag defiling, 6 out of the 8 respondents who did so in the Constraint condition reported harm, whereas only 1 participant among the 10 in the Control condition who wanted to criminalize reported harm. These findings are illustrated in Figures 2a and 2b.



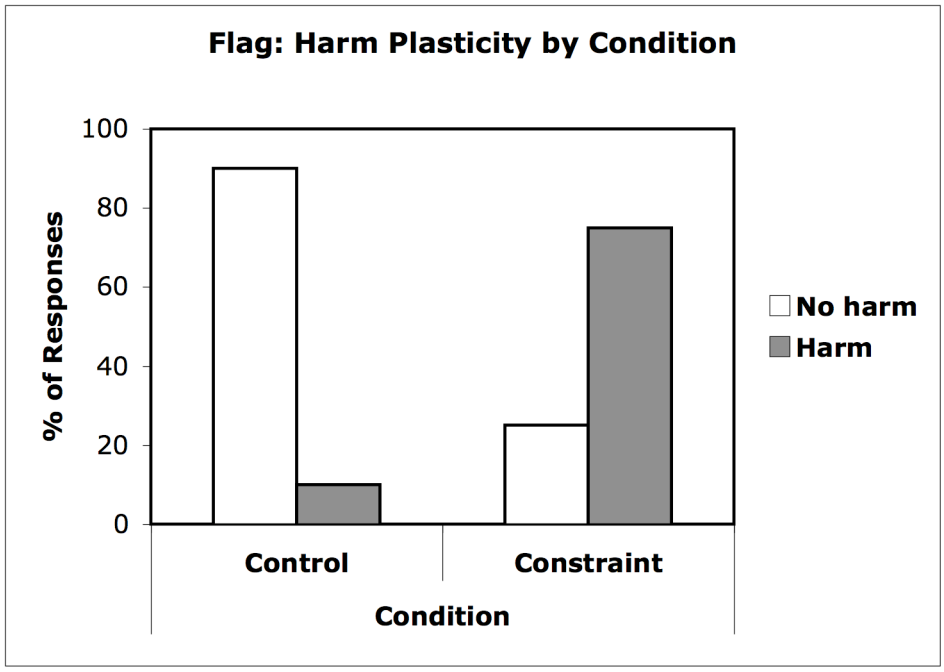


Figure 2. Study 1: Percentage of harm reports (among the participants who criminalized) in the (a) nudity and (b) flag-defiling scenarios, by condition (Control vs. Constraint).

The significant growth in reports of harm between the Constraint and Control conditions supports the predicted plasticity of harm effect. In both scenarios, those who wanted to punish were significantly more likely to impute harm to the conduct when a finding of harm was required to penalize, as compared to when no constraint was imposed upon the criminalization decision. Due to the greater specification of harm in this experiment, the frequency of reported harm was lower in the Control condition than it had been for the same scenarios in the pilot study, making the plasticity effect—i.e., the significantly higher frequency of harm reported in the Constraint condition—all the more striking.

Finally, analysis of the continuous measure of harm provided further evidence of motivated cognition. In addition to being asked a yes/no question about whether the act in question caused harm, the participants had been asked to indicate *how much* harm, if any at all, the conduct caused. An analysis of variance conducted upon the responses of those who punished the conduct revealed that these participants reported significantly higher degrees of harm in the Constraint condition as compared to the Control condition, in both the nudity and flag-defiling scenarios ($F(1, 63) = 3.86$, $p = .05$, $\eta^2 = .06$ (nudity scenario); $F(1, 16) = 6.34$, $p = .02$, $\eta^2 = .28$ (flag-defiling scenario)). Thus, those who were told that the law requires a finding of harm in order to criminalize were not only more likely to report the presence of harm if they wanted to penalize, but also reported significantly greater levels of harm than those who were not informed of the legal constraint—as shown in Figure 3.

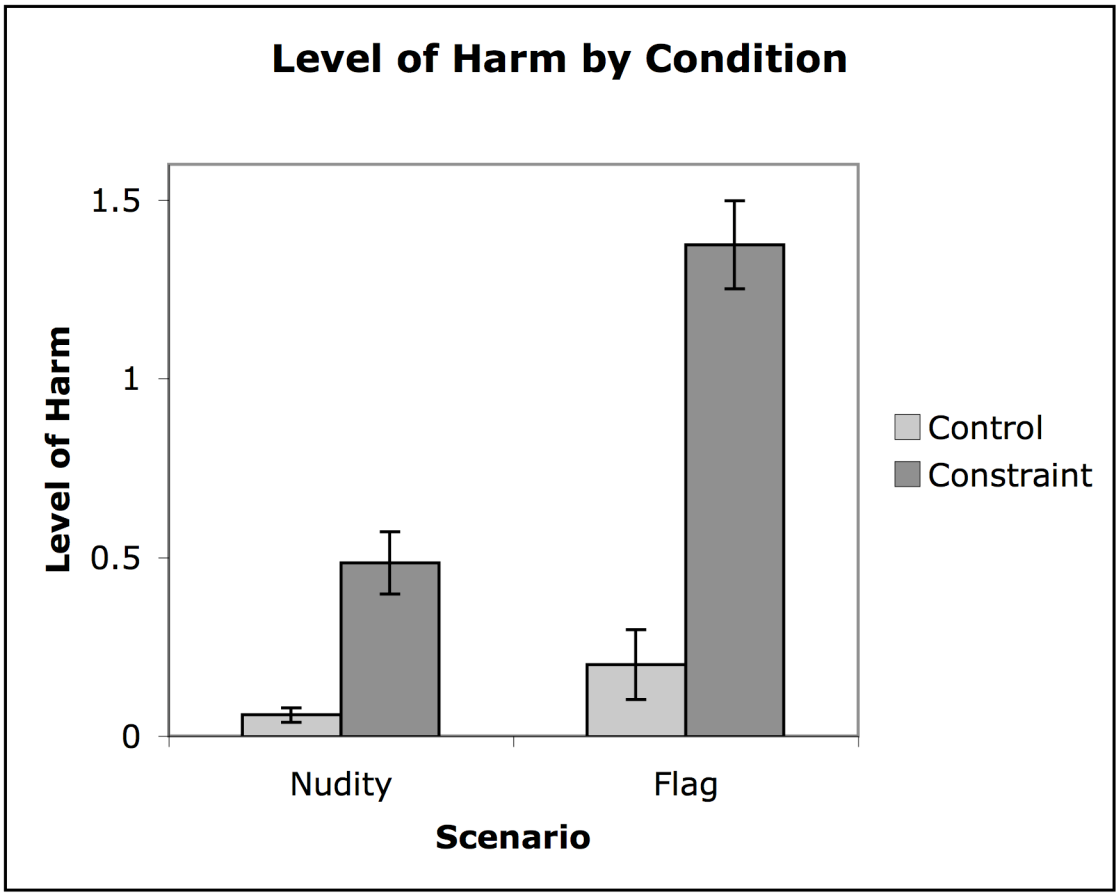


Figure 3. Study 1: Level of harm reported (among the participants who criminalized) in the nudity and flag-defiling scenarios, by condition (Control vs. Constraint).

Although the statistical effect size of the difference between the levels of harm reported in the two conditions was noteworthy, especially in the flag-defiling scenario, the average level of harm reported in each scenario was relatively low even in the Constraint conditions (i.e., below the second point on an eight-point scale). This is not surprising given that the legal constraint called for harm to punish, but did not suggest that any particular amount of harm was needed. Thus, the participants simply needed to cross a threshold of some *de minimis* harm in order to justify their criminalization decisions within the terms of the given law. Consistent with the theory of motivated

cognition—which posits that people only stretch their reasoning to the extent necessary to achieve their desired outcomes—the respondents did not recruit any more harm than necessary. Correspondingly, the participants assigned relatively minor penalties in these cases. The most common type of punishment recommended was a monetary fine, followed by a fine coupled with community service and/or a public apology. For both the public nudity and flag-defiling scenarios, the mean penalty severity was in the two-point range of a seven-point scale.

In sum, the results of Study 1 indicate that the experimental manipulation had its predicted effect. When we presented participants with acts that people criminalize without reporting harm, but informed them that the law requires a finding of harm in order to punish, those who wanted to penalize the conduct continued to do so at the same rate—but were significantly more likely to report the presence of harm and to report significantly greater levels of harm to support that choice. The respondents did not alter their criminalization goals in adherence to the necessity-of-harm constraint, but rather, recruited the harm that they needed to justify their desired punishment outcomes within the terms of the legal constraint. The data support the plasticity of harm hypothesis.

It is worth noting that the participants reported that the behaviors in the target scenarios violated widely held social values to a significantly larger extent than their own personal values
($t(64) = -8.31$, $p < .001$ (nudity scenario); $t(64) = -6.06$, $p < .001$ (flag-defiling scenario)). Considered in light of the harm plasticity finding, people were thus motivated to recruit harm in order to criminalize conduct even when they reported being less offended by it personally as compared to the rest of society. However, in the flag-

defiling scenario, the respondents' punishment recommendations were significantly correlated only with the extent to which the conduct violated their own personal values, and not societal values at large ($r(87) = .30$, $p = .004$). Thus, in the more ideologically charged scenario, punishment was fuelled primarily by people's personal disagreement with the conduct in question—a motive that is explored further in the next study.

C. Study 2: Motivating Role of Ideological Incongruency

An alternative to the motivated cognition explanation for Study 1's plasticity of harm finding could be that, rather than imputing harm to the conduct they wanted to criminalize, those presented with the legal constraint were spurred to conduct a "more intense but essentially objective search" for harm (Kunda, 1990, p. 489). Study 2 sought to rule out this possibility by more explicitly demonstrating that subjective, directional goals drive the recruiting of harm in this context.

To this end, we triggered an additional motive to punish based on an ideologically repugnant viewpoint. If the results in Study 1 can be explained by saying that there always was harm present in the nudity scenario but it took a harm constraint for the respondents to look hard enough to find it, then the introduction of this second legally irrelevant factor that heightens the motivation to punish should not change whether or not people find harm stemming from the nudity itself. We chose the issue of abortion for this purpose, because people on both sides of the debate—pro-life or pro-choice—tend to have strong views on the matter. The design of Study 2 thus also provided an opportunity to test the universality of the harm plasticity effect across people on both sides of the abortion debate.

i. Participants

The 53 respondents were shoppers at a shopping mall in New Jersey who participated in Study 2 for a small monetary payment.[7] They were 70% female and ranged in age from 18 to 65, with a mean age of 30.

ii. Methodology

The first step in Study 2 was to gauge the participants' views on abortion. This was done through a "social values survey," in which the respondents were asked to rate their views on various controversial issues, such as gay marriage and the death penalty. Embedded in these questions was a seven-point continuous measure of the respondents' positions on abortion (ranging from "strongly pro-life" to "strongly pro-choice"). The participants who responded using the extremes of the scale were then categorized as either pro-life (1-2) or pro-choice (6-7), and those with moderate views (3-5) were excluded from the analysis.

The respondents were next asked to fill out the experimental questionnaire, which began with the legal constraint used in Study 1— informing them that, according to the law, conduct can only be punished if it causes clearly demonstrable harm to others. However, the constraint was not used as an experimental manipulation in this study because all the participants received the same legal instruction. They were then presented with one scenario about which they answered the same criminalization and harm questions used in Study 1.

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[7] We excluded the data of respondents who failed the experimental manipulation checks and who expressed moderate views on abortion (for purposes of the experimental design, explained below).

The scenario retained the public nudity vignette from the previous experiment, because we already knew from the results of Study 1 that people recruit harm in order to punish that conduct. However, in Study 2, we added a twist whereby the nudist in the supermarket was either a pro-choice or a pro-life advocate, who held up a sign and handed out flyers stating why abortion should or should not be legalized. So, this experiment in effect had a 2x2 between-subjects design, depicted in Table 1, in which the nudist's ideological position on abortion was, by random assignment, either congruent or incongruent with the respondents' positions on abortion.

Table 1

Study 2's Between-Subjects Design

	Nudist with pro-life message	*Nudist with pro-choice message*
Pro-life respondent	Congruent	Incongruent
Pro-choice respondent	Incongruent	Congruent

The ability of the participants to make an association between the two questionnaires (the first one gauging their positions on abortion and the second one presenting an abortion-related scenario) was diminished by the fact that this study was conducted in a public mall on a day when several other researchers were doing survey experiments, so the participants were filling out numerous questionnaires. Moreover, the abortion measure was imbedded among other "hot-button" questions in the initial survey, and the two surveys were formatted to look very different from each other.

iii. Hypotheses

We predicted that the participants judging a nudist whose position on abortion was ideologically incongruent with their own would be more motivated to punish him, and would therefore recommend more severe penalties and be more likely to impute harm to the conduct (as compared to when the nudist's message on abortion was congruent with their own). We expected to see this result even though the ideological position of the nudist is not only legally irrelevant, but also constitutionally impermissible to consider for purposes of punishment in this context, under the First Amendment of the U.S. Constitution.

Moreover, we expected to see a heightened harm plasticity effect across participants with opposite ideological positions on abortion. We predicted that respondents who were faced with a message that clashed with their own views would be vulnerable to the motivated cognition effect regardless of whether they themselves were pro-life or pro-choice. However, consistent with the illusion of objectivity, we expected that the participants would not recognize (or report) the legally inappropriate motive driving their punishment decisions.

iv. Results

(a) Enhanced punishment

As expected, the participants did recommend punishing the nudist differently depending on whether or not they agreed with his message ($F(1, 51) = 4.01$, $p = .05$, $\eta^2 = .07$.). Specifically, as depicted in Figure 4, the respondents assigned significantly higher fines ($F(1, 51) = 13.22$, $p = .001$, $\eta^2 = .21$) and prison sentences $F(1, 51) = 4.34$, $p = .04$;

η^2 = .08) to the nudist if his message on abortion was incongruent with their own positions on the issue.

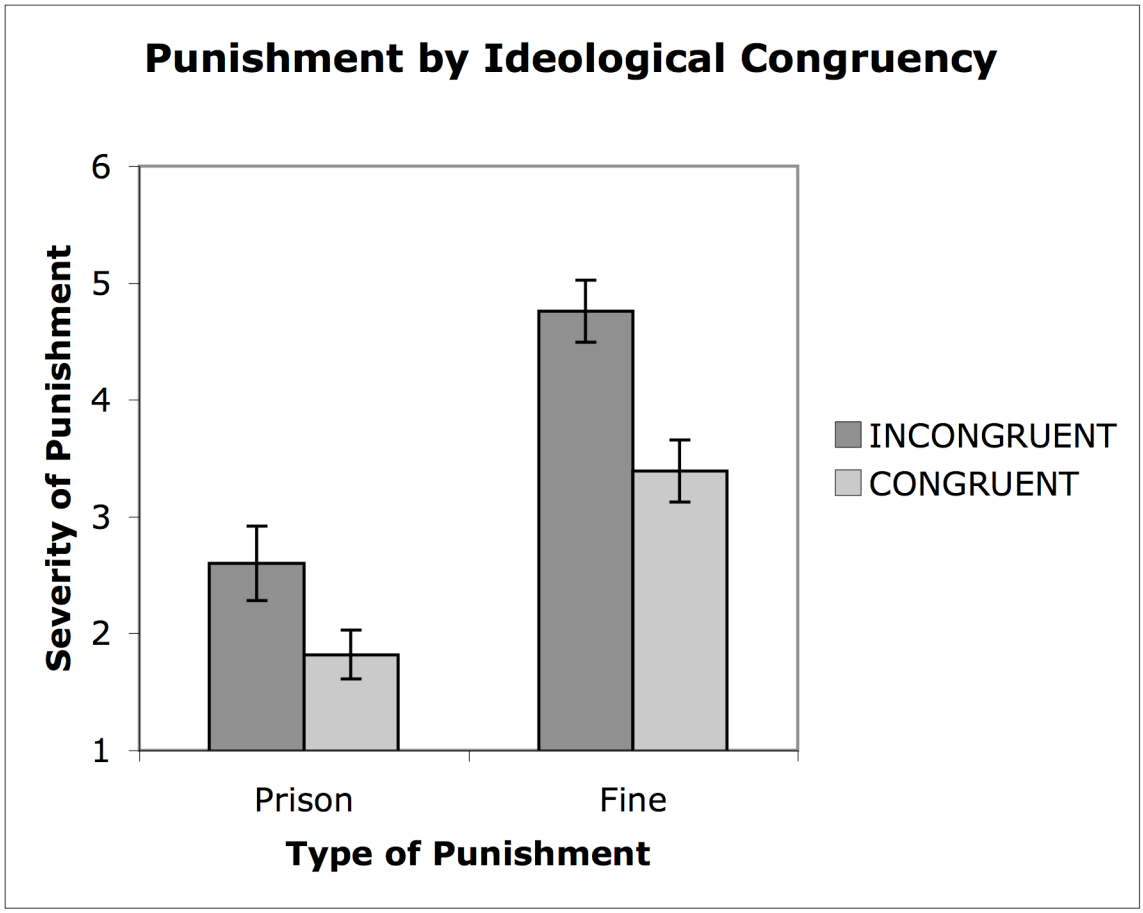

Figure 4. Study 2: Prison and fine recommendations, by congruency with the nudist's ideological position (Incongruent vs. Congruent).

(b) Imputed harm

Consistent with our hypothesis, the respondents who fell into the Incongruent condition, and were thereby more motivated to punish the nudist, reported significantly more harm in the scenario as compared to those who fell into the Congruent condition ($F(1, 51) = 7.26$, $p = .01$, $\eta^2 = .13$)—as illustrated in Figure 5. The act of public nudity

and the necessity-of-harm constraint were held constant across conditions and thus could not account for this significant difference in harm ratings; the only feature that differed was whether or not the nudist's message on abortion was consistent with the respondents' own views. So, the participants' reported perceptions of harm were directionally motivated not only by their desire to criminalize nudity within the terms of the given legal constraint (as evidenced in Study 1), but also by their personal ideological beliefs about a topic that was legally irrelevant to the alleged crime. This indicates that the respondents did not neutrally uncover existing harm in the nudity scenario, but rather, imputed harm based on their punishment motives.

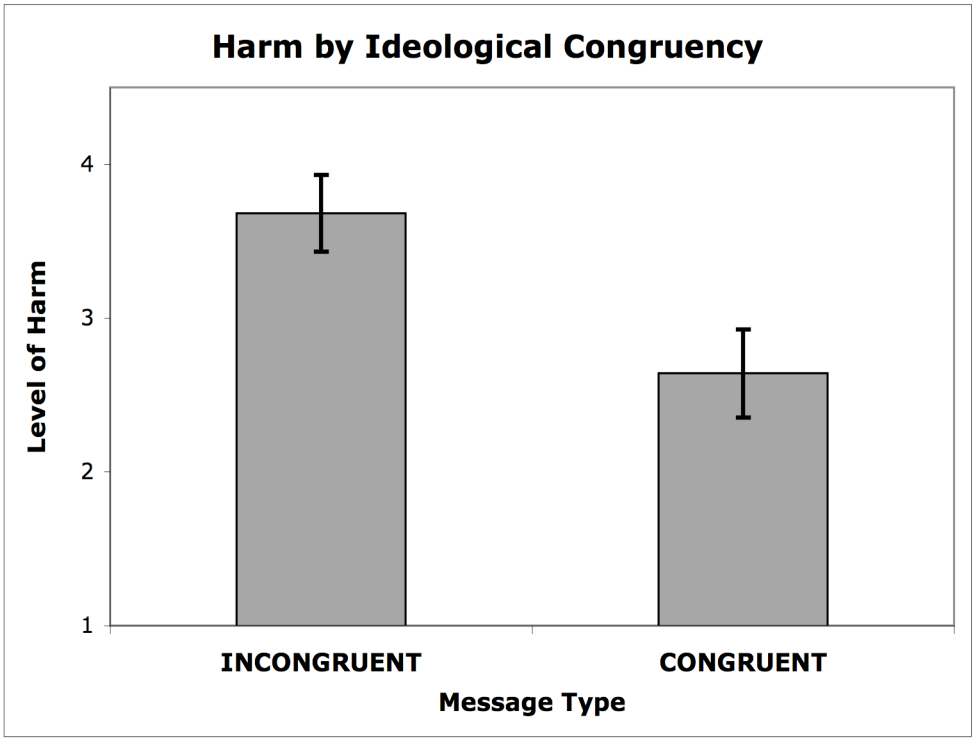

Figure 5. Study 2: Level of reported harm, by congruency with the nudist's ideological position (Incongruent vs. Congruent).

Yet, when the participants were asked to describe the harm they perceived in the scenario, their explanations focused exclusively on the public nudity, and not on the nudist's position on abortion. In fact, only one (pro-choice) participant in the study explicitly referenced the nudist's (pro-life) position on abortion in her explanation of harm. This finding is consistent with the illusion of objectivity that governs motivated cognition. Although this study was not designed to provide direct evidence for the non-deliberate nature of the process, the respondents' self reports did not give any indication that their ideological views were purposefully motivating their judgments.

(c) Individual difference findings

The results of Study 2 presented thus far have been grouped and analyzed according to the congruency between the views of the participants and the message of the actor they were judging, rather than by each respondent's particular position on abortion (i.e., pro-life or pro-choice). However, we also examined the effect of the latter, in order to test for the universality of the plasticity effect across ideological views.

Analysis of this individual difference measure revealed a significant two-way interaction between the ideological position of the participants and the nudist on judgments of harm ($F(1, 49) = 5.42$, $p = .02$, $\eta^2 = .10$). The pro-life respondents reported significantly more harm when judging a nudist with a pro-choice message as compared to a nudist with a pro-life message, and vice versa for the pro-choice respondents. We did additionally find a main effect of abortion position, whereby pro-life participants (who were more politically conservative than pro-choice participants[8]) generally assigned more

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[8] There was a significant correlation between the participants' positions on abortion and their self-reported political views: those who were pro-life reported being more

severe punishment and reported greater perceptions of harm in the scenario, regardless of the nudist's position on abortion. These results are shown illustrated in Figure 6.

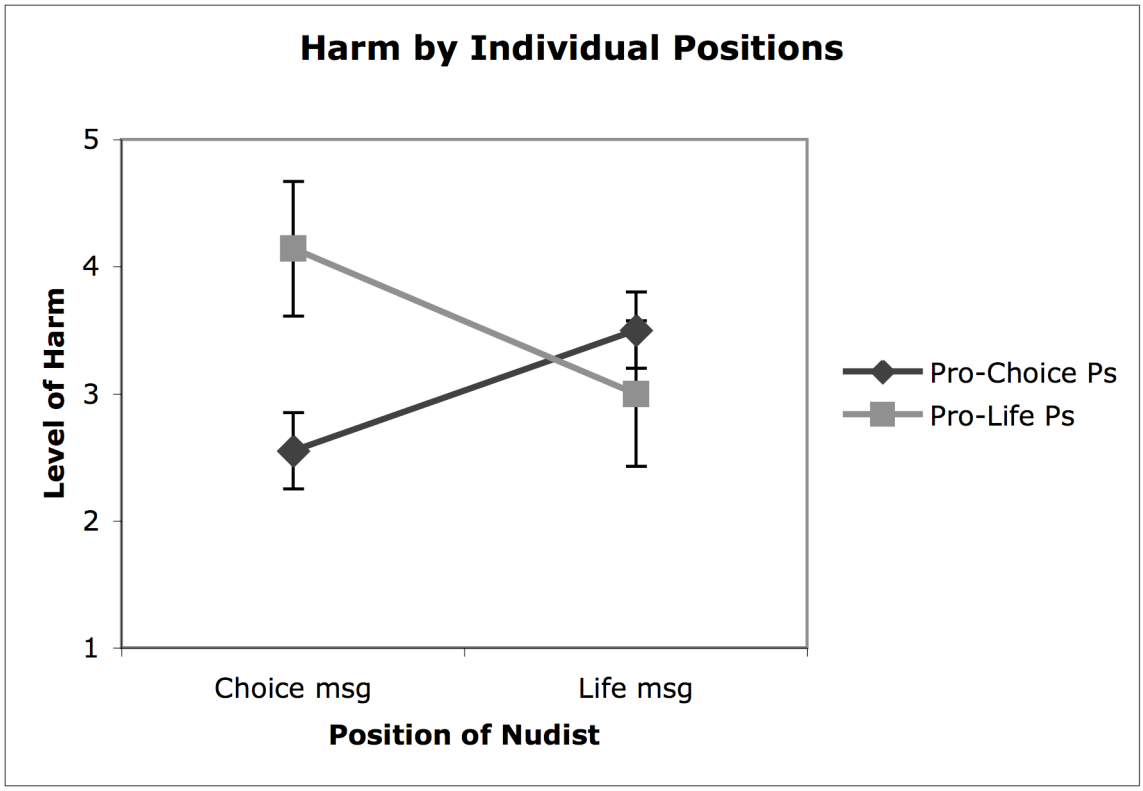

Figure 6. Study 2: Level of harm reported, by ideological positions of the participants and the nudist (Pro-Choice vs. Pro-Life).

In sum, Study 2 demonstrated that a legally irrelevant ideological factor increased people's directional motivation to punish disliked conduct. This augmented imputations of harm, seemingly without the decision makers' recognition (or acknowledgment), since they maintained that the harm was caused only by the public nudity. Furthermore, the results revealed a universality in people's tendency to impute harm in this context;

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politically conservative; those who were pro-choice reported being more politically liberal ($r = -.40$, $p = .003$).

motivated cognition operated in the legal judgments of both pro-life and pro-choice respondents, driven by whether or not the conduct in question conflicted with their particular position on the issue of abortion.

D. Study 3: Confronting the Illusion of Objectivity

Study 2 presented an indirect indication that those participants who recruited harm to justify their ideologically driven punishment goals were operating under an illusion of objectivity, since their explanations of the alleged harm focused exclusively on the nudity aspect of the conduct. The final study in this series sought to further investigate this important assumption of the theory of motivated cognition. If, as we suggest, the motivated recruiting of harm is a non-deliberate process, then getting people to confront the illusion of objectivity by making the motivating ideological factor salient should reduce the harm plasticity effect—thereby also pointing toward a potential remedy for this type of outcome-driven decision making.

i. Participants

The 37 respondents were Princeton University students who participated in Study 3 for partial credit toward a course requirement.[9] They were 68% female and ranged in age from 18 to 22, with a mean age of 19.

ii. Methodology

The methodology of Study 3 was the same as that of Study 2, with a critical variation. In order to more directly explore the illusion of objectivity, Study 3 used a

[9] We excluded the data of respondents who failed the manipulation checks or reported moderate views on abortion.

within-subjects design—presenting all the participants with the legal constraint requiring harm in order to punish, followed by *both* the pro-life and the pro-choice public nudity scenarios of Study 2. Thus, the participants were asked to make punishment and harm judgments, under the constraint of the harm principle, in regard to a nudist with a pro-life sign *and* a nudist with a pro-choice sign.

The pro-life and pro-choice scenarios were presented in counterbalanced order across participants and the study was conducted using a paper questionnaire (as opposed to electronic), so that the respondents could see both scenarios before making their decisions. Moreover, the participants were told in advance that they would be asked to make judgments about two scenarios, and that they should consider each of them carefully. These measures reduced the risk that the within-subject design's confrontation of the illusion of objectivity would impact only the second scenario that the respondents judged.

The respondents were then asked to rate the severity with which each actor should be punished and the extent of harm, if any, caused by each actor's conduct. The order of the punishment and harm measures was counterbalanced across participants in this study to explicitly test for order effects, which were not found to be present.

iii. Hypotheses

We predicted that the within-subjects design in Study 3 would peel away the illusion of objectivity that amplified the recruiting of harm in Study 2. Since it would be obvious to the participants that the public nudity component was the same in both scenarios, irrespective of the nudist's position on abortion, they could no longer inadvertently cite harm caused by the nudity as the justification for more severely

punishing the nudist whose message was incongruent with their own views on abortion (as they did in Study 2). So, if the plasticity of harm resulted from an unintentionally biased cognitive process, the transparency in Study 3's presentation of scenarios could be expected to remove ideologically motivated discrepancies in people's punishment decisions, thereby curtailing the need to recruit harm.

iv. Results

When confronted with both the pro-life and the pro-choice nudists, the participants in this experiment did not punish the actor whose message was incongruent with their own views on abortion any differently than the actor whose message was congruent with their personal beliefs. Although the pro-life respondents did generally punish more severely and assign more jail time to the nude protester than the pro-choice respondents did (as seen in Study 2), this occurred in both scenarios without regard to the content of the protester's message. Likewise, there was no significant difference in the pro-choice respondents' punishment ratings of the pro-life and pro-choice nudists.

The absence of ideologically-driven differences in punishment obviated the need to impute harm based on this factor. As Figure 7 demonstrates, the congruency between the nudist's message and the participants' own positions on abortion had no effect on the levels of harm reported in each scenario (in contrast to the significant interaction seen in Study 2's Figure 6 above).

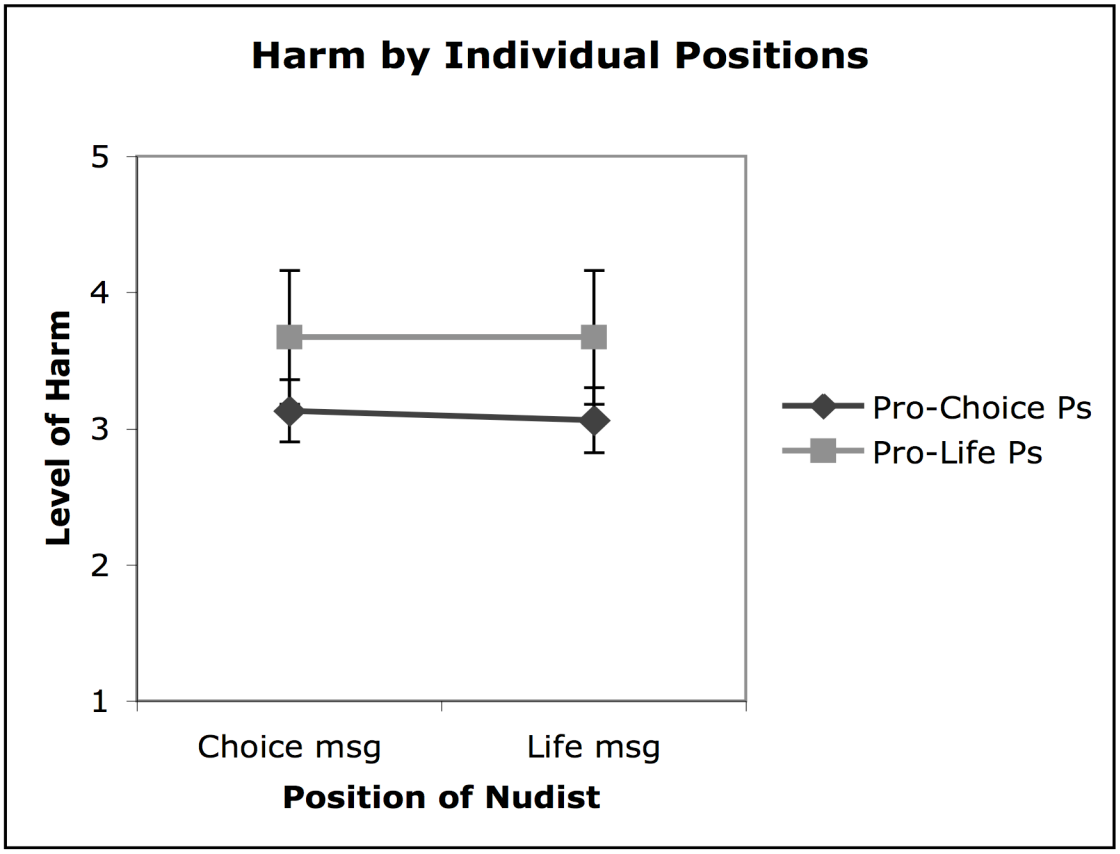

Figure 7. Study 3: Level of harm reported, by ideological positions of the participants and the nudist (Pro-Choice vs. Pro-Life).

In fact, the mean levels of harm reported in both the scenarios in Study 3 (M = 3.16 for the pro-life nudist and M = 3.22 for the pro-choice nudist, on seven-point scales), which were *not* significantly different from each other (F (1, 35) = .39, p = .54, η^2 = .01), fell right in-between the mean levels of harm reported in Study 2's congruent (M = 2.64) and incongruent (M = 3.68) conditions, which *were* significantly different from each other (see Figure 5 above).

The presentation of two scenarios that differed only in the ideological content of the actor's message thus forced the respondents to confront the potential bias that might

be triggered by this legally irrelevant factor, thereby eliminating the motivated imputation of harm based on their own ideological positions.[10] The results of Study 3 also abated a potential concern that the participants in these experiments may not have understood that, despite the given definition of harm, offense to one's values did not count as harm under the terms of the legal constraint.

E. Discussion: Studies 1-3

The three studies described above sought to illustrate how and why motivated cognition can drive decision making in a theoretical context inspired by the long-debated role of harm in criminalization. The results revealed that although the harm principle dominates people's intuitions about punishment, there are acts—like public nudity and flag defiling—that people want to criminalize even without finding harm. Yet, when informed that the law requires a finding of harm in order to penalize such conduct, those who want to punish are significantly more likely to report the presence of harm, and report significantly greater levels of harm. The participants in our studies did not alter their criminalization goals in adherence to the necessity-of-harm constraint, but rather,

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[10.] In both the Incongruent and Congruent conditions of Studies 2 and 3 (in which all the respondents received the legal constraint), mean reports of harm were higher than in the Constraint condition of Study 1—possibly indicating that an ideologically motivated nudist was seen as more harmful than a nudist without an expressive message, regardless of the position he was advocating. The higher reporting of harm in Study 3 as compared to Study 1 could also suggest that, while confronting the potential of an ideological bias curtailed the recruiting of harm based on ideological opposition, it did not reduce the underlying imputation of harm to public nudity when people wanted to criminalize the conduct (i.e., the original harm plasticity effect demonstrated in Study 1). However, the capacity for directly comparing the data of Studies 2 and 3 with that of Study 1 is limited, because Studies 2 and 3 used different scales for the continuous measure of harm, and the participants were specifically selected for their strong pro-life or pro-choice positions on the issue of abortion (whereas the results of Studies 2 and 3 can be directly compared to each other because both those experiments used the same scales and similarly selective samples).

recruited the harms that they needed to justify their desired punishment outcomes, ostensibly within the terms of the law. Our data thereby provided an experimental demonstration of the predicted plasticity-of-harm effect.

We ruled out the non-motivational alternative—that the legal constraint inspired a more intense but essentially objective search for harm—by showing that the imputing of harm was directionally exacerbated by a legally irrelevant ideological factor. Disagreement with a public nudist's message on abortion enhanced people's motivations to penalize the nudity, which led to higher punishment recommendations and correspondingly more recruiting of harm. However, the respondents' explanations of the perceived harm focused only on the non-ideological aspect of the conduct, which was constant across conditions and thus could not account for the significant difference in harm reports.

The effect of a legally extrinsic motive directionally driving harm judgments was seen among both pro-choice and pro-life participants, suggesting that the tendency to recruit harm in the service of preferred outcomes is ideologically universal. This is consistent with previous findings that liberals and conservatives are "uniformly vulnerable" to the motivated cognition effect (Kahan, unpublished, p. 28; Ferguson et al., 2008). However, when the ideological aspect of the scenarios was made transparent, the participants refrained from basing their punishment and harm decisions on it. Although the respondents still imputed harm in order to criminalize nudity within the terms of the legal constraint, they were no longer motivated by their personal views on abortion. This result provides some evidence for the non-deliberate nature of motivated cognition in this

context (and points toward a potential remedy—which will be further explored in Study 6).

F. Legal Applications

i. Implications for Harm and Beyond

The harm principle has played a pivotal role in curtailing the legal enforcement of morality through state regulation, and these experiments are not intended to suggest that this principle is now useless or obsolete. To the contrary, the pilot study's finding that only a few acts defied the harm principle demonstrates the dominant role that harm implicitly plays in guiding people's instincts about whether or not to criminalize. This in itself is an important result; it suggests that, to a large extent, people tend to intuitively follow a utilitarian "harm goes with crime" logic when making these types of legal judgments.

We were, however, able to identify some types of conduct—e.g., public nudity and flag defiling—that people wanted to criminalize even without finding harm. And it was in these scenarios that participants in Study 1 imputed harm, if necessary, to legally justify their moral intuitions about punishment. The results therefore suggest that the concept of harm may not be as cognitively stable or reliable as the legal system assumes. This calls into question the various laws and policies that are based on findings of harm, to the extent that such determinations may be endogenous to the desired outcomes of legal decision makers. In the current American justice system, "[t]he duty of lawmakers, judges, and citizens to justify their positions on grounds susceptible of affirmation by persons of diverse moral persuasions—paradigmatically, the prevention of harm—is deeply woven into prevailing norms of legal and political discourse" (Kahan, 2007, p.

116). However, these first three studies demonstrate that while supposedly objective standards like the harm principle appear to provide a way to overcome sectarian biases in legal decision making, the rhetoric of harm can covertly become a conduit for morally or ideologically motivated agendas.

In fact, rather than actually enforcing neutrality, seemingly objective legal constraints like the harm principle could ironically just exacerbate people's illusions of neutrality by leading them to believe that they are "satisfying the duty of impartiality" when they articulate a harm-based justification (Kahan, 2007, p. 144). The finding that people with conflicting positions on abortion significantly differed in their perceptions of the harm caused by the scenario involving an abortion-related message—while neglecting to recognize the influence that this ideological factor had on their judgments—thereby helps explain the intensity of the legal conflicts that arise over divisive issues like abortion or gay marriage. The drive to comply with a "neutral" legal constraint (e.g., a requirement of harm in order to punish) can seemingly transform such conflicts into debates about allegedly objective "facts" (e.g., whether or not an act causes harm to others), when perceptions of those "facts" are actually cognitively motivated by people's subjective moral intuitions. Differing viewpoints may therefore be seen as irrational or dishonest, because they appear to be contrary to objective truths rather than subjective preferences.

The present studies were not designed to demonstrate that the participants' punishment motives were retributive (i.e., punishment as an end in itself, because the transgressor "deserves" it), as opposed to utilitarian (i.e., punishment as a means to an end). In fact, since the participants reported that the given scenarios violated their

personal and social values, one could make a utilitarian argument for deterring the acts even if they did not cause "harm" to others. Nevertheless, without a finding of such harm, penalizing the conduct would violate the specific utilitarian goal of the harm principle that was imposed as a legal constraint in these experiments.

In the context of criminal law, Robinson and Darley (1995) have argued that the "failure to criminalize certain conduct, which the community finds morally offensive, . . . call[s] into question the moral judgment of the code drafters, which in turn may undercut the law's moral voice . . . [and] reduce the criminal law's compliance power" (p. 202). Yet, the participants who wanted to penalize the moral violations in our studies did not blatantly ignore the utilitarian constraint that required a finding of harm in order to punish; instead, they recruited the harm necessary to fulfill their desired outcomes while appearing to remain in compliance with the given law. In this manner, the findings illustrate how motivated cognition can enable the fulfillment of popular punishment impulses seemingly within the terms of utilitarian criminal justice policies.

The legal implications of these results are not confined to perceptions of harm in criminal judgments. Similar forms of motivated cognition could influence perceptions of other elements of an alleged crime, such as causation and intent, so the findings dovetail well with the experimental research on criminal blame reviewed in Chapter III (e.g., Alicke 1992; Alicke, 2000; Nadler & McDonnell, 2011; Nadler, 2012). Furthermore, motivated cognition driven by punishment goals could bias assessments of harm in other realms of law beyond criminal regulation—such as torts litigation, where a requirement of harm is "firmly embedded" and punitive damages are used to punish certain conduct (Darley, Kugler, Solan, & Sanders, 2010, p. 53; *Exxon Shipping Co. v. Baker*, 2008).

ii. Constitutional Consequences

The results of Studies 1-3 also speak to the concern that "constitutional theorists have paid too much attention to explicating the normative content of various . . . standards and too little to the psychology of enforcing them" (Kahan et al., 2012, p. 46). Study 1, for example, demonstrated that the *Lawrence* Court's "constitutionalizing" of a harm requirement for state intervention may be circumvented by the cognitive recruiting of harm when decision makers are motivated to punish. Additionally, Study 2 illustrated that outcome-driven cognition can directly undermine the First Amendment.

The respondents in Study 2 assigned higher punishment to the nudist when his message was incongruent with their own personal beliefs—a feature of the scenario that was not only legally irrelevant, but also unconstitutional to factor into their judgments. As the Supreme Court stated in *Texas v. Johnson* (1989), holding that burning a U.S. flag is protected expression: "If there is a bedrock principle underlying the First Amendment, it is that the government may not prohibit the expression of an idea simply because society finds the idea itself offensive or disagreeable" (p. 414). Even if public nudity objectively causes harm, the degree of legally cognizable harm should not differ based on whether the nudist is pro-choice or pro-life. The Constitution requires uniform applications of the law to all such actors, regardless of the ideological position they advocate and independent of the consonance between their message and the views of those judging them.

iii. Jury Decision Making

Since the participants in these studies were ordinary citizens who could be called upon to serve on a civil or criminal jury, the implications of the results are particularly worth considering in contexts of decision making by jurors. A body of empirical research on jury decision making has shown that jurors' "naive representation of legal concepts" can trump courts' instructions on the law (Smith, 1993); that lay adjudicators will "alter their own interpretations of the facts to satisfy both the law and their own theories of justice" (Elwork & Sales, 1985); and that mock jurors rely on their own theories of criminal responsibility to reach verdicts independent of a judge's legal instructions (Wiener, Habert, Shkodriani, & Staebler, 1991). Those findings are consistent with the present hypothesis that even when people are trying to abide by the constraints of a law, their own justice goals might drive their perceptions of relevant facts.

Applied to jury decision making, the results of Studies 1-3 suggest that jurors may be motivated, without full awareness, to mold factual determinations (such as whether or not an act causes harm) to justify a desired punishment outcome based on legally irrelevant or inappropriate factors, while appearing to remain within the constraints of the given jury instructions (loosely analogous to the given legal constraint requiring harm in order to punish). In fact, Study 2's indication that lay decision makers may be particularly vulnerable to outcome-driven cognition in cases involving First Amendment rights is reminiscent of the jury's response in *Newton v. National Broadcasting Company* (1987), the defamation case with which I introduced this dissertation. The *Newton* jurors may have been motivated to impute malice to NBC and harm to Newton's reputation in

order to punish the offensive portrayal of a beloved entertainer within the legal standard that they were given.

To the extent that some of these experimental results were obtained from student samples, evidence suggests that the motivated cognition effect they illustrate could be even stronger in real cases decided by adult jurors. One mock jury study conducted upon both community residents and college students found that the former relied more on their own attributions of responsibility than on the court's instructions in reaching their verdicts, which the researchers suggested might be because community residents, like real jurors, are less accustomed to following directions than students (Wiener et al., 1991). Another experiment that collected data from college students and actual jurors who appeared for jury duty found that the tendency to bias interpretations of evidence during the course of a trial in favor of a preferred verdict was twice as high among the prospective jurors as compared to the student sample, with the jurors exhibiting "greater reliance on their prior beliefs, and more confidence in their tentatively leading verdicts" (Carlson & Russo, 2001, p. 99). The researchers suggested that since real jurors are generally older than students, their decision making may be motivated by "more stable prior beliefs" (p. 99).

Application of the present research to real jury decision making is limited, however, by the fact that all of these experiments were conducted on individuals, whereas jurors reach decisions as a group. Although a diversity of identities or opinions within a group has been shown to make people less susceptible to certain biases (Sommers, 2008), motivated cognition in collective deliberations could "trigger a self-reinforcing atmosphere of distrust and recrimination that prevents culturally diverse participants from

converging on outcomes that suit their common ends" (Kahan, 2010, p. 7). Moreover, one study that used a simulated jury setting found that group deliberations led to more polarized judgments (Myers & Kaplan, 2008). On the other hand, a meta-analysis that compared empirical literature on judgmental biases in individuals versus groups found no clear pattern of differences (Kerr, MacCoun, & Kramer, 1996). However, none of these studies on group decision making have focused on motivated cognition in particular. Further experiments are therefore needed to investigate whether group dynamics among multiple jurors (or panels of judges) intensifies or ameliorates the effect shown at the individual level in the present work.

iv. Voter-Based Initiatives: Proposition 8

Motivated cognition in lay decision makers can endanger constitutional principles not only through the jury process, but also through voter-determined referenda. On Election Day 2008, citizens of California who entered the polling booths were asked to cast their votes on Proposition 8, a ballot initiative that sought to amend the California Constitution by eliminating the right of same-sex couples to marry. In the months leading up to the vote, proponents of Proposition 8 executed an intensive "Protect Marriage" advertising campaign that emphasized "the concern that people of faith and religious groups would somehow be *harmed* by the recognition of gay marriage" and that "children need to be *protected* from exposure to gay people and their relationships" (*Perry v. Schwarzenegger*, 2010, p. 990) (emphasis added). Voters were not explicitly told that they needed to find harm in order to eliminate same-sex marriage, but the campaign messages evoked fears about same-sex relationships seemed targeted toward recruiting harms. However, the campaign "never articulated" what these alleged harms

were, relying instead on "inchoate threats vaguely associated with gays and lesbians" (pp. 937, 988, 1003).

Proposition 8 passed by a narrow margin of 52% (Bowen, 2008), and the California Supreme Court upheld the voter-enacted amendment (*Strauss v. Horton*, 2009). Two same-sex couples then filed *Perry v. Schwarzenegger* (2010), a legal action challenging Proposition 8 in federal court on the grounds that it violated the Due Process and Equal Protection Clauses of the U.S. Constitution. During oral arguments for a summary judgment motion in the case, the proponents of Proposition 8 were asked to explain how permitting same-sex marriage harmed the state's interest in marriage. The court described their attorney's response as follows: "[W]hen pressed for an answer, counsel replied: 'Your honor, my answer is: I don't know. I don't know.' But the proponents promised to demonstrate at trial "some twenty-three specific harmful consequences" of permitting same-sex marriage (*Perry*, 2010, p. 931).

The desire to pass Proposition 8 may have led its supporters to impute legally cognizable harm to same-sex marriage in their attempt to eliminate it within the boundaries of the Constitution. At trial, the district court judge determined that the proponents "provided no credible evidence to support any of the claimed adverse effects [they] promised to demonstrate" (p. 931). Meanwhile, the plaintiffs presented experts in social epidemiology, political science, economics, history, and psychology to testify about specific and concrete harms that Proposition 8 caused to same-sex couples (pp. 935, 938, 961). They also provided evidence that permitting same-sex marriage would *not* harm the state's interest in opposite-sex marriage (pp. 934-935). The district court therefore struck down Proposition 8 as unconstitutional.

Last year, the Court of Appeals for the Ninth Circuit affirmed the California district court's decision, stating, "Proposition 8 operates with no apparent purpose but to impose on gays and lesbians, through the public law, a majority's private disapproval of them and their relationships" (*Perry v. Brown*, 2012, p. 1095). Uncloaking attempts to impute legally cognizable harm to same-sex marriage for this purpose, both courts ultimately circled back to the point underlying the harm principle: that citizens cannot "use the power of the state to enforce moral convictions" (*Perry*, 2003, p. 1002; *Lawrence v. Texas*, 2003). The proponents of Proposition 8 appealed this ruling, and the U.S. Supreme Court heard oral arguments in the case, *Hollingsworth v. Perry*, just this past week; its decision is impending.

v. Judicial Safeguards?

The judiciary intervened in the *Newton* and *Perry* cases to prevent lay decision makers from undermining important constitutional principles through recruited harm. However, this safeguard is only as strong as the ability of judges themselves to resist the unintentional psychological tendency to reason toward desired legal outcomes. Although courts are required "to 'flush out' the impact, conscious or unconscious, of regulators' animosity toward those whose identity or values defy dominant norms," if professional legal decision makers are themselves cognitively motivated, then "they—like everyone else—are more or less likely to *see* challenged laws as contributing to attainment of secular ends depending on whether those laws affirm or denigrate their own cultural commitments" (Kahan et al., 2012, p. 33).

In *Perry*, for example, a judge with a directional motivation akin to that of the proponents of Proposition 8 might have subconsciously joined them in imputing a certain

type of "harm" to same-sex marriage. Actually, the proponents in that case alleged motivated cognition in the *other* direction. After retiring from the bench, Judge Vaughn Walker, the California district court judge who had presided over the *Perry* case, disclosed that he was gay. The proponents of Proposition 8 subsequently filed a motion to vacate Judge Walker's judgment on the basis that his potential interest in marrying his partner may have led to biased reasoning in the case (*Perry*, 2012, p. 1095). The motion was denied, which the Ninth Circuit upheld, stating, "To hold otherwise would demonstrate a lack of respect for the integrity of our federal courts" (p. 1096). Given, however, that the motivated cognition process operates under an illusion of objectivity, the process does not implicate the integrity of judges who are caught between their own justice intuitions and the demands of the law. Preferred outcomes could inadvertently motivate the ways in which even professional decision makers with the best of intentions perceive and construe information. Judicial susceptibility to motivated cognition is examined more thoroughly in the next chapter.

Chapter V. Cognitive "Cleansing" of Evidence: Motivated Applications of the Exclusionary Rule

Although Studies 1-3 provided an experimental demonstration of motivated cognition driving punishment judgments in a centuries-old legal context that remains timely, the constraint that called for a finding of harm in order to criminalize was hypothetical in nature. Moreover, decisions about which conduct should be criminalized are made by legislators, not jurors or judges. The next two experiments, Studies 4 and 5, were therefore designed to provide a doctrinal demonstration of the same general hypothesis in the context of a real law, the exclusionary rule, to redress the growing concern that "[t]he fit—or lack thereof—between [legal] doctrines and the psychological dispositions of constitutional decisionmakers has been almost entirely neglected" (Kahan et al., 2012, p. 46).

Suppose that police officers illegally search a car and discover evidence of a repugnant crime. The exclusionary rule holds that such evidence—regardless of the crime it exposes—is "tainted" by the wrongfulness of the search and should not be admitted in court, with some exceptions. However, just as participants in Studies 1-3 recruited harm in order to punish offensive conduct within the terms of the hypothetical legal constraint, judgments about suppressing evidence—or invoking an exception to avoid doing so—may be motivated by the drive to see a morally egregious defendant brought to justice within the terms of the exclusionary rule.

A. Doctrinal Observations

i. The Exclusionary Rule

The exclusionary rule, one of the most controversial doctrines of American criminal procedure, stems from the U.S. Constitution's Fourth Amendment protection against unreasonable searches and seizures by the government. The rule's suppression of illegally obtained evidence in criminal cases has been supported by two rationales: (1) a normative goal of protecting the integrity of the judicial process from being "contaminated" by tainted evidence (*Olmstead v. United States*, 1928), and (2) a utilitarian goal of deterring police officers from conducting wrongful searches (*Elkins v. United States*, 1960). Of these two goals, the Supreme Court has over time identified deterrence as "the single and distinct" purpose of the exclusionary rule (*Tehan v. United States ex rel. Shott*, 1966, p. 413; *Davis v. United States*, 2011).

Critical for purposes of the present experiments, the exclusionary rule is a "trans-substantive" law (Stuntz, 2000, p. 875). It governs illegal searches independent of the defendant's alleged crime (Bellin, 2011)—"regardless it seems, whether the defendant is charged with shoplifting or skyjacking, bookmaking or bomb throwing. What matters . . . is the extent to which the police have deviated from prescribed norms, not the extent to which the defendant has" (Kamisar, 1987, p. 9). However, are decision makers cognitively capable of applying the rule in this neutral manner?

Studies 4 and 5 put this question to the test, providing experimental affirmation of what lawyers have for decades observed:

> It is hard to read the mass of appellate search and seizure decisions without getting a distinct feeling that a police action which the courts would uphold that

> produced heroin would not always be held valid when only marijuana was found. Indeed this practice is much clearer in trial courts, where every defense lawyer knows that his chances on a motion to suppress will depend to a great extent on whether his client has been apprehended with marijuana or with heroin. (Kaplan, 1974, p. 1049, fn. 109)

Doctrinally omitting the crime severity variable from the exclusionary rule does not necessarily eliminate the motivating influence of this factor. "To the contrary, the intuition is simply pushed underground, causing courts to gravitate toward other mechanisms for protecting society" (Bellin, 2011, p. 46).

Legal scholars have recounted the following ways in which judges may try to reconcile the requirements of the law with their competing sense of justice in cases of egregious crime that call for the suppression of evidence: "Judges do not like excluding bloody knives, so they distort doctrine, claiming the Fourth Amendment was not really violated" (Amar, 1994, p. 799); "[t]rial judges . . . tilt fact-finding against exclusion, while appellate judges give constitutional rights crabbed and grudging interpretations" (Dripps, 2001, p. 2). Highlighting the cross-partisan nature of this response, Judge Guido Calabresi (2003) observed, "Regardless of who appointed her, the judge facing a clearly guilty murderer or rapist who makes a Fourth Amendment or other constitutional claim will do her best to protect the fundamental right and still keep the defendant in jail . . . [by] expanding what is deemed a reasonable search or seizure" (p. 112). Legal scholars have thus suggested that the exclusionary rule "suffers a serious psychological problem" (Dripps, 2001, p. 2). The present studies apply the theory of motivated cognition to help explain this problem.

Previous experimental work on the exclusionary rule has revealed that people are more likely to support the suppression of tainted evidence when an illegal search offends cherished values (e.g., where a search is motivated by racism), and that people care more about the expressive, integrity-based rationale of the doctrine than the deterrence goal that the Supreme Court has prioritized (Bilz, 2012). In addition, empirical studies have attempted to evaluate the deterrent effect of excluding wrongfully obtained evidence (e.g., Canon, 1974; Perrin, Caldwell, Chase & Fagan, 1998). Studies 4 and 5 approach this legal doctrine from a different angle—focusing not on the motivations behind the police search or the rationale behind the law, but rather, on how the nature of the evidence uncovered influences judgments about its admissibility. I suggest that motivated cognition can drive this process through one of the several ambiguous exceptions to the exclusionary rule.

ii. The "Inevitable Discovery" Exception

Evidence obtained through an illegal search *can* be admitted in court if the chain of causation between the illegal search and the tainted evidence is too attenuated (*Wong Sun v. United States*, 1963); if the police relied reasonably and in good faith on an invalid search warrant (*Leon v. United States*, 1984); or if the evidence "inevitably" would have been discovered through lawful means (*Nix v. Williams*, 1984). The experimental paradigm used in Studies 4 and 5 draws upon the "inevitable discovery" exception, which the Supreme Court adopted under the reasoning that suppressing illegally obtained evidence would have little deterrent value if that evidence would have been discovered, as a matter of course, through lawful means.

The Court has asserted that the inevitable discovery exception "involves no speculative elements, but focuses on demonstrated historical facts capable of ready verification or impeachment" (*Williams*, 1984, p. 445, n. 5). However, as federal circuits and legal commentators have pointed out, the exception by its very nature requires "some degree of speculation as to what the government would have discovered absent the illegal conduct" (*United States v. Leake* , 1996), since any potential path of discovery "only hypothetically, not actually, leads to the evidence" (Bloom, 1992, p. 81). Furthermore, there is no consensus among appellate courts as to what specific criteria must be met to establish the inevitability of discovery, so different courts use different legal tests (e.g., *United States v. Webb*, 1986 vs. *United States v. Silvestri*, 1986).

Noting that "all the prosecution has to do is show 'by a preponderance of the evidence'—which is the lowest legal standard of proof in American law—that the evidence would have been discovered by lawful efforts," criminal procedure scholar Tracey Maclin (2012) observed that this exception has become "a virtual cure-all device for admitting evidence obtained in violation of the Fourth Amendment" (pp. 284, 287). The inevitable discovery exception thus presents a clear entry point for motivated cognition in applications of the exclusionary rule, as demonstrated in the next two studies.

B. Study 4: Cognitive "Cleansing"

i. Participants

The 87 respondents in Study 4 were recruited on Amazon's Mechanical Turk website[11] for a small monetary payment.[12] The participants were 66% female and ranged in age from 18 to 69, with a mean age of 39.

ii. Methodology

All the participants were presented with a hypothetical scenario in which police officers conducted an illegal search of a car. The participants were told that the police broke into and searched the defendant's vehicle without obtaining a proper search warrant. Although police officers with probable cause may search a car without a warrant, the respondents were given no facts supporting a finding of probable cause. Rather, they were explicitly told that the search was illegal. The scenario avoided delving into the probable cause issue so as not to confuse the lay participants, who were unlikely to be familiar with this legal concept.

The participants were then randomly assigned to one of two experimental conditions: (1) those assigned to the "Heroin case" were told that the police discovered

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[11] Direct data comparisons between Mechanical Turk and laboratory studies have found that results do not substantially differ (Buhrmester, Kwang, & Gosling, 2011; Mason & Suri, 2012; Paolacci, Chandler & Ipeirotis, 2010).

[12] The average time it took participants to complete the survey was 6 minutes, 46 seconds. I excluded the data of those who completed the survey in less than three minutes, due to concerns about their ability to process the information and thoughtfully answer the questions in such a short period of time. I also excluded the data of respondents who failed the checks on their understanding of the facts and law in the case. (The participants were asked whether the police officers' search of the defendant's car was legal, what the police officers found in the car, to whom the defendant was distributing the materials found in the car, and a true-or-false question testing comprehension of the exclusionary rule and its inevitable discovery exception).

many bags of heroin and needles that the defendant had been selling to high school students, making large profits for himself; (2) those assigned to the "Marijuana case" were told the police discovered many bags of marijuana that the defendant had been selling to terminally ill cancer patients to ease their suffering, without making any profits for himself. This experimental manipulation was designed with the expectation that participants in the Heroin condition would be more motivated to see the defendant brought to justice than those in the Marijuana condition.[13]

All the participants were told that, during the course of the search, the police discovered that the registration on the car had expired. This information was intended to provide a potential means for discovery of the evidence outside the illegal search—i.e., by potentially providing a pretext for a future police interaction—without necessarily rendering discovery of the evidence inevitable.[14] They were next presented with a simple explanation of the exclusionary rule and its inevitable discovery exception: "According to the law, evidence obtained by the police through an illegal search is 'tainted' and should therefore be thrown out of a case—unless the evidence inevitably would have been discovered another way." It was made clear that in the given scenario, the drug evidence was wrongfully obtained, but that the defendant would be unlikely to receive any

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[13] On a scale categorizing drugs according to the degree of addiction and physical harm they cause, marijuana is a "soft" drug on the lower end of both these properties, whereas heroin is considered among the most addictive and damaging of "hard" drugs (Nutt, King, Saulsbury, & Blakemore, 2007). National polling data confirm that people are more opposed to the recreational use of heroin than the medical use of marijuana (Associated Press/CNBC Poll, 2010; CBS News/New York Times Poll, 1997).

[14] Under *Arizona v. Gant* (2009), police officers may search a car incident to a recent arrest only if the arrestee is within reaching distance of the vehicle during the search and the police have reason to believe the car contains "evidence relevant to the crime of arrest." Although the participants were not expected to know this two-part rule, it arguably renders discovery of the tainted evidence in the given experimental scenario less likely to be inevitable.

punishment if the evidence were to be suppressed. Furthermore, the participants were provided with the following balanced but non-substantive arguments on both sides of the case: the prosecutor argued that the drugs inevitably would have been discovered during the course of the police investigation even if not for the illegal search; the defense attorney argued that discovery of the drugs was not inevitable and the police would not have found the drugs if not for the illegal search.

To confirm that the experimental manipulation had its intended effect (i.e., that the Heroin case triggered a stronger motivation to see the defendant brought to justice than the Marijuana case did), the participants were asked in their personal capacity to rate the morality of the defendant (on a seven-point scale ranging from "very immoral" to "very moral"), and the extent to which he should be punished (on a seven-point scale ranging from "no punishment" to "severe punishment"). The participants were then asked to put themselves in the role of a judge and complete the primary measures: whether the drug evidence should be admitted in the case (on a seven-point scale ranging from "no, the drug evidence definitely should not be admitted" to "yes, the drug evidence definitely should be admitted"), and whether the evidence would have been discovered through lawful means even if not for the illegal search (on a seven-point scale ranging from "no, the drugs definitely would not have been discovered" to "yes, the drugs definitely would have been discovered"). These perspective-taking instructions (self versus judge) were intended to minimize the risk of the respondents' punishment judgments influencing their ratings on the admissibility and likelihood-of-discovery measures.

The participants were also asked to rate the morality of the police officers who conducted the search (on a seven-point scale ranging from "very immoral" to "very moral"), and the extent of negative consequences the officers should face for their illegal actions (on a seven-point scale ranging from "no consequences" to "severe consequences"). To ensure that this opportunity to recommend disciplinary measures for the police officers would not undermine the deterrent value of the exclusionary rule, the questions about the police were asked *after* the participants had completed the primary admissibility and discovery measures, and the electronic survey did not permit them to go back and change their answers to previous questions. Finally, the participants were asked to rate their level of agreement with the exclusionary rule (on a nine-point scale ranging from "strongly disagree" to "strong agree"), and their confidence in the general integrity of police officers and judges in this country (on seven-point scales ranging from "no confidence" to "complete confidence").

The facts presented to the participants in this experimental paradigm were intentionally sparse as compared to the information that would be available to a judge in a real legal case, in order to maintain the internal validity of the experiment without interference from extraneous variables. This design also enabled a stringent test of whether people who were motivated to admit the tainted evidence would invoke the inevitable discovery exception despite having little factual basis for doing so.

iii. Results

(a) Manipulation checks

Analyses of variance confirmed that the experimental manipulation gave rise to different justice motives between the two conditions. As shown in Figures 8 and 9, the

participants judging the Heroin case assigned lower morality ratings to the defendant ($F(1, 85) = 364.60$, $p < .001$, $\eta^2 = .81$), and inversely, higher punishment recommendations ($F(1, 85) = 153.72$, $p < .001$, $\eta^2 = .64$), as compared to the participants judging the Marijuana case.

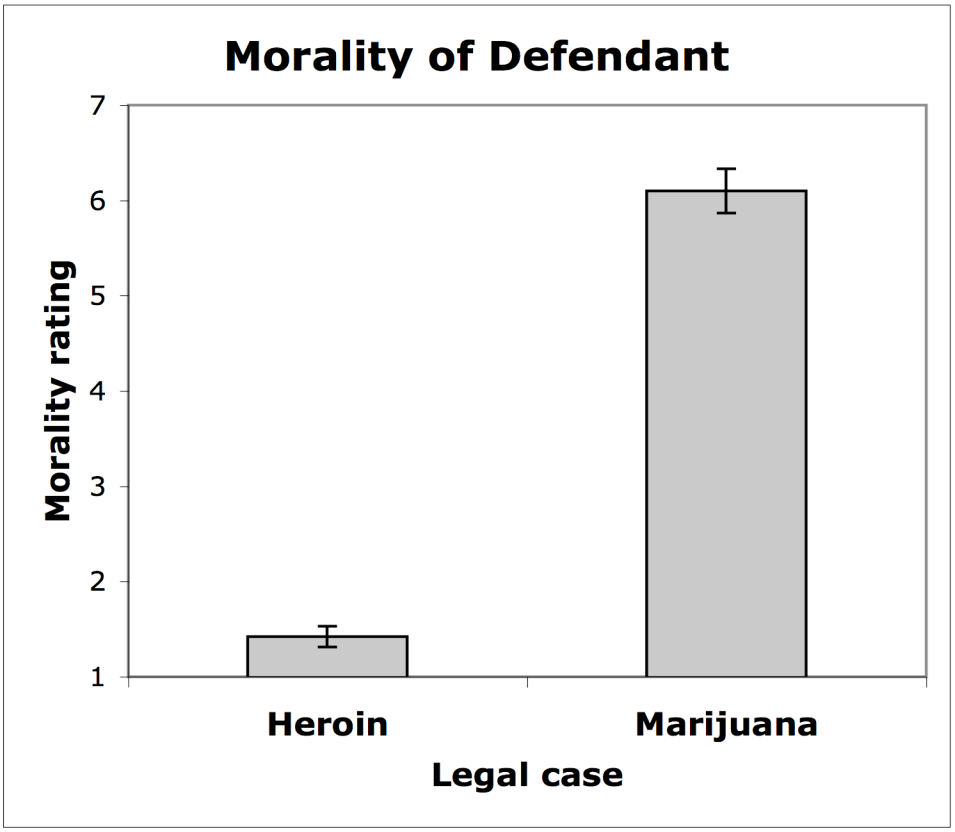

Figure 8. Study 4: Morality ratings of the defendant, by type of case (Heroin vs. Marijuana).

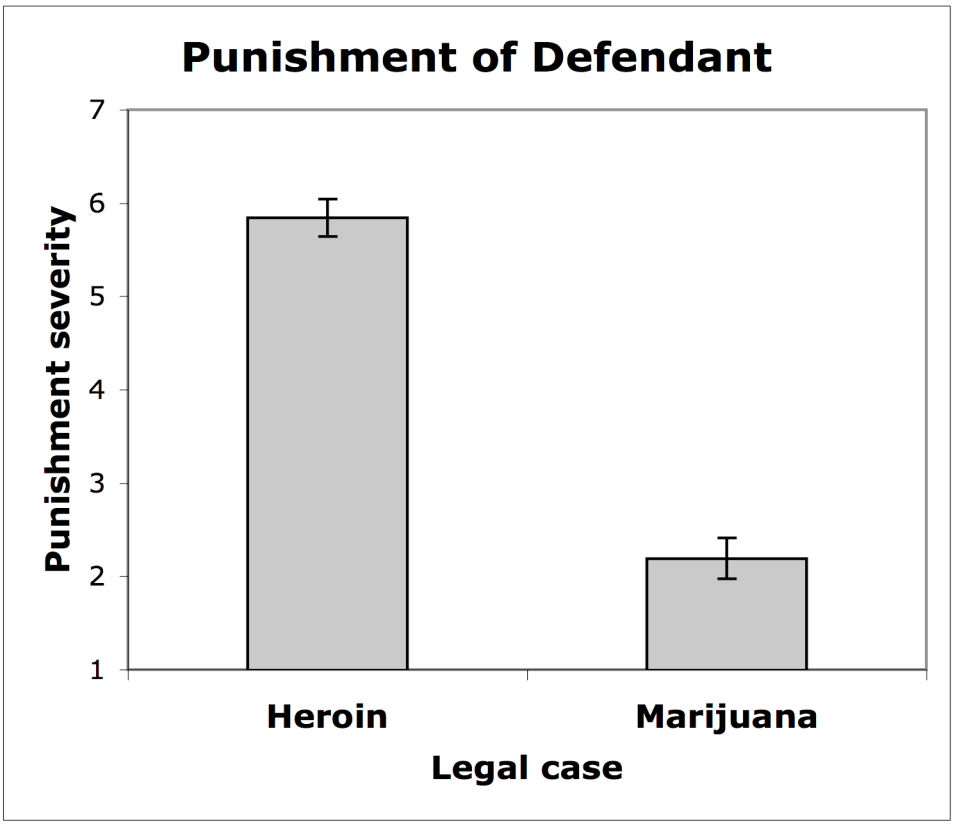

Figure 9. Study 4: Punishment recommendations for the defendant, by type of case (Heroin vs. Marijuana).

Regression analyses confirmed that the experimental condition to which the participants were assigned predicted their morality ratings ($B = 4.67$, $SE = .25$, $p < .001$) and punishment recommendations ($B = -3.65$, $SE = .30$, $p < .001$) for the defendant. Moreover, the morality ratings mediated the relationship between condition and punishment ($z = -11.60$, $p < .001$). That is, the extent to which the case that people judged (Heroin versus Marijuana) predicted their punishment recommendations depended on their moral assessment of the defendant in question. As intended, the Heroin participants perceived the defendant as more immoral and therefore more deserving of punishment.

(b) Cognitive cleansing of tainted evidence

Analysis of the primary measures uncovered the predicted motivated cognition effect. Participants judging the Heroin case, who were more motivated to see the defendant brought to justice, were significantly more likely to admit the tainted evidence than those judging the Marijuana case ($F(1, 85) = 33.94$, $p < .001$, $\eta^2 = .29$). Correspondingly, the Heroin participants were significantly more likely to report that the evidence in question would have been discovered even if not for the police officers' illegal search ($F(1, 85) = 25.73$, $p < .001$, $\eta^2 = .23$). These results are illustrated in Figures 10 and 11.

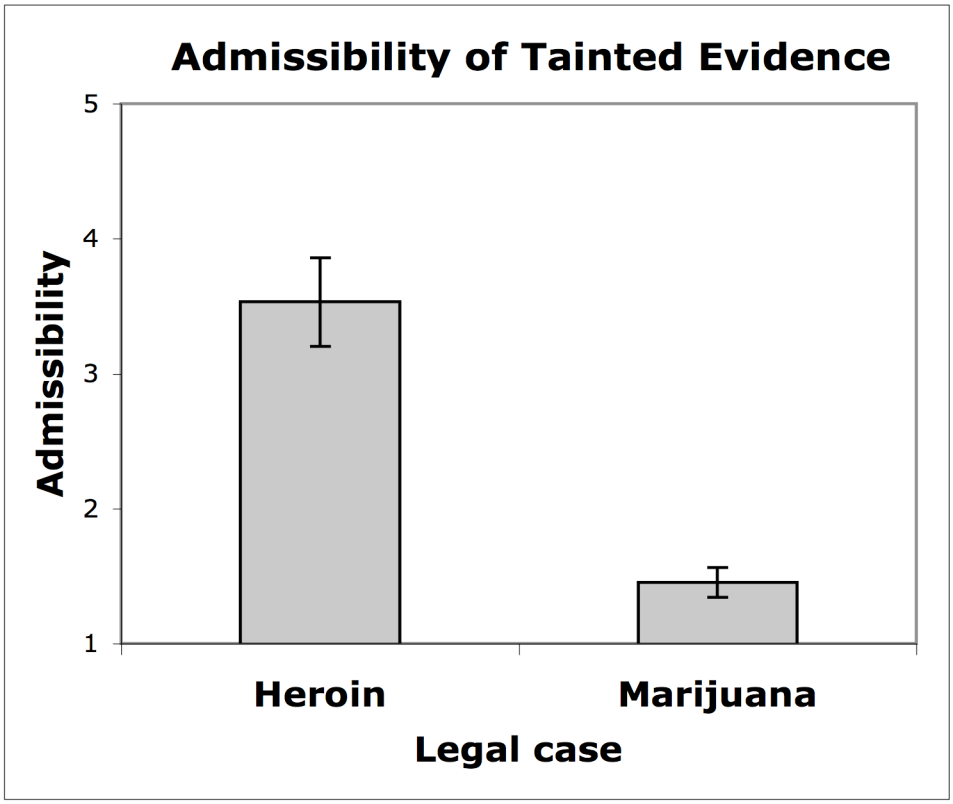

Figure 10. Study 4: Admissibility of evidence, by type of case (Heroin vs. Marijuana).

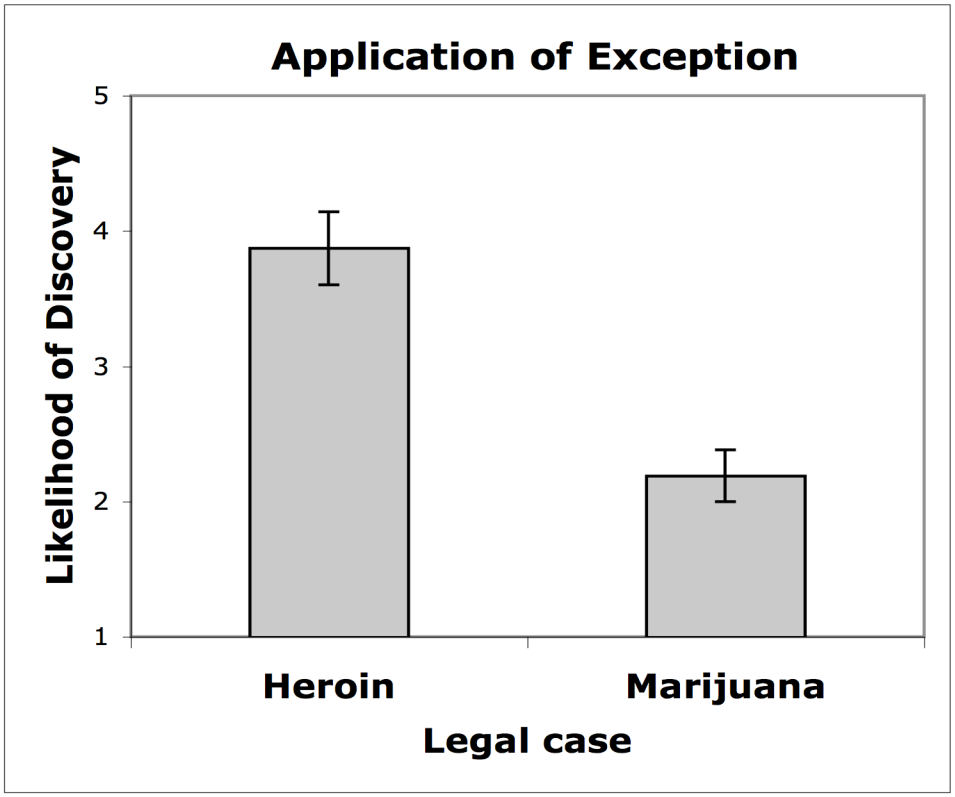

Figure 11. Study 4: Likelihood that evidence would have been discovered through lawful means, by type of case (Heroin vs. Marijuana).

Regression analysis provided additional support for the hypothesis. As noted above, the type of case the participants judged (Heroin versus Marijuana) predicted their motivation to punish the defendant. These punishment motives, in turn, predicted judgments about the admissibility of the evidence (B = .49, SE = .08, $p <$ .001) and its likelihood of being discovered through lawful means (B = .41, SE = .07, $p <$ .001). Critically, people's punishment recommendations fully mediated the relationship between the type of case they were judging and their decisions about both the admissibility of the evidence (B = -2.08, SE = .36, $p <$ .001) and its likelihood of discovery (B = -1.68, SE = .33, $p <$ .001). These mediation relationships, mapped in

Figure 12, suggest that the Heroin participants' significantly stronger tendency to admit the tainted evidence and to reason that it would have been discovered through lawful means was driven by their stronger motivation to see the defendant brought to justice.

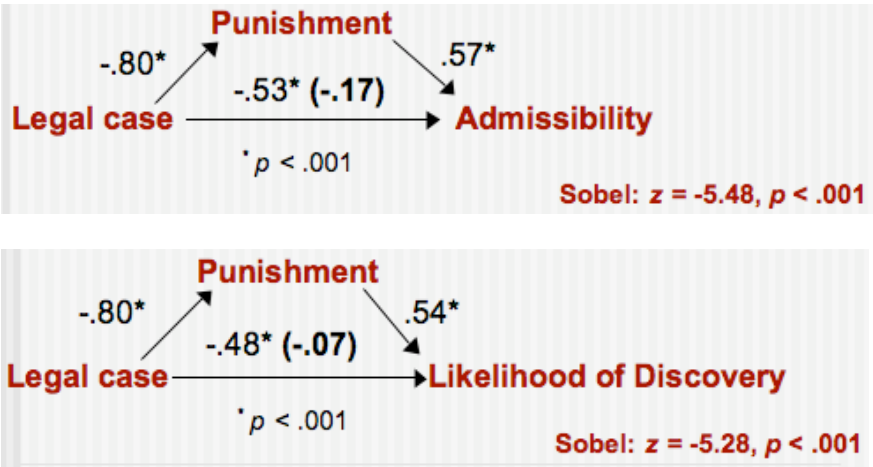

Figure 12. Study 4: Punishment ratings mediating the relationship between type of case (Heroin vs. Marijuana) and admissibility of evidence (upper figure); punishment ratings mediating the relationship between type of case and likelihood of discovery through lawful means (lower figure).

In sum, although all the participants were presented with the same legal doctrine and identical facts about the nature of the police search, the type of evidence discovered during the search provoked different intuitions about punishing the defendant, which in turn led to different perceptions of the discoverability of the evidence. Those who were presented with wrongfully obtained evidence of a morally repugnant crime were more likely to conclude that the evidence would have been discovered even if not for the illegal search, thereby justifying its admissibility under an exception to the exclusionary rule. Thus, people's strong desire to reach a "just" outcome led them to perform a "cognitive

cleansing" of the tainted evidence, which rendered it admissible within the terms of the given law.

Notably, this finding cut across ideological lines. Participants' self ratings of political ideology (on a seven-point liberal-conservative scale) and political party affiliation did not lead to significant differences in their judgments about the admissibility of the evidence or its likelihood of discovery. The results did uncover a main effect of gender, whereby female participants perceived lawful discovery of the evidence as significantly more likely than male participants did ($F(1, 86) = 4.94$, $p = .03$, $\eta^2 = .07$). However, this occurred regardless of the type of evidence uncovered and therefore did not impact the primary findings.

(c) Attitudes toward law enforcement

Although the Supreme Court has endorsed the exclusionary rule for the utilitarian purpose of deterring the police from conducting illegal searches, the participants in this experiment perceived the officers' actions as more justifiable when they themselves were motivated to see the defendant punished. Figures 13 and 14 reveal that participants judging the Heroin case rated the police officers as significantly more moral ($F(1, 85) = 21.32$, $p < .001$, $\eta^2 = .20$), and were more lenient in recommending disciplinary actions against them ($F(1, 85) = 6.86$, $p = .01$, $\eta^2 = .08$),[15] as compared to participants judging the Marijuana case. These significant differences were driven not by the officer's actions, but rather, by the type of evidence their actions uncovered.

[15] Participants were asked about the extent of negative consequences the police officers should face for their illegal search, and this data was reverse coded to graphically represent the participants' leniency toward the police officers.

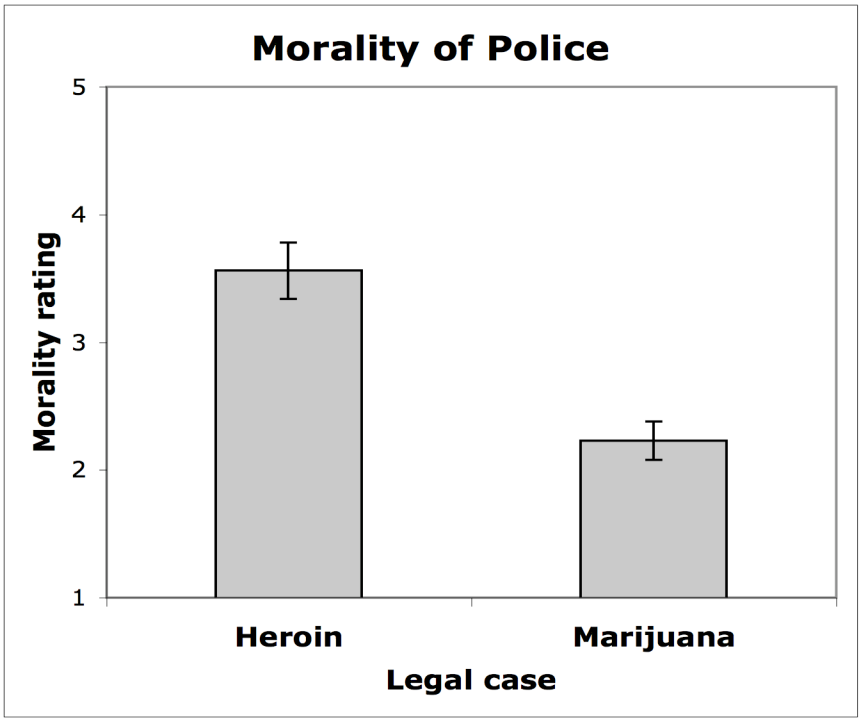

Figure 13. Study 4: Morality ratings of the police officers, by type of case.

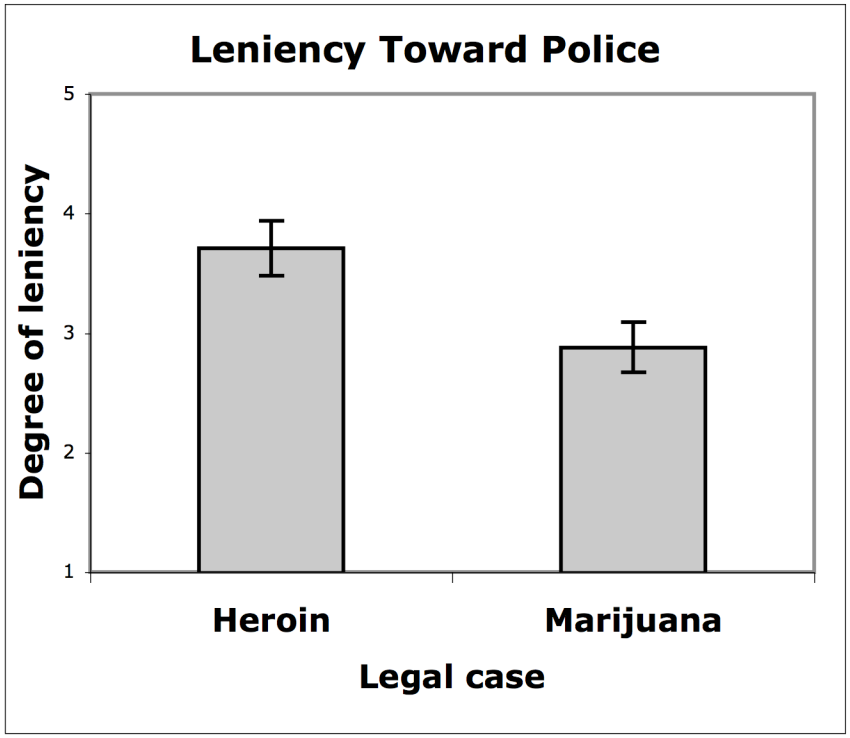

Figure 14. Study 4: Leniency toward the police officers, by type of case.

Interestingly, the different judgments triggered by the nature of the defendant's crime also carried over to ratings of law enforcement officials more generally. As shown in Figure 15, the participants judging the Heroin case expressed greater overall confidence in the integrity of police officers in this country as compared to those judging the Marijuana case ($F(1, 85) = 5.72$, $p = .02$, $\eta^2 = .06$).

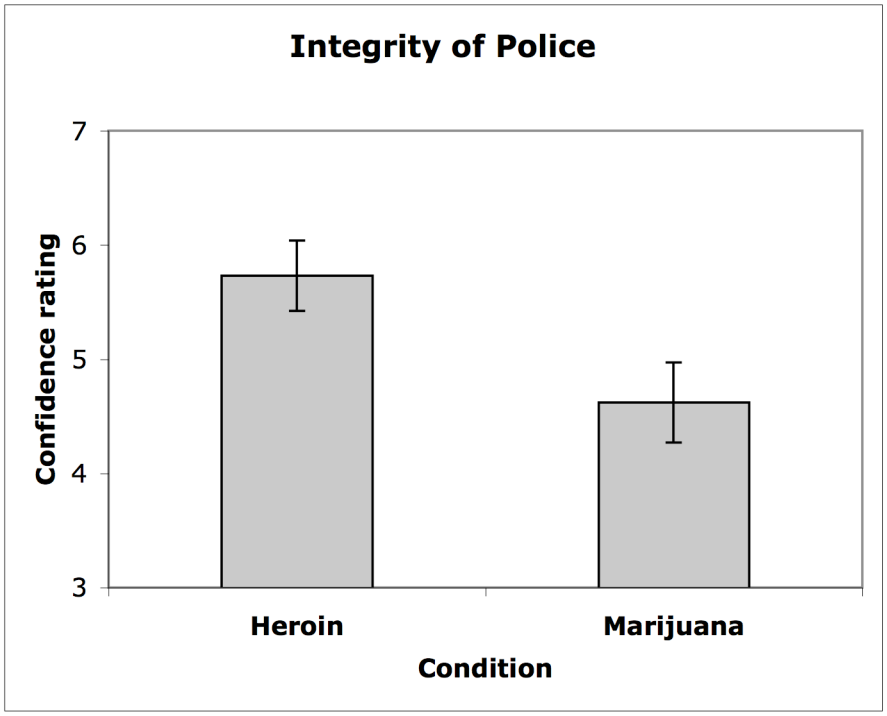

Figure 15. Study 4: Confidence in the integrity of police forces generally, by type of case.

(d) Agreement with the law

Finally, the type of evidence uncovered by the illegal search not only influenced judgments about its discoverability and about the officers who conducted the search, but also colored people's agreement with the given law. As reflected in Figure 16, the

participants judging the Heroin case expressed significantly less agreement with the exclusionary rule than those judging the Marijuana case ($F(1, 85) = 10.41$, $p = .002$, $\eta^2 = .11$).

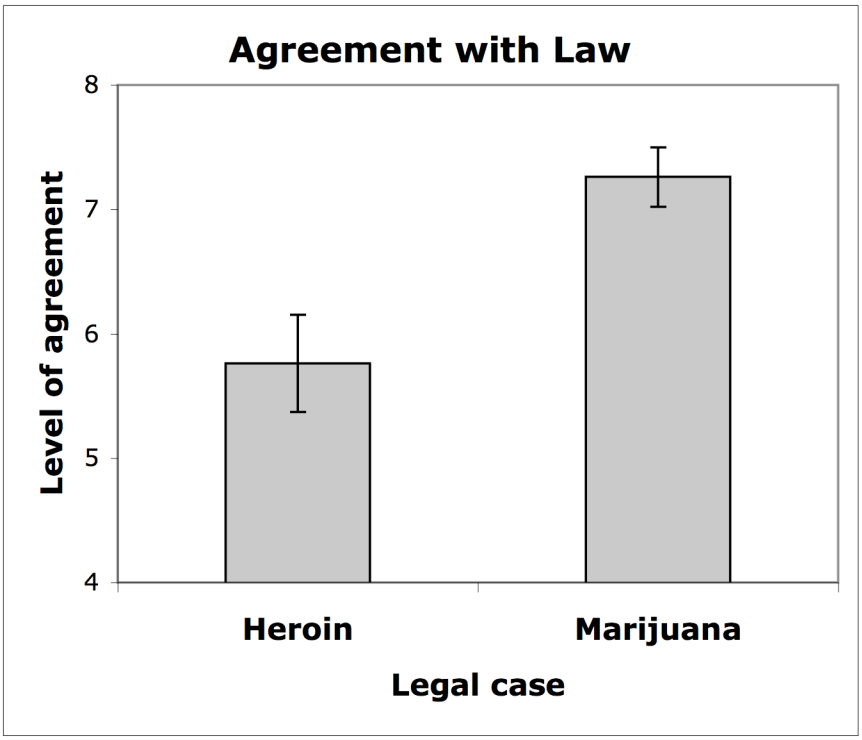

Figure 16. Study 4: Agreement with exclusionary rule, by type of case.

In fact, the extent to which the Heroin participants wanted to admit the tainted evidence ($B = -.58$, $SE = .11$, $ß = -.50$, $p < .001$) and punish the defendant ($B = -.44$, $SE = .10$, $ß = -.44$, $p < .001$) predicted their level of agreement with the exclusionary rule. When people were motivated to see the defendant brought to justice for a morally repugnant crime, they expressed less agreement with the law that constrained this goal. The mean level of agreement with the exclusionary rule was nevertheless fairly high, even in the Heroin condition (Heroin: $M = 5.76$ on a nine-point scale, $SD = 2.61$; Marijuana: $M = 7.26$, $SD = 1.60$). This, in addition to people's drive to comply with the

law, likely contributed to why they engaged in motivated judgments about the tainted evidence to support their desire to admit it, rather than blatantly flouting the exclusionary rule.

C. Study 5: Dichotomous Replication

The critical admissibility and likelihood-of-discovery measures in Study 4 were presented on seven-point scales in order to allow for flexibility in responses and statistical analysis. In the real legal world, however, applications of the exclusionary rule and its inevitable discovery exception require definitive answers: the evidence must be either admitted or suppressed; its discovery through lawful means must be deemed either inevitable or not. Study 5 was therefore designed to replicate Study 4's findings with dichotomous yes/no dependent measures instead of continuous scales.

Study 5 also introduced an important variation to confirm that the motivated cognition finding was not driven by the order in which the questions were asked. The participants in Study 4 had been asked first about the admissibility of the tainted evidence, and then about its likelihood of discovery through lawful means. If the participants were reasoning in a cognitively sequential way, perhaps they would respond differently (i.e., not admitting tainted evidence even when motivated to punish) if asked to commit first to the inevitability-of-discovery judgment. To test this possibility, Study 5 counter-balanced the order in which the participants were asked about applying the exclusionary rule and invoking its inevitable discovery exception.

i. Participants

The 119 respondents in Study 5 were recruited through Amazon's Mechanical Turk website for a small monetary payment.[16] The participants were 71% female and ranged in age from 18 to 81, with a mean age of 55.

ii. Methodology

The design and measures of Study 5 were similar to those of Study 4, with two primary differences: (1) the admissibility and inevitability-of-discovery questions were asked using dichotomous yes/no choices rather than continuous scales; and (2) half the participants answered the admissibility question first, whereas the other half answered the inevitable discovery question first. Therefore, participants in this study were randomly assigned to one of four conditions: Heroin Admissibility-first, Heroin Inevitability-first, Marijuana Admissibility-first, or Marijuana Inevitability-first.

The participants were also asked to explain why they thought discovery of the tainted evidence was or was not inevitable. In addition, at the end of the study, they reported how they felt about the selling of heroin and marijuana as depicted in the experimental scenarios (on seven-point scales ranging from "strongly in favor" to "strongly against"), and the extent to which they thought their judgments in the case were influenced by their feelings about the crime in question (on a seven-point scale ranging from "not at all" to "very strongly").

[16] I excluded the data of respondents who completed the survey too quickly and/or failed the checks on their understanding of the facts and law in the case.

iii. Results

(a) Manipulation checks

As expected, the participants across all four conditions expressed much greater disapproval of the heroin crime (M= 6.86 on a seven-point scale, $S.D.$ = 0.53) than the marijuana crime (M = 3.09, $S.D.$ = 1.72) ($t(119) = -23.09$, $p < .001$). Furthermore, as in Study 4, those judging the Heroin case rated the defendant as significantly more immoral ($F(1, 117) = 209.54$, $p < .001$, $\eta^2 = .64$), and recommended significantly more severe punishment for him ($F(1, 117) = 190.17$, $p < .001$, $\eta^2 = .62$), as compared to participants judging the Marijuana case. The experimental manipulation of justice motives thus once again had its intended effect.

(b) Absence of order effects

There were no order effects in the admissibility and inevitability-of-discovery measures. Chi-square analyses on the order variable were insignificant within each drug case and across both drug cases, indicating that there was no relationship between the order in which the admissibility/inevitability questions were asked and the participants' responses on these measures. Thus, the order variable could be collapsed across the four conditions to consider the data simply by type of case (i.e., two conditions, Heroin versus Marijuana, as in Study 4).

(c) Replication with dichotomous variables

Echoing the results of the first study, the participants in the Heroin condition of Study 5 were significantly more likely than those in the Marijuana condition to see the evidence as discoverable through lawful means and therefore admissible—even though they now had to commit definitively to admitting the tainted evidence and to the finding

that its discovery was inevitable. As illustrated in Figure 17, approximately 60% of the participants judging the Heroin case categorically admitted the tainted evidence, as compared to only about 15% of those judging the Marijuana case. Correspondingly, approximately 55% of the participants in the Heroin condition stated that discovery of the tainted evidence was inevitable, whereas again only about 15% of the participants in the Marijuana condition came to this conclusion.

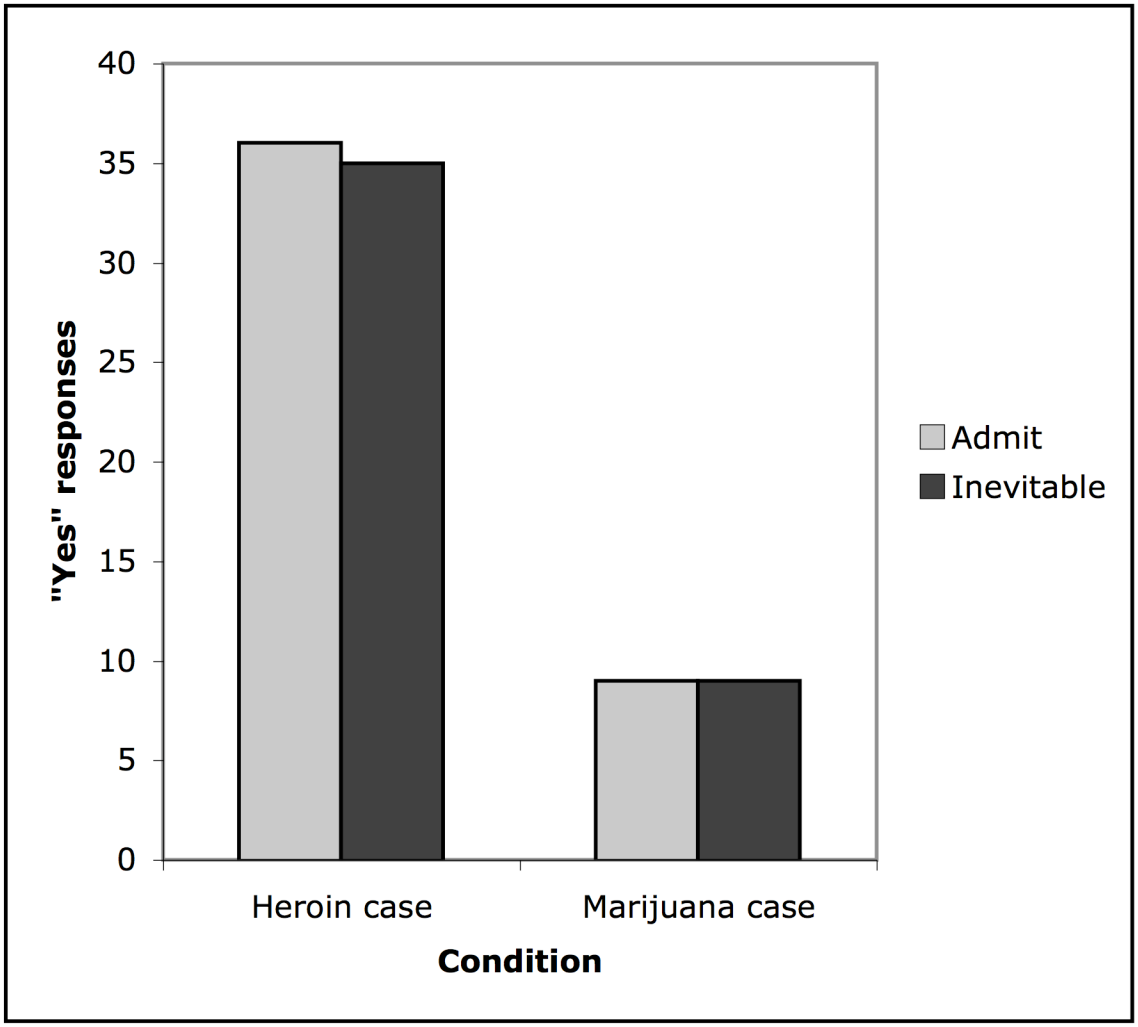

Figure 17. Study 5: Frequency of affirmative admissibility and inevitable discovery responses, by type of case (Heroin n = 62, Marijuana n = 57).

Chi-square analyses for both the admissibility (χ^2 (1, N = 119) = 22.57, p < .001, *phi* = .44) and inevitability-of-discovery measures (χ^2 (1, N = 119) = 21.07, p < .001, *phi* = .42) were significant, indicating a dependent relationship between the condition to which the participants were assigned (Heroin versus Marijuana) and their responses on these questions. Confirming comprehensive replication of Study 4, the Heroin participants in Study 5 also assigned significantly higher morality ratings to the police officers who conducted the illegal search (F(1, 117) = 37.07, p < .001, η^2 = .24), recommended greater leniency for their actions (F(1, 117) = 8.10, p = .005, η^2 = .07), and expressed less agreement with the exclusionary rule (F(1, 117) = 4.02, p = .05, η^2 = .03) than the Marijuana participants.

The results of Study 5 thus replicated the findings of Study 4, with more definitive measures. Even when people had to unequivocally commit to admitting the tainted evidence and to the inevitability of its discovery through lawful means, they were significantly more likely to do so when motivated to see the defendant brought to justice due to the egregiousness of his crime. Yet, when the participants in Study 5 were asked to self-report on a seven-point scale the extent to which their judgments in the case may have been influenced by their feelings about the defendant's crime, 1 ("not at all") was the most common response (mode n = 27).

(d) Inevitable discovery explanations

Participants had also been asked to explain *why* they thought discovery of the tainted evidence through legal means was or was not inevitable. Two coders independently coded this qualitative data, and a third neutral coder resolved any discrepancies. The results revealed that the Heroin participants who said discovery of the

evidence was inevitable focused most frequently on the fact that the car's registration had expired: 43% of percent of these respondents asserted that the police would undoubtedly pull the defendant over for his expired registration and thereby find the drugs in his car.

That this factor did *not* necessarily guarantee discovery of the evidence, however, was reflected in the finding that 22% of the participants in the Marijuana condition specifically mentioned the expired registration as an *insufficient* basis for rendering discovery of the evidence inevitable. Similarly, among the minority of Heroin participants who did *not* exhibit the motivated reasoning effect, 26% spontaneously stated that the expired registration did *not* render discovery of the evidence inevitable. For example, one such respondent wrote:

> The drugs could have been discovered if [the defendant] was subsequently stopped for a traffic violation or because his registration was expired and police officers then . . . found the drugs. But this is a highly contingent rather than certain chain of events. What if [the defendant] decides to renew his registration tomorrow?

The explanations that the participants gave for why they thought discovery of the tainted evidence was or was not inevitable were thus consistent with the prediction that, under the influence of motivated cognition, people may use the same facts to "access different beliefs and rules in the presence of different directional goals, and that they might even be capable of justifying opposite conclusions on different occasions" (Kunda, 1990, p. 483).

Other frequent reasons for inevitable discovery given by the Heroin participants who were motivated to invoke the exception involved optimistic assumptions about the

police's case against the defendant (e.g., suggesting discovery was inevitable because the police investigation was already underway, or assuming the police had the ability to get a legal search warrant) (14%), and presumptions about the potential indiscretion of those who purchased the drugs (14%). The latter explanation was seen among participants who invoked the inevitable discovery exception in both the Heroin and the Marijuana cases (e.g., "I think that eventually one of the high school kids would tell someone about the drugs" vs. "It might be discovered that [the defendant] was providing drugs to cancer patients because of people talking to each other").

Among the Heroin participants who did *not* engage in outcome-driven reasoning, the most commonly cited point about the expired registration being insufficient grounds for discovery was followed closely by assumptions about the weakness of the police case against the defendant (i.e., "If they [had] been able to find the drugs another way they would have") (22%). The most frequent reasons given by the participants in the Marijuana condition for why the drugs would not have been discovered fell into three categories: general statements about the scenario providing no factual basis for inevitable discovery (26%); reasons based on the assumed competence or morality of the defendant (22%); and comments about the expired registration not being sufficient grounds for inevitable discovery (22%, as noted above).

D. Discussion: Studies 4-5

The results of Studies 4 and 5 demonstrate that, contrary to the neutral manner in which the exclusionary rule is supposed to be applied, the nature of a defendant's crime cognitively matters in judgments about suppressing wrongfully obtained evidence of that crime. The participants who were more motivated to see the defendant brought to justice

due to his more morally repugnant transgression (i.e., those judging the Heroin case) were more likely to construe lawful discovery of the evidence as inevitable, thereby justifying their decision to admit the tainted evidence within a legal exception to the exclusionary rule. This result held true regardless of whether participants were asked first about the admissibility of the evidence or its likelihood of discovery, so the cognitive process was more global than sequential. Yet, most participants self-reported that their judgments had not been influenced by their feelings about the defendant's crime.

Given that the experimental scenario presented an unambiguously illegal search and a paucity of facts for construing lawful discovery of the evidence as inevitable, the default response in this experimental paradigm should have been to exclude the evidence. The motivated cognition effect was therefore driven by the data of the participants in the Heroin condition—a finding consistent with my general hypothesis that motivated cognition is triggered in punishment contexts when decision makers' own justice intuitions conflict with a legal constraint with which they also want to comply. Meanwhile, when the law leads to an outcome that is perceived as just, people are more likely to abide by it and express agreement with the same rule that in different circumstances they might less-than-consciously circumvent. Here, the participants in the Marijuana condition were significantly more likely to adhere to the exclusionary rule because it suited their inclination *against* punishing the defendant. If, however, the participants judging the Marijuana case were to be presented with a factual scenario indicating that the drugs inevitably *would* have been discovered even if not for the illegal search, I would predict that *they* would then be the ones to cognitively construct an interpretation that would enable them to avoid admitting the tainted evidence.

The experimental results accord with data showing motivated cognition in the perceived likelihood of events, with "more desirable events perceived as more likely to occur" (Kunda, 1990, p. 488). Explaining this phenomenon, Kunda (1990) suggested:

> [O]ne possibility is that the bias affect[s] not subject's probability estimates, but rather the subjective interpretation of these estimates. Thus, people may interpret their belief that an event has a 60% probability of happening to mean that the event is either slightly likely or somewhat likely to happen, depending on whether they want to view it as likely. Such an interpretation, in turn, may affect their willingness to assume and bet that the event will occur. (p. 488)

Here, the participants in the Heroin condition may have had a lower threshold for what would make discovery of the evidence "inevitable"—particularly in Study 5, which required them to commit one way or the other.

This construction is supported by comparing the results obtained from the different types of measures used in the two experiments. In Study 4, which used continuous scales, only 7% of the participants in the Heroin condition selected the extreme end of the scale labeled "yes, the drugs definitely would have been discovered." Whereas, when presented with only the dichotomous option of reporting whether discovery of the evidence was inevitable or not in Study 5, 57% of the Heroin participants stated that discovery was inevitable. There is a practical necessity for definitive answers in legal cases, but the difference produced by these two types of measures suggests that the legal system should consider instituting a double-layered decision making process for judgments that might be vulnerable to motivated cognition. For example, jurors or judges sitting on panels could be asked to report their individual

judgments on continuous scales that are then formulaically calculated into a definitive outcome.

The exclusionary rule strives to curtail misconduct by the police, so it is interesting that the motivated cognition process also led people to hold different perceptions of the police officers who conducted the illegal search. Respondents judging the Heroin case were not only more forgiving of the officers, but also expressed higher confidence in the integrity of police forces generally. These findings are consistent with previous studies on motivated cognition showing that people are "confident in transferring or applying their motivation-influenced estimates to other, independent decisions" (Boiney, 1997, p. 20).

It is important to note, however, that not all the Heroin participants were susceptible to motivated cognition in this context. Approximately 60% of them in Study 5 admitted the tainted evidence and construed its lawful discovery as inevitable, which created a strong contrast with the mere 15% of Marijuana participants who exhibited the effect, but this was clearly not a uniform response. The legal applications and implications of the findings, discussed in the sections that follow, should therefore be read with the qualification that even in circumstances that trigger a high motivation to punish, not all legal decision makers are equally likely to be influenced by outcome-driven reasoning.

Moreover, the present experimental design had a potential limitation that requires further investigation. The participants were asked to make morality and punishment judgments about the defendant as a manipulation check on their justice motives *before* being asked about the admissibility of the evidence. Although the respondents were

given perspective-taking instructions to answer the morality/punishment questions in their personal capacity, and then directed to put themselves in the position of a judge when responding to the primary measures that followed, having overtly acknowledged a desired punishment outcome may have exacerbated its influence on the admissibility and inevitable discovery variables (i.e., perhaps causing the motivated reasoning to be self-fulfilling, and thereby driving the mediation relationships depicted in Figure 12 above). To rule out this concern, a follow-up study should attempt to replicate the present findings with the morality and punishment questions asked at the end of the experiment.

E. Legal Applications

i. Public Responses to the Exclusionary Rule

Like the harm plasticity findings of Studies 1-3, the results of Studies 4 and 5 raise concerns about the enforcement of a utilitarian legal doctrine that is dramatically out of line with the public's quest for justice—this time in regard to a real law. Esteemed criminal law scholar John Kaplan (1974) observed:

> Though one may scoff at the need for retribution as irrational, hypocritical, and old-fashioned, it seems to lie deep within the human psyche. The frustration of a popular need for retribution is [a] factor that must be considered in making a utilitarian calculation of the cost of the exclusionary rule. (p. 1035)

Indeed, psychologists have found that people's punishment decisions are driven more by retributive motives than by the utilitarian rationales that they outwardly espouse (Carlsmith, 2006; Carlsmith & Darley, 2008; Carlsmith, Darley, & Robinson, 2002; Darley, Carlsmith, & Robinson, 2000). Retributive motives, in turn, seem to be driven by moral judgments about the offender; morality judgments correlate with the severity of the

punishment assigned to an offender and constitute "a major mediator between . . . perceptions of the specifics of the crime . . . and the eventual sentence" (Darley & Pitman, 2003, p. 331).

The fact that punishment recommendations in the present research were mediated by morality ratings of the defendant may provide some indication that the participants were driven by a desire for retribution. Nevertheless, there were obvious utilitarian grounds for these results too: there is greater utility in deterring and/or incapacitating someone from selling heroin to high school students than from selling marijuana for medicinal purposes. One could attempt to identify which punishment motive exerts a greater influence in this paradigm by presenting an experimental condition in which the world "punishes" the Heroin defendant for his immorality outside of the legal process—for example, by inflicting upon him a severe personal tragedy. If driven primarily by retribution, respondents should be less motivated to admit the tainted evidence when life has already delivered the defendant his "just deserts."

But regardless of whether the Heroin participants in the present studies were driven by retributive or utilitarian motives, their desire to see the justice system address the defendant's crime clashed with the exclusionary rule's specific utilitarian goal of deterring the police from conducting illegal searches. On the one hand, it is inevitable that some laws constraining government action in criminal contexts will be unpopular with the general public. In fact, the Constitution's Bill of Rights, which includes the Fourth Amendment's protection against illegal searches and seizures, was "designed to limit the government's reach even when the government's action is backed by an overwhelming mandate from the people" (Stewart, 1983, p. 1392). Dissenting from a

Supreme Court holding that admitted evidence obtained through reliance on an invalid search warrant (*Leon v. United States*, 1984), Justices William Brennan and Thurgood Marshall cautioned:

> [T]he relaxation of Fourth Amendment standards seems a tempting, costless means of meeting the public's demand for better law enforcement. In the long run, however, we as a society pay a heavy price for such expediency, because . . . the rights guaranteed in the Fourth Amendment "are not mere second-class rights, but belong in the catalog of indispensable freedoms." Once lost, such rights are difficult to recover. (pp. 959-960)

Dissenting in another case that declined to apply the exclusionary rule (*Olmstead v. United States*, 1928), Justice Louis Brandeis pointed out that if the legal system itself "becomes a lawbreaker" by permitting the use of tainted evidence, "it breeds contempt for law; it invites every man to become a law unto himself; it invites anarchy" (p. 485).

On the other hand, people also feel contempt toward laws that they perceive as unjust, and there are various reasons why the exclusionary rule is "deeply unpopular" in this regard (Bandes, 2009, p. 2; Law and the Media Survey, 2000). Most relevant to the psychological desire for justice, the suppression of tainted evidence "deprives society of its remedy against one lawbreaker because he has been pursued by another" (*Irvine v. California*, 1954, p. 136). As Judge (later Justice) Benjamin Cardozo famously stated, "The criminal is to go free because the constable has blundered. . . . The question is whether protection for the individual would not be gained at a disproportionate loss of protection for society." (*People v. Defore*, 1926, pp. 24-25).

An added "affront to popular ideas of justice" may be the perceived disparity in some cases between the police's wrongdoing and the "windfall" that the exclusionary rule delivers to a blatantly guilty defendant (Kaplan, 1974, p. 1036). Legendary evidence scholar John Wigmore (1922) thus criticized the rule for "regard[ing] the over-zealous officer of the law as a greater danger to the community than the unpunished murderer or embezzler or panderer" (p. 482). The constable might not always be innocently "blundering" or "over-zealous" in his conduct, but the exclusionary rule has also been critiqued for providing no protection to the most vulnerable targets in such scenarios: victims of malevolent searches that produce no incriminating evidence to be excluded (Amar, 1995).

Although these arguments against the exclusionary rule have rational counterpoints (Dripps 2001; Steiker, 1993), the public is unlikely to be familiar with the nuances of the debate. While the negative consequences of suppressing evidence are "dramatic and easily understood," its underlying rationale may be less accessible (Burger, 1964, p. 12). As a result, critics of the exclusionary rule have warned that it could create "instinctive resentment" among the public and "destroy respect for law because it provides the spectacle of the courts letting the guilty go free" (Oaks, 1970, p. 737). Writing in his personal capacity, Judge (later Chief Justice) Warren Burger (1964) described the exclusionary rule as "one of the major causes of popular discontent with the administration of criminal law," and cautioned: "If a majority—or even a substantial minority—of the people in any given community . . . come to believe that law enforcement is bring frustrated by what laymen call 'technicalities,' there develops a sour and bitter feeling that is psychologically and sociologically unhealthy" (pp. 2, 12).

Indeed, as noted in Chapter III, previous psychology studies have shown that people's disagreement with legal rules that lead to seemingly unfair results can ultimately undercut the "moral credibility" of the law (Robinson & Darley, 1995; Robinson & Darley, 1997) and diminish levels of legal compliance (Mullen & Nadler, 2008; Tyler, 1990; Tyler, 2006)—"not only with respect to the unjust law in question, but also with respect to other unrelated laws" (Nadler, 2005, p. 1410). Describing the serious ramifications of this public response, Robinson and Darley (1995) observed: "A system that is perceived as unjust is in danger of being subverted and ignored. On the one hand, it risks jury nullification and martyrdom that rallies resistance to its commands. On the other, it risks vigilantism." (p. 202)

Like the "harm plasticity" studies, the results of these experiments on the exclusionary rule point to an alternative response: people may reason their way toward their desired "just" outcomes within the technical boundaries of the given law. The Heroin participants who were more motivated to see the defendant brought to justice *did* express less agreement with the exclusionary rule that inhibited this goal, but did not blatantly flout the law by admitting the tainted evidence without justification. Instead, they cognitively construed the facts in a manner that enabled them to invoke a legal exception to the rule. Constitutional scholar Akhil Amar (1994) alluded to the possibility of such outcome-driven reasoning becoming a less-than-conscious response to the conflict between justice intuitions and Fourth Amendment constraints:

> In the popular mind, the Amendment has lost its luster and become associated with grinning criminals getting off on crummy technicalities. . . . If exclusion is the remedy, all too often ordinary people will want to say that the right was not

> really violated. At first they will say it with a wink; later with a frown; and one day, they will come to believe it. (p. 799)

The present work provides experimental support for this speculation.

ii. Extrapolations to the Judiciary

(a) Judicial susceptibility to motivated cognition

Given that the participants in Studies 4 and 5 were lay people, this demonstration of motivated cognition in admissibility judgments by ordinary citizens may appear to provide affirmation for this category of decision making being in the hands of professional adjudicators. One might suppose that legal training, repeat experience with large numbers of cases, and the institutional constraints of precedent and appellate review would equip judges to better adhere to the trans-substantive terms of the exclusionary rule. If so, the present bifurcated system of decision making—with judges deciding on the admissibility of evidence, followed by jurors deciding on the defendant's guilt—might provide an inbuilt safeguard against the type of motivated cognition demonstrated in this work.

However, legal scholars' observations of judicial applications of the exclusionary rule (discussed earlier in this chapter) indicate that judges too seem to be influenced by the nature of an alleged crime in their evidentiary determinations. Furthermore, experimental studies using law student participants have demonstrated that legal training does not necessarily provide inoculation against motivated cognition (e.g., Braman & Nelson, 2007; Furgeson et al., 2008; Redding & Reppucci, 1999). In fact, the Braman and Nelson (2007) study on the evaluation of legal precedents (discussed in Chapter III) found that the motivated cognition effect was actually "stronger and more consistent" in

law student participants than in those without legal training (p. 952). This result may not be so surprising given that lawyers in the American adversarial system are trained to engage in outcome-driven reasoning to provide their clients with the strongest advocacy for their cases. When those lawyers become law clerks or judges, it may not be easy for them to discard the reinforced inclination to garner directional arguments in favor of a desired outcome.

Indeed, experiments conducted using samples of judges have revealed that even though these professional decision makers attempt to put aside their own "attitudes, emotions, and other individuating factors" when making judgments, they too are vulnerable to many of the same inadvertent cognitive biases as lay people (Guthrie, Rachlinski, & Wistrich, 2000, pp. 789-790; Rachlinski, Guthrie, & Wistrich, 2006). One direct comparison of lay people and federal magistrate judges found that the judges exhibited all five of the cognitive illusions that were tested for, at comparable levels to lay people on three of them (Guthrie et al., 2000). Another line of experiments that tested the cognitive ability of judges to disregard inadmissible information found that they were influenced by various legally inapplicable factors, such as demands disclosed during a settlement conference, information protected by the attorney-client privilege, and prior sexual history of an alleged rape victim (Wistrich, Guthrie & Rachlinski, 2005). Nevertheless, the judicial respondents were able to disregard information obtained in violation of a criminal defendant's right to counsel—a situation that directly implicated constitutional rights, which judges arguably have more of a professional commitment to upholding than lay people.

Redding and Reppucci's (1999) experiment examining motivated evaluations of social science evidence in death penalty cases (discussed in Chapter III) found that the law students were more susceptible to motivated cognition than state court judges. However, the judges also exhibited a motivated cognition effect when it came to the "much more subjective and value-laden judgment about what weight to accord that evidence once it is admitted," which the researchers pointed out is "a critically important decision that often affects the outcome of cases" (p. 48).

Notably, Redding and Reppucci (1999) also found that legal training and experience seemed to exacerbate the illusion of objectivity, which can actually increase the risk of non-objective decision making (Kang et al., 2012). Judges in the study were more confident than law students that other legally trained professionals would agree with their decisions, even though there was actually greater variability in the judicial judgments. Another experiment comparing the decisions of judges and jurors in a civil case found that both groups were comparably influenced by inadmissible material that should have been disregarded; but while jurors recognized their "cognitive limitations" in this regard, both "judges and jurors shared an almost identical confidence in a superior judicial capacity to remain unbiased" (Landsman & Rakos, 1994, p. 125).

Although much can be gleaned from combining the experimental literature on motivated cognition with existing work on judicial biases more generally, there is a need for more targeted and systematic experiments that specifically investigate motivated cognition in judges. One could also empirically test for motivated cognition in real search and seizure decisions, by applying a statistical model to assess whether the egregiousness of the defendants' crimes predicts the outcomes of the cases, after

controlling for intrusiveness of the police searches. In addition, future experiments should seek to uncover the effects of repeat experience and appellate review, and to explore how motivated cognition manifests at different levels of the judiciary or among other professional adjudicators, such as mediators or administrative judges.

(b) Judges as intuitive psychologists

The suggestion that motivated cognition may be operating in judicial applications of the exclusionary rule is not intended to repudiate a more strategic component to outcome-driven reasoning. Regardless of their own susceptibility to motivated cognition, judicial decision makers may be good intuitive psychologists, who implicitly understand how the justice motives triggered by an underlying crime in a case will shape public perceptions of their suppression holdings.

Judges have shown "a remarkable ability in the most serious cases to stretch legal doctrine to hold doubtful searches and seizures legal" not only when applying the exclusionary rule would "offend their own sense of proportionality," but also when it would "reach beyond the view of what the public would tolerate" (Kaplan, 1974, p. 1037). Thus, in addition to the cognitive difficulty of applying a legal doctrine that clashes with their personal sense of justice, judges may be more purposefully reluctant to suppress evidence in cases where the outcome would severely clash with the justice intuitions of the public at large.

iii. Motivated Establishment of Legal Precedent—Case Studies

The experimental findings that the nature of illegally seized evidence motivates people's admissibility judgments, and anecdotal accounts of judges being influenced by public opinion and/or their own intuitions in this regard, invite inquiry into the factual

contexts of the Supreme Court cases that established the exclusionary rule doctrine. Could motivated cognition have played a role in *Mapp v. Ohio* (1961) and *Nix w. Williams* (1984), the high-profile Supreme Court rulings that laid down the national precedents for the exclusionary rule and its inevitable discovery exception?

(a) *Mapp v. Ohio* (1961): Entrenching the exclusionary rule

Mapp v. Ohio, the Supreme Court case that extended the exclusionary rule to state courts and "elevated [it] to the status of a constitutionally derived policy" (Canon, 1974, p. 681), involved a sympathetic defendant and unsympathetic behavior by the police. Dollree Mapp stood convicted of possessing four books and a hand-drawn picture that were "obscene" in violation of an Ohio statute—a victimless crime that would not trigger a strong motive to punish (*Mapp v. Ohio*, 1961).[17] Moreover, the manner in which these materials were seized was unnecessarily harsh and invasive. Police officers demanded entry into Mapp's residence while she was at home alone with her daughter. When she refused to let them in without a search warrant, they returned with four additional officers and "forcibly opened" a back door to enter her home. Mapp's attorney arrived at the scene, but the police would not permit him to enter the house or to see his client. There was thus a particularly skewed power dynamic between the one unarmed, unrepresented woman and numerous aggressive law enforcement officials.

Mapp's request to see a search warrant resulted in a physical altercation, which the Court described as follows: "Running roughshod over appellant, a policeman

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[17] The books in question were entitled *Affairs of a Troubadour*, *Little Darlings*, *London Stage Affairs*, and *Memories of a Hotel Man* (Maclin, 2012, p. 86). The police had come to Mapp's home looking for a bombing suspect, but all they found were the "lewd and lascivious" books and pictures (Cohen, 2009). Mapp asserted that she was storing these items for a former roommate (Kamisar, 2006).

‘grabbed’ her, ‘twisted [her] hand,’ and she ‘yelled [and] pleaded with him’ because it was hurting. Appellant, in handcuffs, was then forcibly taken upstairs to her bedroom . . . .” (*Mapp*, 1961, p. 645). The policemen proceeded to search not only through Mapp’s personal belongings in her bedroom, but also through the other rooms in the house, including her child’s bedroom. Critically, the government never showed at trial that the police had a warrant to conduct this search (p. 660).

These circumstances of *Mapp* may have played a motivating role in the Supreme Court’s expansive ruling in the case: that the exclusionary rule applies not just in federal courts, but in state courts too. The Court might have been less disposed to so significantly expanding the constitutional regulation of state law enforcement through this case if it had involved a more morally egregious defendant who triggered a high motivation to punish.

Moreover, just as the participants in Studies 4 and 5 willingly applied the exclusionary rule and expressed greater agreement with it when it enabled them to let the sympathetic Marijuana defendant off the hook, the factual context of *Mapp* probably influenced its general acceptance by the public at the time. The Court’s decision did of course invoke strong reactions from the law enforcement community (Inbau, 1962; Kamisar, 2006; Specter, 1962), but public and scholarly responses to it arguably “never reached the quantitative or emotional crescendo” that occurred following more controversial criminal procedure decisions of that decade. In fact, one commentator noted that *Mapp* initially “evoked considerable support, including occasional praise from otherwise vehement critics of the high court,” and was “rather calmly accepted if not universally applauded” (Canon, 1974, pp. 683, 696).

(b) *Nix v. Williams* (1984): Carving out inevitable discovery

Although the suppression of illegally seized evidence in *Mapp* may have been acceptable to the Court and the public at large due to the factual context of that case, the far-reaching trans-substantive precedent it established made the fruit of illegal searches inadmissible in all state courts regardless of the nature of the evidence uncovered. So, responses to this legal doctrine were bound to change as fact patterns arose involving more morally reprehensible defendants who more clearly "ought" to be brought to justice.

For example, in the 1971 case of *Coolidge v. New Hampshire*, the *Mapp* precedent required the Supreme Court to reverse the conviction of a man who had been found guilty after a jury trial of brutally murdering a 14-year-old girl, because the police had seized sweepings of hair and fiber samples from the defendant's car using a search warrant that was later found to be defective. The factual context of this case aroused sympathies opposite to those invoked by *Mapp*. In a partial dissent from the majority opinion, Chief Justice Burger said it "illustrates graphically the monstrous price we pay for the exclusionary rule in which we seem to have imprisoned ourselves" (*Coolidge v. New Hampshire*, 1971, p. 493).

Given the seemingly unjust and unpopular outcomes that the exclusionary rule could thus produce, it is not surprising that the Supreme Court eventually began "narrowing the thrust" of the doctrine—both by developing exceptions that "chipped away" at the rule and by restricting the circumstances in which it applied (Bloom, 1992, p. 80). And then, in its 1984 term, the Court is described as having "put aside its whittling knife, and [gone] after the exclusionary rule with a machete" (Wasserstrom &

Mertens, 1984, p. 90). The inevitable discovery exception used in Studies 4 and 5 was adopted during this term in *Nix v. Williams*, a case involving facts that—in contrast to the belligerent police officers and sympathetic defendant in *Mapp*—were particularly unfavorable for the defense.

Robert Anthony Williams was accused of sexually assaulting and murdering a 10-year-old girl whom he allegedly snatched from a YMCA bathroom in Iowa on Christmas Eve (*Nix v. Williams*, 1984). Williams turned himself in to the police, who agreed to drive him to a police station in Des Moines and not question him until he had met with his attorney there. During the car ride, however, one of the detectives made a plea to Williams to help the girl's parents give her "a proper Christian burial," and Williams directed the officers to her corpse. Meanwhile, there was a large-scale search underway with 200 volunteers looking for the girl, and one of the search teams was only two-and-a-half miles from where the child's smothered body was frozen to a cement culvert, which was "one of the kinds of places the teams had been specifically directed to search" (pp. 435-436). However, the corpse was covered in snow and "barely discernable" (Johnson, 1983, pp. 372-373).

Williams' attorney moved to suppress all evidence relating to the corpse on the ground that it had been discovered through the detective's unlawful conduct, but the trial court denied the motion and a jury convicted Williams of first-degree murder.[18] The case made its way to the Supreme Court, which ruled in favor of the defendant (*Brewer v.*

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[18] The Eighth Circuit, however, granted Williams' habeas corpus motion on the basis that the evidence had been wrongly admitted (*Williams v. Nix*, 1983). Although Williams had led the police to the body, he pled not guilty to the murder: "The defense theory was that someone else killed the girl and planted the body in Williams' room at the YMCA. Assuming he would be blamed, Williams panicked and fled with the body." (Johnson, 1983, p. 357).

Williams, 1977). However, a now-famous footnote in the opinion stated that in the event of a retrial, although Williams' incriminating statements and testimony about him leading the police to the corpse should be suppressed, "evidence of where the body was found and of its condition might well be admissible on the theory that the body would have been discovered in any event, even had incriminating statements not been elicited from Williams" (p. 407, fn. 12).

Williams was retried, and this time the prosecution did not offer into evidence either his statements or the fact that he had directed the police to the child's body. Evidence of the body's condition and post-mortem test results were, however, admitted under the argument that the corpse would soon have been discovered through the independent search efforts (*Nix v. Williams*, 1984, pp. 437-438). A second jury found Williams guilty, and the case once again came before the Supreme Court, which this time ruled in favor of the State by applying—and thereby establishing as national precedent—the inevitable discovery exception.

Implying something akin to motivated cognition, the defense counsel in the second *Williams* case before the Court alleged that the record contained only "post hoc rationalization" in support of the inevitable discovery exception (*Nix v. Williams*, 1984, pp. 448). Indeed, that discovery of the corpse in this case was not so obviously inevitable is evidenced by the fact that in a vigorous dissent to the Court's first *Williams* opinion, Chief Justice Burger had criticized the inevitable discovery "loophole" in the majority opinion's footnote as "an unlikely theory . . . [that] renders the prospect of doing justice in this case exceedingly remote" (*Brewer v. Williams*, 1977, p. 416, fn. 1). The Chief

Justice apparently underestimated his colleagues' motivation to embrace this interpretation of the facts in order to see the defendant brought to justice.

The *Williams* case was not the Supreme Court's first opportunity to rule on the legality of the inevitable discovery exception to the exclusionary rule; the Court had declined to hear several previous cases that raised the question (LaCount & Girese, 1975). The egregious facts of *Williams*, however, arguably provided the motivation that the justices needed to establish the exception as binding precedent on all lower courts. As legal commentators observed, "A novelist could hardly have come up with a more wrenching scenario for a dispute over fundamental legal issues and basic social values" (Wasserstrom & Mertens, 1984, fn. 324). *Williams* involved "one of the most infamous and closely scrutinized crimes of its era" (Hessler, 2000, p. 247), and the Court's original decision reversing the first murder conviction was "one of the most written about criminal procedure decisions in U.S. history . . . instigat[ing] wide discussion in both the academic literature and the popular media" (Wasserstrom & Mertens, 1984, p. 131).

In a separate opinion concurring with the Supreme Court's second *Williams* judgment (*Nix v. Williams*, 1984), Justice Stevens explicitly defended the objectivity of the Court's holding:

> There can be no denying that the character of the crime may have an impact on the decision process. As the Court was required to hold, however, that does not permit any court to condone a violation of constitutional rights. Today's decision is no more an ad hoc response to the pressure engendered by the special facts of the case than was *Williams I*. . . . The rule of law that the Court adopts today has

> an integrity of its own and is not merely the product of hydraulic pressures associated with hard cases or strong words. (pp. 451-452)

As noted earlier, however, the integrity of decision makers is not at issue in the operation of motivated cognition, since the theory predicts that people engage in this process without full awareness. In fact, it "requires no assumption of judicial dishonesty" to "suppose that the character of the claimant in an exclusionary rule proceeding tends to exacerbate bias that is naturally present in all after-the-fact proceedings" (Stuntz, 1991, p. 913).

A close examination of the Supreme Court's foundational *Mapp* and *Williams* cases thus complements the experimental findings of Studies 4 and 5 by suggesting that, in addition to influencing present applications of the exclusionary rule and its inevitable discovery exception, motivated cognition might have played a critical role in the very establishment of these laws. Moreover, motivated cognition could in this manner be driving the generation and/or enforcement (or lack thereof) of any number of other doctrines of criminal law and procedure.

Chapter VI. Pathway to Remedies

A. Seeking a Solution

i. Piercing the Illusion of Objectivity

This program of research has attempted to provide an understanding of when, how, and why motivated cognition drives legal judgments, which is a critical first step toward developing remedies to address this phenomenon. I propose that identifying the non-deliberate nature of motivated cognition points toward one potential solution. Given that legal decision makers are generally committed to reaching accurate and lawful conclusions, the key to reining in motivated cognition might lie in drawing attention to inadvertently and inappropriately motivating factors that deviate from that goal.

The potential for this remedy was seen in the harm plasticity line of experimental work described in Chapter IV. Participants' motivated punishment and harm judgments (Study 1) were exacerbated when the public nudist was promoting an ideological message on abortion that was contrary to the participants' own position on the issue (Study 2), although they did not seem to recognize the motivating influence of this factor. When the factor was made salient, however, by presenting two scenarios of nude activists that differed only in the ideological content of their message, it no longer motivated people's judgments of harm (Study 3). So, making the participants confront the potential that they might be motivated to punish the nudist based on a legally extrinsic factor eliminated its influence on their decision making. This result provided cause for optimism by demonstrating people's unwillingness to *purposefully* engage in the recruiting of harm to fulfill their desired punishment outcomes.

Similarly, in previous literature on the psychology of blame (discussed in Chapter III), making moral character explicit by presenting both likeable and dislikeable individuals whose actions led to the same harmful outcome eliminated difference in judgments of responsibility that were otherwise motivated by this legally irrelevant factor (Nadler, 2012). In a within-subjects experimental design, participants were no longer more likely to attribute greater responsibility, causality, intent, or foreseeability to the less pleasant person. "Remarkably, it seems that we do not deliberately use character information to inform responsibility judgments, for when differences in character are made explicit, . . . we moderate our responsibility judgments so that we hold the virtuous harmdoer equally responsible as the ignoble harmdoer," Nadler (2012) observed (p. 29).

The potential for successfully implementing a "consider the opposite" directive in real legal cases is limited, however, because decision makers judges only one defendant and, even if asked to imagine a hypothetical alternative, there is not always a clear opposite to potentially motivating factors. In an attempt to provide a solution that could be more broadly operationalized, the final study in this dissertation builds upon the earlier experimental findings and draws upon the flexible correction model of bias correction (Petty et al., 1998) to identify a more direct way to curtail the motivated cognition effect.

ii. The Flexible Correction Model

The flexible correction model posits that people must be aware of a potential bias, and also be motivated and able to correct for it, in order for correction to take place (Wegener & Petty, 1997, p. 152). One supporting experiment assessed participants' attitudes toward an exam policy after manipulating the likeability of the source describing the policy (the biasing factor), the quality of the argument, and the presence of a

debiasing instruction that warned participants about the potentially biasing factor (Petty et al., 1998). The results revealed a significant interaction between bias and instruction. The tendency to express more favorable attitudes toward the policy when it was presented by a likeable source disappeared when participants received the corrective instruction. The debiasing instruction did not, however, have any effect on the significant influence of argument quality, suggesting that "the observed correction was not due to changing the amount of elaboration aimed at processing the substantive arguments contained in the message" (pp. 101-102). This result is consistent with Study 2's finding that higher reports of harm in the face of a legal constraint stemmed from a directional motivation to punish, and not from a more intense but objective search for harm.

The final study in this dissertation applies the findings of the flexible correction model within the framework of motivated cognition established by the studies above. Legal decision-makers are motivated to reach legally accurate conclusions, as called for by the flexible correction model for corrective process to ensure. This is why they inadvertently engage in motivated cognition to achieve their punishment goals *within* the terms of the given law, rather than blatantly flouting it. So, explicitly warning people about legal extrinsic factors that might inappropriately motivate their judgments—thereby providing the other critical awareness component called for by the flexible correction model—should help prevent outcome-driven cognition. Study 6 was designed to test this remedy in the legal context of the exclusionary rule.

B. Study 6: Cognitive "Correction"[19]

i. Participants

The 344 respondents were a combination of Princeton University students and participants recruited through the Mechanical Turk website, who participated in Study 6 for a small monetary payment.[20] They were 54% female and ranged in age from 18 to 82, with a mean age of 32.

ii. Methodology

Study 6 used the same exclusionary rule paradigm as Studies 5 and 6, so the participants were assigned to judge either the Heroin or the Marijuana case. In addition, the participants in this study were randomly assigned to one of four instruction conditions: "Awareness," "Law," "Research," or "Control"—as described below.

Inspired by the flexible correction model, the Awareness instructions were of primary interest in this study. They were as follows:

> You will be asked to make some decisions about evidence in a legal case. Factors that are not legally relevant to these decisions—such as your feelings about the defendant's crime, or your desire to punish or not to punish the defendant—may influence your judgments. However, this would violate the purpose of the law. It is important that you think about your responses carefully and do not let your personal feelings about legally irrelevant factors influence your decisions about

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[19] Study 6 was conducted in collaboration with Joel Cooper.

[20] We excluded the data of respondents who were non-Americans, who completed the survey too quickly, and/or who failed the checks on their understanding of the facts and law in the case.

> the evidence in this case. Please keep this in mind and try to be as objective as possible in your judgments.

These instructions were designed to make the participants aware of the legally extrinsic criminal egregiousness factor that motivated applications of the exclusionary rule in Studies 4 and 5.

However, we also tested two other alternatives for sake of comparison. The Law instructions informed participants of the rationales behind the exclusionary rule, to see if this would strengthen their commitment to following the rule. They were as follows:

> You will be asked to make some decisions about evidence in a legal case. If evidence was obtained through an illegal search, the law forbids it from being used because using tainted evidence would damage the reputation of the court. Furthermore, if police officers know that evidence obtained through an illegal search cannot be used, they will be less likely to engage in illegal searches. In some cases the rule may lead to outcomes you disagree with, but its enforcement creates a more honest and fair justice system. Please keep this in mind and try to be as objective as possible in your judgments.

These instructions thus included both the normative and utilitarian justifications for the exclusionary rule, described in Chapter IV.

The Research instructions were designed to educate participants about motivated cognition in the very exclusionary rule context of the present experimental paradigm, to see whether this would immunize them from falling prey to the effect. They were as follows:

> You will be asked to make some decisions about evidence in a legal case. Research has shown that people's judgments can be inappropriately influenced by the outcome they desire, without their awareness. One study found that people were more likely to admit tainted evidence and see its discovery as inevitable if they strongly disapproved of the defendant's crime and wanted to make sure he was punished. Meanwhile, people were less likely to admit tainted evidence and see its discovery as inevitable if they wanted to let the defendant 'off the hook.'
>
> Please keep this in mind and try to be as objective as possible in your judgments.

Finally, in the Control condition, participants were just told: "You will be asked to make some decisions about evidence in a legal case."

All the participants were asked to answer the same questions as in Study 4, with the key measures being their judgments about the admissibility of the tainted evidence and its likelihood of lawful discovery. In addition, those who received corrective instructions were asked to rate on a seven-point scale the extent to which they thought the instructions had made them more objective. Study 6 also tested for order effects based on whether the corrective instructions were delivered before or after the facts and law in the case.

iii. Results

(a) Full design

The data revealed no order effects based on the timing of the instructions, so this variable was collapsed across the other conditions. Replicating the primary findings of Studies 4 and 5, there was a main effect of drug condition on the morality, punishment, admissibility, and discovery measures. The Heroin participants rated the defendant as

significantly less moral ($F(1, 343) = 1014.15$, $p < .001$, $\eta^2 = .76$) and more deserving of punishment ($F(1, 343) = 458.97$, $p < .001$, $\eta^2 = .58$) than the Marijuana participants did. Moreover, the participants judging the Heroin case were overall significantly more likely than those judging the Marijuana case to admit the tainted evidence ($F(1, 343) = 70.26$, $p < .001$, $\eta^2 = .18$.), and therefore to conclude that it would have been discovered by lawful means ($F(1, 343) = 52.71$, $p < .001$, $\eta^2 = .14$.). However, there was a significant interaction between the drug and instruction conditions on admissibility judgments ($F(3, 343) = 2.86$, $p = .037$, $\eta^2 = .03$), which was driven by the data of participants who received the Awareness instructions.

Participants judging the Heroin case continued to be significantly more likely to admit the tainted evidence than those judging the Marijuana case if they received either the Law instructions ($F(1, 85) = 17.47$, $p < .001$, $\eta^2 = .17$) or the Research instructions ($F(1, 86) = 24.61$, $p < .001$, $\eta^2 = .22$) instructions—just as when they received no instructions at all in the Control condition ($F(1, 82) = 31.43$, $p < .001$, $\eta^2 = .28$). However, the difference in admissibility judgments between the participants judging the Heroin and Marijuana cases was markedly reduced when they received the Awareness instructions ($F(1, 87) = 3.88$, $p = .052$, $\eta^2 = .04$). This indicates that the remedy based on the flexible correction model had its predicted effect, and therefore merits a closer examination.

(b) Awareness instructions

The remaining analyses compare the responses of only the participants who received the Awareness and Control instructions.[21] The 171 participants in these two conditions were 60% female and ranged in age from 18 to 82, with a mean age of 32.

Analyses of variance revealed no main effect of instruction condition on judgments about the admissibility of the tainted evidence ($F(1, 170) = .51$, $p = .48$, $\eta^2 = .003$). However, the expected interaction between the drug and instruction conditions on admissibility judgments was even stronger when comparing just the Awareness and Control conditions ($F(1, 170) = 7.69$, $p = .006$, $\eta^2 = .64$). Post-hoc tests revealed that the Heroin participants who received the Awareness instructions were significantly less likely to admit the tainted evidence than the Heroin participants who did *not* receive the instructions ($p = .02$). Moreover, the Awareness instructions markedly reduced the difference in admissibility judgments between the participants judging the Heroin case and those judging the Marijuana case ($p = .06$). Whereas, among the participants in the Control condition (who received no corrective instructions), those judging the Heroin case continued to be significantly more likely to admit the tainted evidence than those judging the Marijuana case ($p < .001$). Figure 18 illustrates these results.

[21] Since all the instruction conditions were run independently of each other, omitting the "Law" and "Research" instruction conditions did not impact the validity of this analysis.

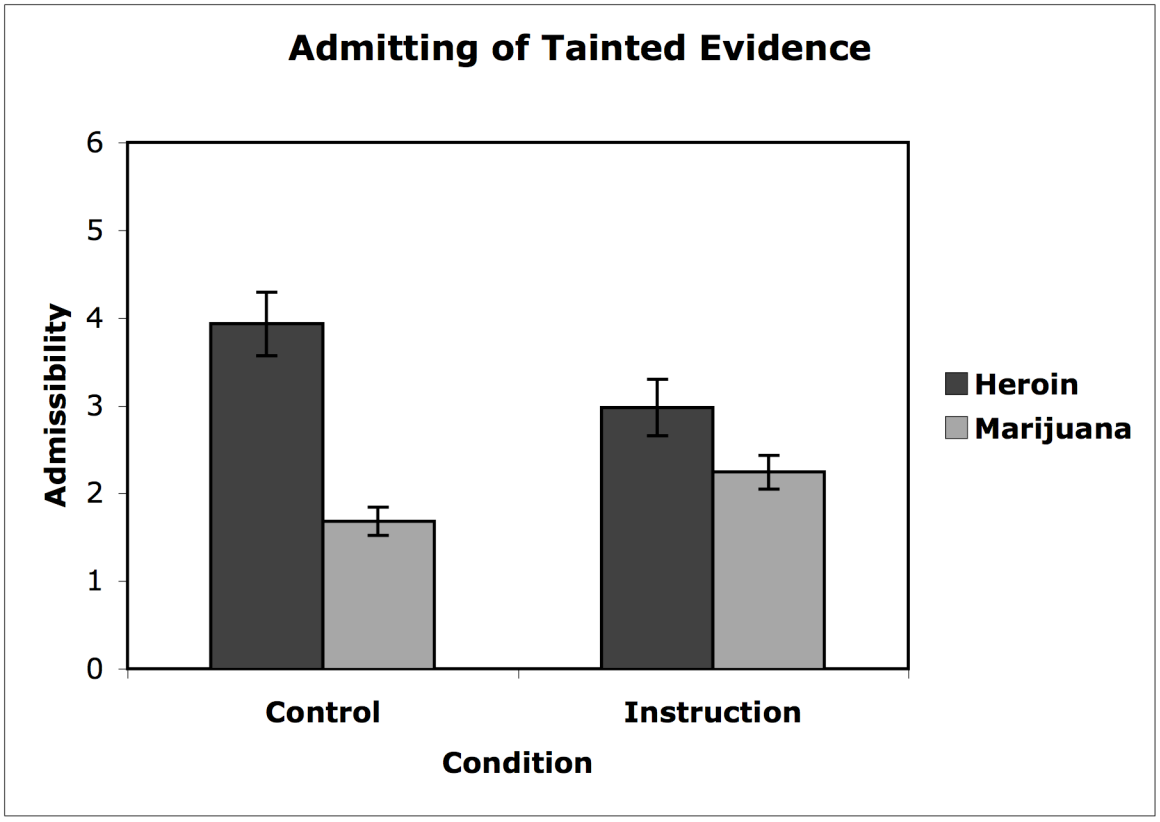

Figure 18. Study 6: Admissibility of evidence by instruction condition (Control vs. Awareness Instruction) and type of case (Heroin vs. Marijuana).

Importantly, notwithstanding the introduction of the corrective instructions, the participants judging the Heroin case were still intuitively more motivated to see the defendant brought to justice than those judging the Marijuana case (just as in Studies 4 and 5). The Heroin participants assigned the defendant significantly lower morality ratings ($F(1, 170) = 7.41$, $p < .001$, $\eta^2 = .75$) and significantly higher punishment recommendations ($F(1, 170) = 27.64$, $p < .001$, $\eta^2 = .54$) than the Marijuana participants did. This indicates that the Awareness instructions did not change the effect that the criminal egregiousness factor had on people's underlying justice intuitions. The

intervention seemed to work, instead, by strengthening people's guard against letting those intuitions motivate their judgments about the admissibility of the evidence. And, once the participants judging the Heroin case were able to resist the motivation to admit the tainted evidence, it was no longer necessary for them to construe discovery of the evidence as inevitable. There was no significant interaction between the drug and instruction condition on the likelihood-of-discovery measure.

Finally, the participants seemed to recognize the effect that the corrective instructions had upon their judgments. Among those who received the Awareness instructions, the Heroin participants—upon whom the instructions *did* have a significant effect—were significantly more likely than the Marijuana participants to report that the instructions had made them more objective ($F(1, 87) = 5.48$, $p = .02$, $\eta^2 = .06$).

C. Discussion: Study 6

The results of Study 6 indicate that the Awareness instructions, which were grounded in theoretical understandings of motivated cognition and bias correction, succeeded in curtailing the motivated cognition effect. Participants who were forewarned that they may be influenced by the egregiousness of the defendant's crime were able to resist the influence of this legally extrinsic factor on their applications of the exclusionary rule.

Meanwhile, neither the Law nor the Research instructions had a significant effect on participants' admissibility judgments. The ineffectiveness of the Law instructions may have resulted from people not being persuaded by the rationales behind the exclusionary rule, especially the deterrence justification, as previous experimental work has suggested (Bilz, 2012). The Research instructions may not have succeeded because

they were written in the third person—i.e., describing how *other* people had exhibited motivated cognition in applications of the exclusionary rule. This may have triggered the psychological phenomenon of naïve realism (Ross & Ward, 1996; Pronin, Gilovich, & Ross, 2004), whereby people are readily able to see biases in others but not in themselves. By contrast, the Awareness instructions, which did succeed, addressed participants directly (i.e., "*you*" may be influenced), and were also not conclusively worded (emphasizing what *may* happen, which made them less threatening). The null findings in Study 6 are arguably just as interesting as the primary query centered on the Awareness instructions, because they illustrate the importance of subtle differences in the wording of corrective instructions and underscore the importance of theoretically based interventions.

Study 6 also found no effect for the timing of the corrective instructions; whether they were delivered before or after the facts and law in the case made no significant difference. This results is consistent with the flexible correction model's expectation that "corrections for bias need not occur only following initial reactions to the target, but people might also attempt to avoid an anticipated bias by changing how information about the judgment target is gathered, how information is scrutinized, or by avoiding the biasing factor, if possible" (Petty et al., 1998, p. 152). Thus, although the term "correction" usually refers to "adjustment of existing reactions," people may also engage in "preemptive corrections" (p. 152).

D. Legal Applications

The results of Study 6, if confirmed and replicated in other legal contexts, could be operationalized in the form of instructions that judges read aloud in court before jury

or judicial decision making. Although there are currently various types of "debiasing" instructions given to jurors, they are not sufficiently grounded in psychological theories and empirical findings, nor systematically and uniformly implemented across courts. And we cannot rely on the adversarial system to bring this kind of information to the attention of jurors, given the great variability in quality of legal representation and the risk that litigators will be motivated to strategically use such findings to further their own interests.

Judges may bristle at the suggestion that they need to read awareness-generating instructions aloud in court before making their own judgments, because they may believe that their years of legal training and experience already make them aware of potentially motivating factors that lay decision makers do not recognize. However, familiarizing judges with experimental research on judicial susceptibility to inadvertent cognitive biases through systemic training initiatives could help counter this assumption. As researchers have observed in regard to curtailing implicit racial biases in the courtroom: "A powerful way to increase judicial motivation is for judges to gain actual scientific knowledge about implicit social cognitions. In others words, judges should be internally persuaded that a genuine problem exists." (Kang et al., 2012, p. 1175)

Potential resistance from the judiciary could also be addressed by highlighting the role that awareness-generating instructions could play in bolstering public confidence in the justice system. Recent national polling results have revealed that faith in the judiciary is low across ideological lines, with three-quarters of Americans stating that justices' decisions are influenced by their personal or political views rather than legal analysis alone (New York Times / CBS News Poll 4, 2012; Liptack & Kopicki, 2012).

Nationwide attempts by courts to formally acknowledge and increase vigilance against covertly motivating factors through awareness-generating instructions could serve not only to curtail the influence of such factors, but also to symbolically convey to the public that the legal system is making efforts to ensure that its judgments are made in compliance with constitutional protections and the rule of law.

E. Shortcomings and Alternatives

i. Drawbacks to Awareness Generating

Since not all people are equally susceptible to motivated cognition, a potential drawback of the proposed awareness-generating remedy is that decision makers who are warned of a potential bias when none exists might "over-correct" for it (Wegener & Petty, 1995). Indeed, in their experiment on source likeability described above, Petty and colleagues (1998) found that "[a]s a result of correcting when no bias was present, the impact of the source likeability manipulation was reversed—the dislikeable source was more persuasive than the likeable source" (pp. 93, 107). Similarly, in legal decision making, attempts to be completely objective and impervious to one's intuitions could lead to overly stringent applications of the law. When applying the exclusionary rule, for example, judges who are trying too hard to avoid any risk of being inadvertently biased against a defendant may be reluctant to invoke an exception to the rule even when it would be appropriate to do so. Thus, future studies need to better define the parameters of such "corrective" efforts.

The use of awareness-generating instructions that direct decision makers to resist inappropriately motivating factors could also backfire when cognition is driven by the motive to protect one's own personal and group commitments, as seen in the cultural

cognition model and other examples of ideology or identity driven cognition (Kahan et al., 2012; Furgeson et al., 2008; Miron et al., 2010). In such cases, people may be threatened by and therefore reject overt attempts to "debias" their judgments (Kahan, 2010; Cohen et al., 2007). Furthermore, awareness-generating instructions are less likely to work when people are loath to recognize and embrace the factors driving their cognition. People generally know and are comfortable "owning" the types of motivating factors used in these dissertation experiments—such as their position on abortion or their great condemnation of heroin than medical marijuana—even if they would not *intend* for these factors to motivate their legal decisions. However, in other situations, such as when decision makers are unknowingly motivated by implicit racial or gender biases, the underlying motivations may themselves be very difficult for people to acknowledge, making them all the more difficult to "correct."

ii. Self-Affirmation Strategies

When motivated cognition in legal judgments is driven by ideology, social identity, or sensitive implicit biases, some researchers suggest that self-affirmation strategies—i.e., having people write about their own positive attributes or experiences before making decisions—may be most effective in combating the effect (Kahan et al., 2012; Miron et al., 2010). Pointing out that this technique could be used during the jury selection process without jurors' recognition, Kahan and colleagues (2012) explained that "by securing the individual's sense of self worth, affirmation supplies a buffer against the psychic cost associated with giving open-minded evaluation to threatening information" (p. 896). Testing this technique in the context of negotiation, Cohen and colleagues (2007) found that affirming people's personal integrity reduced the motivating influence

of identity-based factors, but only when the relevance of the identity factors was made salient. The application of this hypothesis as a remedy for motivated cognition in legal judgments awaits an empirical test.

There is unlikely to be one magical fix for the covert operation of motivated cognition in legal decision making, especially given the many areas of law in which it may arise. Effective remedies are thus likely to differ based on the legal avenue through which motivated cognition is operating and/or the factors that are motivating the process.

iii. Procedural "Fixes"

One might argue that the legal system already has inbuilt protections against motivated cognition. For example, under the current structure of bifurcated decision making, judges rule on the admissibility of evidence and jurors make most other factual determinations about the case; and then there is the option of seeking appellate review of these judgments. However, to the extent that judges too are susceptible to motivated cognition, this division of responsibilities does not necessarily help, because judges implicitly know the likely effect that their preliminary decisions will have on a jury's ultimate determination in a case. Moreover, it is almost impossible for appellate judges to find out what motivated a jury's decision making, given that jurors deliberate behind closed doors and do not provide any oral or written reasoning to support their verdicts.

It might help to introduce bleached or blind decision making, whereby legally extrinsic factors that could trigger motivated cognition are kept from the decision maker. Decision making could also be further divided between multiple judges or sets of jurors. Alternatively, more mechanisms of accountability could be instituted to strengthen legal decision makers' accuracy goals. However, such attempts would impose considerable

administrative costs on an already overloaded criminal justice system, and would be especially impractical to implement in regard to judges. Judges make all the admissibility decisions in a case, so they need to see all the evidence. Furthermore, admissibility questions often arise unexpectedly in the middle of trials. And, if the system were to keep legally extrinsic motivating information from judges, who would decide what should be redacted in each case? The introduction of awareness-generating instructions would entail relatively less expenditure and logistical difficulty than these other procedural initiatives.

F. Amending the Law

Finally, the experimental findings and legal analysis presented herein raise the following normative query: Is the phenomenon of motivated cognition necessarily bad for the legal system? After all, legal decision makers are not expected to be neutral machines. Judges are often expected to draw upon their personal discretion and experience, and one of the purposes of the jury is to give voice to community values in the legal process.

The harm plasticity line of experiments (Studies 1-3) and the real-life *Newton v. NBC* and *Perry* Proposition 8 cases discussed in Chapter IV illustrate how, in some legal circumstances, the infiltration of motivated cognition is fundamentally incompatible with constitutional values. However, in regard to the exclusionary rule, lawyers and even judges have for decades argued that the nature of a defendant's alleged crime—the factor that motivated applications of the rule in Studies 4 and 5—is a sound basis on which to base decisions about the admissibility of tainted evidence. Justice Robert Jackson, for instance, suggested in a dissenting opinion that it would made sense to uphold a "drastic"

police search in pursuit of a serious crime, like the kidnapping of a child, but not for a "universal search to salvage a few bottles of bourbon and catch a bootlegger" (*Brinegar v. United States*, 1949, p. 183). Similarly, legal scholars have endorsed the need for a crime severity distinction in the exclusionary rule as "a global truth that makes intuitive sense to police officials and citizens alike" (Amar, 1994, p. 802; Bellin, 2011).

However, whether or not one believes it is right for applications of the exclusionary rule to be based on the severity of the alleged crime, it is problematic when this factor motivates admissibility judgments in a covert manner that neither the legal system nor the decision makers themselves acknowledge. The rule of law requires that laws be applied in the same way to all individuals, according to the terms of those laws. So, given that the exclusionary rule is a trans-substantive law, applying the rule differently to two defendants who were searched in the same manner—based on a factor that the legal doctrine does not recognize as relevant—can have a destabilizing effect on the justice system. Moreover, since not all individuals are equally susceptible to motivated cognition, defendants and the public at large are deprived of legal notice and procedural consistency if the nature of the underlying offense determines the admissibility of evidence for some defendants but not for others. If crime severity is to be factored into applications of the exclusionary rule, it should be done in a systematic, transparent, and reviewable manner.

So, in some cases, the solution to motivated cognition may lie in rethinking legal doctrines that are particularly vulnerable to this phenomenon due to their ambiguity or their tendency to clash with widespread justice intuitions. Given that legally irrelevant or inappropriate factors can motivate judgments in almost any area of law, it will not be

feasible to reconsider the terms of all doctrines that present entry points for this psychological phenomenon.

However, laws that show as serious a motivated cognition effect as the exclusionary rule are good candidates for substantive revision.

In the case of the exclusionary rule, proposals to reframe it in ways that explicitly take crime severity into account (Bellin, 2011; Kaplan, 1974) have been met with various critiques—such as the question of whether "a short list of 'serious crimes' is likely to stay short" (Kamisar, 1987, pp. 11, 21, 23). Factoring in crime severity would also not sufficiently address the present experimental finding that motivated applications of the exclusionary rule were driven by the moral repugnance of the defendant's crime, which is not necessarily commensurate with its legal severity. For example, decision makers may be more motivated to see a defendant who brutally assaulted an elderly grandmother brought to justice than a defendant who murdered a serial killer, even though assault is a less severe crime under the law than murder.

It will not be easy to reach consensus on how best to approach substantive changes to this or any other legal rule. However, attempts that are informed by psychological understanding and experimental findings will at least bring people's justice intuitions to the surface, rather than letting them drive legal decision making in an obscure manner that erodes fundamental rule of law values. Especially in the arenas of criminal law and procedure—where much is at stake for defendants, victims of crime, and society at large—clarity and consistency of legal standards is of critical importance.

Chapter VII. Conclusion

A. Theoretical Contributions

The experimental studies and analysis presented in this dissertation provide support for my hypothesis on how and why motivated cognition drives decisions about criminalizing offensive conduct and admitting tainted evidence. When the participants' own intuitions about the "right" legal outcome in a case (i.e., this conduct/defendant *should* be punished) conflicted with the requirements of a "law" (the hypothetical harm constraint or the real exclusionary rule), they cognitively processed the available information in a motivated manner (recruiting harm or construing discovery of tainted evidence as inevitable) to achieve their desired outcomes within the terms of the given legal doctrine. The studies also provide some indication of the non-deliberate nature of this process, which I suggest holds the key to remedying it. Making the participants aware that their judgments could be motivated by legally extrinsic factors—either by making such factors salient or by explicitly forewarning people about them through awareness-generating instructions—curtailed the motivated cognition effect.

The findings that decision makers will impute harm to conduct when motivated to criminalize it, and construe the lawful discovery of tainted evidence as inevitable when motivated to see a defendant brought to justice, offer a new perspective to the psychological literature on public responses to legal constraints. Although previous research has suggested that people will react in deliberately hostile ways to laws that conflict with their own intuitions (Mullen & Nadler, 2008; Robinson & Darley, 1997; Tyler, 2006), the present work indicates that, in such situations, motivated cognition can

enable decision makers to achieve their desired legal outcomes *within* the terms of the given law.

The present results also offer a new perspective to dual-process theories of moral reasoning that differentiate between deontological judgments that are "driven by automatic emotional responses" and utilitarian judgments that are "driven by controlled cognitive processes" (Greene, 2009). In these dissertation experiments, respondents eliminated the potential conflict between their deontologically-driven desire to punish the offensive behavior and the utilitarian legal constraint presented by the harm principle or the exclusionary rule, by imputing the facts necessary to ensure that "the right course of action morally becomes the right course of action practically as well" (Liu & Ditto, unpublished, pp. 13-14). Thus, people's deontological impulse to fulfill their own justice intuitions fuelled their utilitarian assessments of harm and inevitable discovery. These findings are consistent with other recent research indicating that "utilitarian and deontological rationales are often more complementary than hydraulic, and . . . individuals may construct utilitarian support for what have typically been taken as deontologically-based moral stands" (Liu & Ditto, unpublished, p. 6).

There is a cost, however, to this cognitive response; decision makers may achieve their desired legal outcomes at the expense of broader constitutional and rule of law principles. Moreover, the backward direction of outcome-driven cognition is fundamentally at odds with the legal system's expectations of how decisions are made. In stark contrast to the blindfolded ideal of the Goddess of Justice holding up her objective scales, motivated legal decision makers engage in the judgment process with imbalanced scales, blinded to their own biases. Unaware of the factors that are driving

their cognitive functioning, they believe they are engaged in neutral perceptions, evaluations, or reasoning. And, most dangerously, the legal system seems to assume so as well.

B. External Validity and Future Directions

It is difficult to "correct" cognitive biases (Wilson & Brekke, 1994; Pronin, 2008) and, even with successful results, there are many steps between providing evidence for an effect in a controlled experimental setting and operationalizing the results in real legal contexts. The first stage, seen in the present studies, involves experimentally demonstrating causality and defining the underlying cognitive phenomenon through methods that prioritize internal validity. This calls for the use of sparse hypothetical scenarios that minimize the risk of confounding variables and continuous measures that allow for broad statistical analysis.

Follow-up work must then attempt to replicate the findings with increasing external validity. One could, for instance, introduce more complex fact patterns to mirror real legal cases, and dichotomous measures that better reflect actual legal decision-making options.[22] There is also a need, as noted in Chapter V, for more experiments that use samples of actual judges and jurors—the "real" decision makers in legal cases. Moreover, as highlighted in Chapter IV, legal decision makers often reach judgments as a group, so multi-participant experiments are necessary to explore how interpersonal dynamics impact the motivated cognition demonstrated at the individual level in the

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[22] This two-step process was attempted to some extent by the use of continuous measures in Study 4 (which allowed for analyses of variance and mediation in order to map the operation of motivated cognition in the exclusionary rule context), followed by replication with dichotomous measures in Study 5 (to more closely reflect the yes-or-no answers required in real admissibility judgments).

present research. Additionally, accountability paradigms could be introduced to more closely emulate decision making in real legal contexts. Participants could, for example, be told that they will have to defend their judgments to a group of peers (as jurors do), or to a real judge (as in appellate review).

Potential remedies that are identified, like the awareness-generating instructions in Study 6, next need to be tested through field experiments, beginning on a small scale in a few courthouses that grant permission. Only then, armed with converging data points from these multiple stages of experimental work, as well as a realistic understanding of resource limitations, can we start moving toward proposing concrete modifications in the legal system at large.

The findings presented in this dissertation demonstrate that the criminal justice system's assumptions about how people make judgments are not always psychologically tenable. This program of research therefore strives toward making legal decision making more compatible with both human cognition and the rule of law. The road from the lab to the courtroom is a long one, and the norms of the legal system will be no easier to change than people's cognitive biases. However, experimental scholars working at the intersection of law and psychology are well poised to take on this challenge.

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