Motivated Cognition in Legal Judgments—An Analytic Review

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Abstract

How and when do legal decision makers' preferred outcomes inadvertently drive their judgments? This psychological phenomenon, known as motivated cognition or motivated reasoning, has become an important topic of investigation among scholars conducting experimental research at the intersection of law and psychology. This article presents an overview of that literature, discusses some of its legal applications and implications, highlights areas that require further investigation, and considers some potential ways to curtail the covert operation of motivated cognition in the legal arena.

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 then tried before Las Vegas jurors, who proceeded to award 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 because Newton had not shown by a preponderance of the evidence that he had suffered either of these consequences as a result of 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. 687). 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, especially in the face of ambiguous or subjective legal standards. How and when might preferred outcomes, based on legally irrelevant factors, drive the perception and reasoning processes of jurors, or even judges, without their full awareness?

Social psychologists have demonstrated the operation of this general phenomenon, known as motivated cognition or motivated reasoning,

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 reasoning driving political judgments (Fischle 2000, Redlawsk 2002, Taber et al. 2009, Taber & Lodge 2006), business judgments (Boiney et al. 1997), moral behavior (Bersoff 1999), and even the use and interpretation of empirical research itself (Mac-Coun 1998). And now, given its ramifications for the enforcement of constitutional values and other important legal principles, motivated cognition has become a primary focus of scholars conducting experimental research at the intersection of law and psychology.

In this article, I present a brief summary of the psychological theory of motivated cognition and then review experimental studies that have identified (a) different factors that can motivate legal judgments and (b) procedural entry points for motivated cognition at various stages of the legal process. I then consider the application of these experimental findings to jurors and judges—the real decision makers in the courtroom—and identify some areas in which further research is needed. Finally, I discuss some of the normative implications of this literature and examine potential ways to curtail motivated legal decision making.

This article emphasizes the interplay between law and psychology but also includes research on motivated reasoning by scholars working across other disciplines. The review is not, however, intended to comprehensively cover all existing studies on motivated cognition that relate to the legal arena. Moreover, the boundaries between the categories into which I have organized the literature are fluid; many of the experiments described could fit into multiple sections of the article.

THE PSYCHOLOGICAL THEORY OF MOTIVATED COGNITION

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" (quoted in Lord et al. 1979, p. 2098). The modern day psychological theory of motivated reasoning holds that when decision makers have a 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).

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). In this process, preference-inconsistent information is evaluated in a more critical manner than information that is consistent with the decision maker's preferred outcome (Ditto & Lopez 1992, Jain & Maheswaran 2000).

Motivated cognition may involve a range of cognitive functions, including not only active reasoning, but also more immediate forms of acquiring knowledge and understanding, such as visual perception. People might, for example, 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 result (Balcetis & Dunning 2006, p. 614). Thus, although the terms motivated reasoning and motivated cognition are used interchangeably, I hereafter favor the latter for its more broadly inclusive scope.

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 decision makers in their own eyes and in the eyes of others (Pyszczynski & Greenberg 1987, p. 302). As Kunda (1990, p. 483) 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.

This differentiates the phenomenon from other, more deliberate forms of outcomedriven decision making seen in legal contexts, such as 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—that is, "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 (e.g., one that could be interpreted as either a 13 or a B, or as either a seal or a horse), they were more likely to report the interpretation that assigned them to a preferable outcome (e.g., consuming a delicious item as opposed to an unappetizing 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 (Balcetis & Dunning 2006). The preferred outcome was paired with one

interpretation when participants first viewed the ambiguous stimulus (e.g., sea creaturedelicious drink), but the experimenters then switched that outcome to the alternative interpretation (e.g., farm creature-delicious drink) before the participants reported what they observed. Nevertheless, the participants reported the original interpretation they had seen (e.g., sea creature), even though it would now lead to the nonpreferred 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 functional magnetic resonance imaging (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 et al. 2006, p. 1947). Specifically, when evaluating negative stimuli, the pattern of brain activity associated with the implicit affect regulation seen in motivated cognition was different from the pattern seen in people's more conscious attempts to regulate their feelings.

Consistent with these 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, p. 954, emphasis in original). Rather, legal decision makers may be particularly likely to strive for legal accuracy when making judgments, owing to "strong socialization emphasizing the importance of following stylized rules of decision making" (Braman 2006, p. 310). However, the goal of reaching an accurate conclusion is not always enough to prevent the influence of other motivating factors, especially because "even highly thoughtful people are not necessarily aware of the impact of any biasing variable(s)" (Petty et al. 1998, p. 95).

In fact, because motivated cognition operates under an illusion of objectivity, motivated decision makers are just as certain about the accuracy of their decisions as those who reason without directional goals (Boiney et al. 1997).

Constraining Limits

The motivated cognition process is not, however, without limits. Kunda (1990, pp. 482–483) 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.

Thus, motivated biases are constrained by existing evidence (Boiney et al. 1997, Klein & Kunda 1992). The process "reflect[s] a compromise" between preferred outcomes and the relevant information at hand (Pyszczynski & Greenberg 1987, p. 333).

Another limit 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 conclusions. Emphasizing the instrumental nature of this phenomenon, Boiney and colleagues (1997, p. 20) 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." 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 as a result of reduced levels of attention or cognitive elaboration.

MOTIVATING FACTORS IN LEGAL JUDGMENTS

Experimental scholars have identified some of the factors and goals that can inadvertently motivate legal determinations. Manipulating features specific to the transgressor—such as his or her moral character or reason for acting—the culpable control model and related research on the psychology of blame have shown that such factors can drive assignments of legal responsibility even when they are not legally relevant. Looking at the nature of the transgression and the law's response to it, the motivated justice model has suggested that legal decision makers engage in motivated construal processes to reconcile situations in which their own justice goals conflict with given legal constraints. And, turning the spotlight onto characteristics of the decision makers themselves, the cultural cognition model and other lines of inquiry have examined the motivating role of individual differences and group commitments. Some key studies from these areas of research are described below. As noted earlier, the categories into which they have been organized are not mutually exclusive; some of the experimental results were produced by a combination of variables relating to the transgressors, the transgressions, and/or the decision makers in question.

The Transgressors: Assigning Legal Blame

Research on the psychology of blame has demonstrated that assignments of legal responsibility may be motivated by factors relating to the transgressor that the legal system "does not always explicitly recognize or encourage" (Nadler & McDonnell 2012, p. 255). The culpable control model, for example, suggests that when a harmful act or event occurs, people try to determine why the act occurred and in so doing tend to blame an actor who evokes a negative emotional response—even if that negative affect is triggered for reasons not directly related to the outcome in question (Alicke 2000). In such situations, Alicke (2000, p. 558) explained, people are likely to "review...evidence in a biased manner by exaggerating the actor's volitional or causal control, by lowering their evidential standards for blame, or by seeking information to support their blame attribution."

For example, in one study, Alicke (1992) showed that participants were more likely to see a speeding driver as the primary cause of a car accident—despite the presence of another potential cause such as an oil spill or a tree branch covering a stop sign—if the driver was speeding home to hide a vial of cocaine, as compared with if he was speeding home to hide his parents' surprise anniversary gift. Although the harmful outcome was unintended in both cases, the participants were also motivated to rate the driver as more responsible for the accident when he had an unsavory reason for speeding.

Investigating this psychological response in regard to the elements of criminal liability, Nadler & McDonnell (2012) suggested that negative legal judgments about blame may be driven not only by an actor's motives for acting, but also by his or her moral character independent of the act in question. Although the criminal law generally aims to "blame a criminal for what she did, not who she is," they showed that "an actor's bad motive and bad moral character can increase not only perceived blame and responsibility but also perceived causal influence and intentionality" (pp. 260, 255).

In one experiment, participants were presented with the case of a woman whose dogs mauled a child to death. The woman was described as having either a "good" (sociable, generous, and healthy) or "bad" (antisocial and unhealthy) character in ways unrelated to the incident (p. 285). The experimental scenarios also varied in whether or not the woman was aware of her dogs' tendency to misbehave.

The participants who had been presented with an unpleasant person rated her as having higher overall responsibility and intentionality in the child's death than did those who had been presented with a pleasant person, even if they were told that the woman was entirely unaware of the risk her dogs posed. In fact, the effects of the woman having a bad character (a legally irrelevant factor) were similar to the effects of her being aware of the dangerousness of her dogs (which would be legally relevant). Explaining how such blaming tendencies are rooted in the theory of motivated cognition,

Nadler & McDonnell (2012, p. 291) suggested that people's initial motivation to "inculpate a defendant they see as 'bad'...leads them to interpret the defendant's transgression in a way that makes it more legally blameworthy."

Further research provided evidence for the nonintentional nature of this psychological process (Nadler 2012). When participants were asked to judge both an individual who was described as good and an individual who was described as bad (instead of just one or the other), they were no longer more likely to make greater attributions of responsibility to the less likeable person. Even though the participants' responses were anonymous (as is the norm in such psychology experiments) and therefore unlikely to be driven by the desire to appear unbiased to others, Nadler (2012, p. 29) observed that people did "not deliberately use character information to inform responsibility judgments, for when differences in character [were] made explicit,...the virtuous harmdoer [was held] equally responsible as the ignoble harmdoer."

The Transgressions: Reconciling Competing Motives

Approaching motivated legal decision making from another angle, the motivated justice model considers the nature of the offense and the law's response to it in order to explain why legal decision makers may engage in motivated cognition (A.M. Sood, unpublished manuscript). People are generally committed to following legal rules (Tyler 1990), and this is especially likely in the high-stakes contexts of criminal justice and courtroom decision making. However, some transgressions strain the cognitive capacity of decision makers to comply with applicable legal doctrines or values in the neutral, transsubstantive manner called for by the law. In such cases, people's intuitions about the "right" response to a particular offense may conflict with their desire to comply with the requirements of a legal constraint.

Prior psychology research has suggested that laws that fail to reflect the public's punishment intuitions bear a risk of overt defiance (Robinson & Darley 1997, Tyler 1990). The motivated justice model applies the theory of motivated cognition to 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 may engage in a motivated construal of relevant information to achieve their desired punishment outcomes ostensibly within the terms of the given legal rule, especially when the law leaves room for ambiguity or interpretation (A.M. Sood, unpublished manuscript).

Motivated recruiting of harm. Sood & Darley (2012) provided experimental evidence for the motivated justice model in the context of a hypothetical legal constraint based on the harm principle (Mill 1859)—which has historically been invoked to argue that the State should criminalize conduct only if doing so prevents harm to others [Hart 1963, Model Penal Code 1962 Sec. 1.02(a)]. In fact, harm has become "the critical principle used to police the line between law and morality within Anglo-American philosophy of law" (Harcourt 1999, p. 131, emphasis in original). To illustrate how people's punishment goals can motivate the construal of harm, Sood & Darley (2012) first identified scenarios that induced defiance of the harm principle (i.e., conduct that people said did not cause harm to others but that they nevertheless wanted to criminalize, such as a man going to the supermarket in the nude). A subsequent experiment presented participants with these same scenarios but then told half the participants that the law requires a finding of harm in order to punish (the other half were given no legal constraint).

The results revealed a rigidity in people's criminalization goals, contrasting with a plasticity in their reports of harm. In the public nudity scenario, for example, participants across both conditions were equally likely to recommend criminalizing the behavior, but those who had received the legal constraint that required a finding of harm to penalize were significantly more likely to impute harm to the conduct (where harm was not otherwise reported).

These participants were thus motivated to cognitively recruit harm in order to achieve their punishment goals within the terms of the given law. However, consistent with the boundaries of motivated cognition, the average level of imputed harm was low, as the participants needed only to cross a threshold of some harm in order to justify their criminalization decisions under the experimental legal constraint.

To rule out a potential nonmotivational explanation that the legal constraint might have inspired a more intense but essentially objective search for harm, another experiment demonstrated that the plasticity of harm was exacerbated by the introduction of an additional directionally motivating ideological factor (Sood & Darley 2012). In this study, all the participants were given the legal constraint that called for a finding of harm in order to punish. However, half the participants were told that the nudist was holding up a prochoice sign in favor of legalized abortion, whereas the other half were told that the nudist was holding up a prolife sign against the legalization of abortion.

For purposes of determining punishment, the nudist's position on abortion would be not only irrelevant, but also constitutionally impermissible to consider: "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" (Texas v. 7obnson 1989, p. 414). Nevertheless, the participants in the experiment assigned significantly higher punishment and therefore imputed more harm to the act of public nudity when the nudist's position was incongruent with their own views on abortion (which had been gauged through a separate survey). This effect was seen among both prolife and prochoice participants, revealing an ideological universality to the underlying cognitive process. Yet, the participants' written explanations of the alleged harm never mentioned the abortion issue; they focused only on the nonideological aspect of the conduct (the public nudity), which was held constant across conditions and thus could not account for the significant differences in reports of harm.¹

Critically, confronting the illusion of objectivity by making the ideological factor salient eliminated this motivated cognition effect. When participants in a final experiment were asked to judge both a prochoice and a prolife nudist, their punishment and harm reports no longer differed based on their personal agreement with the actor's position on abortion (Sood & Darley 2012).

Cognitive cleansing of tainted evidence.

Whereas the harm plasticity studies used a hypothetical legal constraint, a more recent set of experiments provided a doctrinal application of the motivated justice model of legal decision making in the context of a real and controversial law of criminal procedure: the exclusionary rule (A.M. Sood, unpublished manuscript). The exclusionary rule holds that evidence obtained through an illegal police search cannot be admitted in a criminal case (Mapp v. Obio 1961, Weeks v. United States 1914), regardless of the nature of the crime uncovered (Kamisar 1987). There are, however, several exceptions to the rule, including the inevitable discovery exception, which permits the use of such evidence if a judge determines that it inevitably would have been discovered through legal means (Nix v. Williams 1984).

To experimentally investigate the operation of motivated cognition in this context, participants were presented with a scenario in which police officers conducted an illegal search of a car (A.M. Sood, unpublished manuscript). Half the participants were told that the police discovered evidence of the defendant selling heroin to high school students; the other half were told that the police discovered evidence of

¹This particular experiment is one example of research that spans across the different categories laid out in this article, as the motivated cognition effect was driven by a combination of features relating to the transgressor (prolife or prochoice), the transgression (public nudity that people want to punish regardless of harm), and the decision makers themselves (prolife or prochoice).

the defendant selling marijuana to terminally ill cancer patients. The respondents were then informed of the relevant legal doctrine and asked to make judgments about the admissibility of the tainted evidence.

The participants judging the heroin case, who were more motivated to see the defendant brought to justice, were significantly more likely than those judging the marijuana case to admit the tainted evidence and to construe its discovery as inevitable—thereby securing their desired punishment outcome within a legal exception to the exclusionary rule. Moreover, although the actions of the police officers were the same across the two conditions, the motivated cognition process also led to significant differences in the participants' perceptions of the officers who conducted the illegal search and in their judgments about the integrity of police forces generally.

The Decision Makers: Political Ideology, Cultural Commitments, and Social Identity

The motivated cognition effects described in the studies above have generally been exhibited among the participants as a whole, without significant individual differences being reported. [An exception was the abortion-related scenario of the harm plasticity experiment (Sood & Darley 2012) that showed motivated decision making being driven not only by characteristics of the act and actor being judged, but also by the ideological views of those making the judgments.] The lines of research highlighted below more specifically focus on the decision makers-seeking to investigate the motivating roles of their political preferences, cultural commitments, and group membership—and the interaction of such variables with features of the transgressor and/or transgression in question.

Liberal-conservative ideology. Using general political ideology (liberal versus conservative) as an independent variable, one study asked law students to determine whether a change in a school district's tax rate violated

a state constitutional provision (Furgeson et al. 2008). Half the participants were told that the change raised taxes, whereas the other half were told that the change lowered taxes. Meanwhile, all the legally relevant materials the participants read—the legislative history, the relevant precedents, and the parties' briefs—were the same across both conditions.

After evaluating the information, politically liberal law students were more likely to overturn the law if it lowered taxes, whereas politically conservative law students were more likely to overturn the law if it increased taxes. This was so even though the participants knew that their 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). 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. 226).

Cultural cognition. Applying a more multidimensional categorization of individual differences to examine "the unconscious influence of individuals' group commitments on their perceptions of legally consequential facts," the cultural cognition model predicts that people's judgments are motivated by where they fall on two spectrums of cultural values: egalitarian versus hierarchical and individualist versus communitarian (Kahan et al. 2012, p. 1). Kahan and colleagues 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 that was used in a real Supreme Court case (Kahan et al. 2009), and perceptions of consent in acquaintance rape cases (Kahan 2010).

One recent experiment 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 government's "don't ask, don't tell" policy that barred being openly gay in the military. 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—any of 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 antiabortion or the progay 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. 885).

Group identity. Researchers have also provided evidence for how justice-related judgments can be motivated by other social identity factors, such as 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 criteria they used to evaluate their group's past bad actions (i.e., slavery) (Miron

et al. 2010). In particular, the participants required more evidence of their in-group's wrongdoing in order to determine that group members had acted unjustly. "Motivation to protect the ingroup can lead to heightened standards and reduced judgments of harm doing and guilt," the researchers observed (p. 777).

PROCEDURAL AVENUES FOR MOTIVATED DECISION MAKING

Having described some of the different factors that can trigger motivated cognition in legal judgments, I now highlight studies that have identified specific stages of the legal process during which this phenomenon can occur such as during the resolution of threshold questions, the application of precedents, and the evaluation of social science evidence in legal cases. The experiments that follow could also be organized into the categories laid out in the prior section, as the motivated cognition they demonstrate is driven by features of the particular transgressors, transgressions, and/or decision makers in question. Conversely, some of the above-discussed studies also illustrated procedural entry points for motivated cognition;² but this was, to a greater extent, the focal research query in the studies described below.

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. These preliminary determinations can dictate whether or not a case even gets its day in court. To investigate the operation of motivated cognition through this channel, Braman (2006) presented law student participants with a legal case involving a firefighter who had been threatened with disciplinary action because his wife posted

²For example, the exclusionary rule studies (A.M. Sood, unpublished manuscript) showed that judgments about the admissibility of tainted evidence can provide a procedural entry point for motivated cognition in criminal cases.

a campaign sign on their personal property in alleged violation of a city ordinance that prohibited public employees from participating in political activity. The wife challenged the ordinance on the basis that it inhibited her freedom of expression, but the defense argued that she did not have legal standing to bring the case because she herself was not a public employee, so the ordinance affected her only indirectly through the sanctions her husband faced.

All the participants in the experiment were presented with the same facts of the case except for one key difference: Half of them were told that the wife's campaign sign had expressed support for a prolife candidate, and the other half were told that she had expressed support for a prochoice candidate. The results revealed that when there was no clear legal authority in favor of the plaintiff, the participants were more likely to reason that she had legal standing to bring the case when their own view on abortion coincided with her position on the issue—even though this had no relevance to the legal question at hand.

Application of Legal Precedents

In some circumstances, the availability of clear legal precedent can provide a constraint upon unconscious cognitive influences in legal decision making (Braman 2006). Indeed, the doctrine of *stare decisis* calls for judges to follow previous legal rulings in similar cases 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 also provide another covert entry point for motivated cognition.

In an experiment testing this hypothesis, Braman & Nelson (2007) presented participants with a legal case involving discrimination by the Boy Scouts against a gay scout leader and gave them examples of prior legal precedents that varied both in their outcomes (i.e., whether or not there was a finding of discrimination) and in their factual similarities to the case at hand (i.e., close, medium, and far cases). As

expected, the participants' judgments about whether or not prior cases were relevant to the present litigation revealed an interaction between people's 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 that did not, whereas the opposite was true of participants who disapproved of gay scout leaders.

This effect was present, however, only 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, "[o]bjective case facts constrained motivated perceptions" (p. 954). Notably, a variation of this experiment conducted with a mixed sample of undergraduate and law students found that the motivated cognition effect was significantly stronger among the legally trained participants.

Evaluation of Social Science Evidence

Motivated cognition can surreptitiously enter the legal domain not only through judgments about threshold questions and legal precedents, but also through decision makers' evaluations of social science evidence. 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 studieson how well the research had been conducted and on how convincing the results were in favor of whichever results confirmed their own initial attitudes toward capital punishment. "[D]ecisions 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 & 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 support or oppose capital punishment, law student participants evaluated data that were consistent with their own position on the death penalty more favorably in all their legal judgments. Judges did not exhibit this effect in judgments about relevance and admissibility, but their personal views on the death penalty did motivate their decisions about the dispositive weight of the evidence, which the researchers noted is "a critically important decision that often affects the outcome of cases" (p. 48).

REAL-WORLD APPLICATIONS

The literature reviewed in this article has demonstrated the operation of motivated cognition in simulated legal contexts. But how do the results translate to the decision making of actual jurors and judges in real legal cases? This section considers the real-world applications of these experimental findings and identifies some areas that require further research.

Jurors' Judgments

Many of the above-described studies were conducted using lay adult participants who would be eligible to serve on civil and criminal juries, so there is reason to believe that the cognitive processes of actual jurors would be similarly motivated by preferred outcomes. In fact, the experimental findings that lay decision makers may be particularly vulnerable to motivated cognition in cases involving First Amendment rights (Kahan et al. 2012, Sood & Darley 2012) are reminiscent of the jury's response in Newton v. National Broadcasting Company (1987), the defamation case that introduced this article, in which the appellate court warned about the risks that motivated judgments pose

to freedom of speech. The *Newton* jurors may have been motivated, without their awareness, to perceive malice in NBC's actions and impute harm to Newton's reputation in order to punish the offensive portrayal of a beloved entertainer within the legal standard they were given.

To the extent that some of the results reported in this literature were obtained using student samples, evidence suggests that the motivated cognition effect they illustrate could be even stronger in cases decided by jurors. One mock-juror study conducted with both community residents and college students found that the former relied more on their own attributions of responsibility than on jury instructions in reaching their verdicts, which the researchers suggested might be because community residents, like real jurors, are less practiced in following directions than students (Wiener et al. 1991).

Another study that compared college students with 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 with 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 noted that because real jurors are generally older than students, their prior beliefs are likely to be "more stable" (p. 99). This is consistent with findings that decision makers with more experience or knowledge about the issues at hand are more likely to reach preference-consistent decisions, as they are more likely to see or draw upon evidence that supports their desired outcome (Taber et al. 2009, Taber & Lodge 2006).

Application of the presently reviewed research to real jury decision making is limited, however, by the fact that these experiments were conducted on an individual basis, whereas jurors reach decisions as a group. Although a diversity of identities or opinions within a group can make people less susceptible to certain biases (Sommers 2008), motivated cognition

in collective deliberations could alternatively "trigger a self-reinforcing atmosphere of distrust and recrimination that prevents culturally diverse participants from converging on outcomes that suit their common ends" (Kahan 2011, p. 7). Moreover, whereas experimental work using a simulated jury setting has indicated that group deliberations can lead to more polarized judgments (Myers & Kaplan 1976), a meta-analysis that compared empirical literature on judgmental biases in individuals versus groups found no clear pattern of differences (Kerr et al. 1996). These studies on group decision making have not, however, focused specifically on motivated cognition. Therefore, further research is needed to investigate whether interpersonal dynamics among multiple jurors (or panels of judges) intensify or ameliorate the effects shown at the individual level in the existing literature on motivated legal judgments.

Judicial Decision Making

Legal training does not necessarily provide inoculation against motivated cognition, as evidenced by several of the experiments that demonstrated this phenomenon in the judgments of law students and/or judges (Braman & Nelson 2007, Furgeson et al. 2008, Redding & Reppucci 1999). In fact, in their study on evaluations of legal precedents, Braman & Nelson (2007, p. 952) reported that the motivated cognition effect was actually "stronger and more consistent" in law student participants than in those without legal training.

There is some experimental evidence for reduced cognitive biases among judges as compared with law students and lay people, but not for a lack of judicial bias altogether. One study that directly compared judgments made by lay people and those made by federal magistrate judges reported that the judges exhibited all five of the cognitive illusions that were tested, at levels comparable with those of lay people for three of them (Guthrie et al. 2001). Another line of experiments that tested judicial ability to disregard inadmissible information found that judges were influenced by various

legally inapplicable factors, such as "demands disclosed during a settlement conference, conversation protected by the attorney-client privilege, [and] prior sexual history of an alleged rape victim" (Wistrich et al. 2005, p. 1251). The judges were, however, able to resist being influenced by inappropriate information that directly implicated constitutional rights, such as "information obtained in violation of a criminal defendant's right to counsel" (p. 1251).

In Redding & Reppucci's (1999, p. 48) study on evaluations of social science evidence in death penalty cases, motivated cognition was seen more in the preliminary relevance and admissibility decisions of the law students than in those of the judges, but the judges did exhibit the effect when it came to the "much more subjective and value-laden judgment about what weight to accord that evidence once it is admitted." Notably, the experiment also found that legal training and experience seemed to exacerbate the illusion of objectivity—which can ironically increase the risk of nonobjective decision making (Kang et al. 2012). The judges were more confident than the law students that other legally trained professionals would agree with their decisions, even though there was actually greater variability in their judgments (Redding & Reppucci 1999).

Another study comparing the decisions of judges and those of jurors in a civil case found that both groups were comparably influenced by inadmissible material that should have been disregarded (Landsman & Rakos 1994). However, although 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" (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 populations of judges. Future research on judges could also explore the effects of repeat experience, appellate review, and how

motivated cognition manifests at different levels of the judiciary or among professional adjudicators with different types of training and decision-making discretion, such as mediators or administrative judges.

Additional Future Directions

An important qualification to these findings is that not all legal decision makers are equally susceptible to motivated cognition. The legal applications and implications of this experimental literature must therefore be considered with this caveat in mind. In the exclusionary rule studies described above, for example, approximately 60% of the participants judging the heroin case admitted the tainted evidence and construed its lawful discovery as inevitablewhich was in stark contrast to the mere 15% of participants in the marijuana case who exhibited this effect but was by no means a uniform response (A.M. Sood, unpublished manuscript). Additional studies are needed to identify what makes particular types of people, areas of law, and categories of legal judgments more or less susceptible to the motivated cognition effect.

Furthermore, judges and jurors are not the only players in the legal system who may be influenced by motivated cognition. Work on coherence-based reasoning—a process whereby "the mind shuns cognitively complex and difficult decision tasks by reconstructing them into easy ones, yielding strong, confident conclusions" (Simon 2004, p. 513)³—has suggested that preferred outcomes may also drive lawyers' judgments. In one study, participants who were assigned to the role of lawyers on

either side of a case involving ambiguous facts showed "strong coherence effects supporting the desired conclusions," such as rating their side's witnesses as more credible or seeing the facts as being more in favor of their client (p. 541). Building upon such findings, future work should pay closer attention to the operation of motivated cognition among other players in the legal system—not only counsel, but also prosecutors, defendants, civil litigants, and witnesses—whose cognitive responses and judgments could play as significant a role in the outcome of legal cases as the determinations of judges and juries.

IMPLICATIONS AND REMEDIES

The experimental demonstrations of motivated legal decision making give rise to normative questions about whether this phenomenon is detrimental to the legal system and what we can or should do about it. A comprehensive consideration of these weighty queries is beyond the scope of this article, but the existing literature suggests some noteworthy points in this regard.

Normative Implications

Legal decision makers are not supposed to be detached machines. Judges are often expected to draw upon their personal discretion and experience, and one of the purposes of the jury is to give a voice to community values in the legal process. However, the infiltration of motivated cognition into the judgments of such decision makers can undermine the rule of law. For example, when a legally irrelevant factor—such as a defendant's unpleasant personality, the nature of illegally obtained evidence, or a decision maker's position on abortion—drives legal determinations, it disrupts the uniform application of laws to all actors. Whether through the resolution of threshold questions, applications of precedent, or evaluations of evidence, outcome-driven perceptions and reasoning interfere with the neutrality and transparency of the legal process. Moreover, the cognitive instability of judgments about concepts such as

³Although the motivated cognition processes described in the present article are driven by "directional goals" (Kunda 1990, p. 482), Simon and colleagues (2001, p. 1259) proposed the following connection to accuracy-driven coherence-based reasoning: "[T]he shifting of inferences toward coherence with the verdicts bears a distinct resemblance to the way in which motivated reasoning processes are biased toward supporting the desired goal. It follows, then, that reasoning processes can be motivated not only by ostensible goals such as self-maintenance and hedonic interests, but also to some degree by the tendency to create coherent mental representations."

harm or the line between speech and conduct calls into question laws and policies that rely on such determinations, to the extent that they may be endogenous to decision makers' personal justice goals and cultural identities.

Elaborating on the "particularly subversive" effect that motivated cognition can have on constitutional principles, Kahan and colleagues (2012, p. 854) 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.

The studies reviewed in this article are muchneeded exceptions that address this pressing concern.

Even in situations when motivated cognition is an arguably rational response to legal doctrines that overestimate the cognitive neutrality of decision makers—as in the case of the exclusionary rule, which some legal scholars have argued should take the severity of the defendant's alleged crime into account in decisions about suppressing tainted evidence (e.g., Bellin 2011, Kaplan 1974)-motivated cognition is not a legally appropriate means by which to respond. If a particular factor is going to be allowed to influence legal judgments, it should be considered in a systematic and reviewable manner across all applications of the relevant law. Alternatively, if the legal system wants to keep certain motivating factors out in order to protect established legal values and constitutional principles, researchers need to identify ways in which to block the psychological process itself.

Potential Remedies

An understanding of how and when motivated cognition drives legal judgments, as provided by this body of experimental research, is a critical first step toward developing remedies to stem its covert operation in the legal system. However, there is unlikely to be one magical fix for this complicated problem, especially given the different legal stages and contexts in which it may arise. Effective remedies are likely to differ based on the procedural avenue through which motivated cognition is operating and the factors that are motivating the process. Therefore, experimental scholars have considered different psychological routes by which to curtail the phenomenon, including through the introduction of awareness-generating instructions and the use of self-affirmation techniques. Motivated cognition could also be addressed by modifications to the legal system itself, such as through structural changes to the processes by which decisions are made or substantive revisions to legal doctrines that are particularly vulnerable to the effect.

Confronting the illusion of objectivity.

Identifying the nondeliberate nature of motivated cognition points toward one potential means by which to curb its operation. "[F]or people to reach their motivational goals, it is imperative that they remain unaware of the distortions they place on their thinking," Balcetis & Dunning (2006, p. 623) noted. "If they knew that they believed [something] merely because they wanted to believe it, they would also know, at least in part, how illegitimate that thought was." Thus, especially in legal decision-making contexts, in which people strive to reach accurate and lawful conclusions, the key to reining in motivated cognition might lie in drawing attention to inadvertently and inappropriately motivating factors (A.M. Sood & J. Cooper, unpublished manuscript).

In the harm plasticity line of research (Sood & Darley 2012), for example, blocking the illusion of objectivity by presenting scenarios of both a prochoice and a prolife nudist—thereby making the decision makers explicitly confront the ideological factor that could color their judgments—curtailed the motivating effect of this factor. Similarly, in experimental work on the psychology of blame (Nadler 2012), making moral character explicit by presenting both "good" and "bad" individuals whose actions led to harmful outcomes eliminated the motivating influence of the wrongdoer's character on judgments about legal responsibility. However, operationalizing these withinsubject designs—in which decision makers are presented with two opposite scenarios—would be difficult in real legal contexts, where people judge just one case at a time.

In an attempt to provide a solution that could be more broadly implemented across legal cases, a recent study (A.M. Sood & J. Cooper, unpublished manuscript) drew upon the psychological theory of the flexible correction model (Petty et al. 1998), which posits that when people become aware of potential biases, they are more likely to correct for them. The experiment used the heroin/marijuana exclusionary rule paradigm described above (A.M. Sood, unpublished manuscript), but some participants were forewarned that their admissibility judgments could be influenced by irrelevant factors, such as how they felt about the defendant's crime—and they were instructed to resist such influences (A.M. Sood & J. Cooper, unpublished manuscript). The participants who judged the heroin case after receiving the awareness-generating instructions were no longer more likely to admit the tainted evidence than those who judged the marijuana case, rendering motivated construal of inevitable discovery unnecessary. Furthermore, the participants in the heroin condition who received the awareness instructions were significantly less likely to admit the tainted evidence than those in the heroin condition who did not receive the instructions.

Once replicated and tested in real legal settings, such findings could be operationalized through, for example, jury instructions. Although there are currently various types of debiasing directives given to jurors, they are not sufficiently grounded in psychological theories and empirical findings, nor systematically and uniformly implemented across courts. However, because not all people are equally susceptible to motivated cognition, a potential shortcoming of the awareness-generating endeavor is that decision makers who are warned of a potential bias when none exists might "overcorrect" for it (Petty et al. 1998, p. 97), which would carry its own host of undesirable legal consequences. Thus, future studies need to better define the parameters of this potential remedy.

Self-affirmation strategies. The use of 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 or group commitments, as seen in the cultural cognition model and related research (Kahan 2010, Miron et al. 2010). In these situations, people may be threatened by and therefore reject overt attempts to debias their judgments (Kahan 2010). Therefore, researchers focusing on identity-driven cognition have suggested that self-affirmation strategies—such as having people write about their own positive attributes or experiences before making legal judgments-may be more effective in combating motivated decision making (Kahan et al. 2012, Miron et al. 2010). "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," Kahan and colleagues (2012, p. 896) explained, suggesting that this technique could be used during the jury selection process without jurors realizing its purpose.

Prior research has provided experimental support for this strategy in the context of negotiations (Cohen et al. 2007), but the application of self-affirmation techniques as a remedy for

motivated legal judgments awaits an empirical test. Future research should also consider how best to apply awareness instructions, affirmation strategies, or any other such corrective efforts to professional decision makers. Judges may be particularly resistant to accepting such initiatives, especially given that they have stronger illusions of objectivity about their decision making than lay people do (Landsman & Rakos 1994, Redding & Reppucci 1999).

Procedural and doctrinal revisions. The psychology-based remedies suggested above are geared toward correcting the cognitive processes of legal decision makers, but one could also try to curtail the operation of motivated cognition in legal judgments by expanding upon existing protective structures within the legal system. For example, there could be structural changes made to increase bifurcated decision making (i.e., more division of responsibility between jurors and judges or between multiple judges) and to strengthen decision makers' accuracy goals through more mechanisms of accountability. However, given the resource constraints of the legal system, the logistical challenges and costs of implementing such modifications are significant drawbacks.

In some cases, a potential solution may lie in rethinking laws that are particularly susceptible to motivated cognition, owing to ambiguous concepts or the tendency to clash with widespread justice intuitions. For example, the experimental finding of lay people applying the exclusionary rule in a motivated manner (A.M. Sood, unpublished manuscript) is consistent with decades of observations of how judges have applied the doctrine (e.g., Kaplan 1974), and this "serious psychological problem" that the rule "suffers" has led legal scholars to propose various revisions and alternatives to it (Dripps 2001, p. 2). These proposals have, in turn, been met with various critiques; considering changes

to a legal doctrine is inevitably a complicated enterprise with a host of constitutional and practical implications. Experimental studies that explain decision makers' psychological responses to the law could make a useful contribution to such debates.

CONCLUSION

The experimental work reviewed in this article reveals that the legal system's assumptions about how people make decisions are not always psychologically tenable. In stark contrast to the blindfolded ideal of the Goddess of Justice holding up her objective scales, legal decision makers may engage in judgment processes with imbalanced scales, blinded only to their own biases. Unaware of the legally extrinsic factors that are motivating their cognitive functioning, they might believe they are engaging in neutral perceptions, evaluations, and reasoning—and most significantly, the legal system seems to assume so as well.

With the fallibility of these assumptions having been demonstrated, it is essential for experimental researchers to now turn their focus toward remedying the covert operation of motivated cognition in legal judgments. It is notoriously difficult to correct cognitive biases (Pronin 2008, Wilson & Brekke 1994), and even with successful results, the road from the lab to the courtroom is a long one. Many steps need to be taken to replicate experimental results with increasing external validity before attempting to systematically operationalize them in real legal contexts, and the norms of the legal system will be no easier to change than people's intuitive cognitive responses. However, by drawing upon the theories and methodologies of psychology coupled with an understanding of the law, experimental scholars working at the intersection of these fields are well positioned to take on the challenge.

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