



## Working Memory and Cognitive Load in the Legal System: Influences on Police Shooting Decisions, Interrogation and Jury Decisions<sup>☆</sup>



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The ability of police and jurors to make informed, unbiased decisions is paramount to the integrity of the legal system. Police and jurors as decision-makers follow procedures ensuring that individuals receive a fair trial from the time of arrest to sentencing. However this process has come under public scrutiny with recent negative media attention focused on police shootings, aggressive handling or interrogation of suspects, and jurors' seemingly biased treatment of minority group members. Most researchers studying factors that motivate police and juror behavior focus on the external influences of decision-making, such as the climate of violence in a neighborhood, or culturally-entrenched criminal stereotypes. Fewer have focused on the cognitive factors that impact the internal decision-making processes. In this review we compile the research on individual differences in cognitive ability (e.g., working memory capacity) and event circumstances (e.g., high emotion, attention load), that influence police and jury decision-making. The majority of studies in this area are laboratory-based which may attenuate the transfer of findings to real-world settings, but cognitive mechanisms engaged in the field are likely similar. Overall, this review suggests that overload of cognitive capacity reduces controlled processing ability, which may work to undermine the reliability of decision-making at all phases of the legal process. Field studies are needed to better understand when decision-makers may be overburdened, and what interventions are most appropriate.

**Keywords:** Memory load, Police decision making, Working memory capacity, Jury decision making

The ability of police, jurors and judges to make informed and unbiased decisions is paramount to the integrity of our legal system. Police and jurors follow procedures and protocols to ensure that individuals are treated fairly from the time of arrest to the time of sentencing. Factors known to influence the veracity of remembered case facts, such as type of questioning, lineup presentation, and witness instructions (i.e., systems variables), can be controlled by police procedure or laws (Wells, Memon, & Penrod, 2006). Other factors outside the control of the legal system, such as crime scene context, duration of the event, and individual differences of individuals involved (i.e., estimator variables), cannot be controlled by procedure or law, and may have deleterious effects on trial outcomes. Among the factors that vary by individual is working memory capacity (WMC), defined as one's ability to hold information in mind for mental manipulation in the face of distraction. Working memory

capacity is an important factor in making controlled decisions in a variety of contexts (Kane & Engle, 2003; Kane, Bleckley, Conway, & Engle, 2001), including the legal system. Since the legal system involves a wide variety of decision-making circumstances, fair outcomes in many cases may depend on the ability to rely upon controlled, rather than heuristic (i.e., automatic), cognitive processes.

In this review, we will discuss the literature on cognitive load and WMC and how the differences in this measure of cognitive ability potentially impact police shoot decisions, interrogation techniques, and ability to interpret nonverbal cues; and juror decision making and ability to interpret case facts. Notably, testing WMC in applied settings is challenging, as such there are relatively few studies conducted with members of the legal system (e.g., judges, jurors, policemen), and even fewer studies conducted in naturalistic environments (e.g., courtroom, crime

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scene, etc.). However, in examining the existing research, we seek to draw some conclusions regarding cognitive processing issues as they may apply to the legal system, identify places where deficits may contribute to unjust outcomes, and ultimately highlight the need for more focused studies on WMC in the legal context.

### Cognitive Capacity

Working memory is the cognitive mechanism that supports active maintenance of task-relevant information during the performance of a cognitive task. It is linked to executive function. Research demonstrates that working memory can be overloaded or taxed by attempting to focus attention on multiple simultaneous tasks (i.e., cognitive load), and so working memory research often tests whether an individual's task performance varies with cognitive load (Unsworth & Engle, 2007). Individual differences in WMC are often indicative of cognitive control ability and of the susceptibility to failures during cognitive tasks. Persons with low working memory capacity (LWMC) have fewer available cognitive resources to regulate behavior and decision-making compared to their high working memory (HWMC) counterparts (Kane et al., 2007; Rosen & Engle, 1998; Unsworth, Schrock, & Engle, 2004). As such, they have more difficulty effectively allocating attention (Engle, 2002, 2010).

When the task at hand allows for subjects to respond using automatic processes (requiring little mental effort), both high and low WMC individuals perform at the same rate (Hinson, Jameson, & Whitney, 2003; Rosen & Engle, 1998). However, research demonstrates differences between HWMC and LWMC individuals when successful task completion requires the suppression of an automatic or heuristic response in favor of controlled processing (more effortful processing). Researchers posit that LWM individuals perform significantly worse on controlled tasks specifically because a limited WMC requires them to over-rely on automatic processes (Rosen & Engle, 1998).

With these findings in mind, we examine working memory in the "wild" as it applies to the various segments of the legal system. Suspect apprehension is the first step of the legal process, which leads into questioning/interrogation, and ultimately a trial. The decision-makers at each juncture of this process influence whether a case is evaluated properly.

### Police Officer Decision-Making in the Field

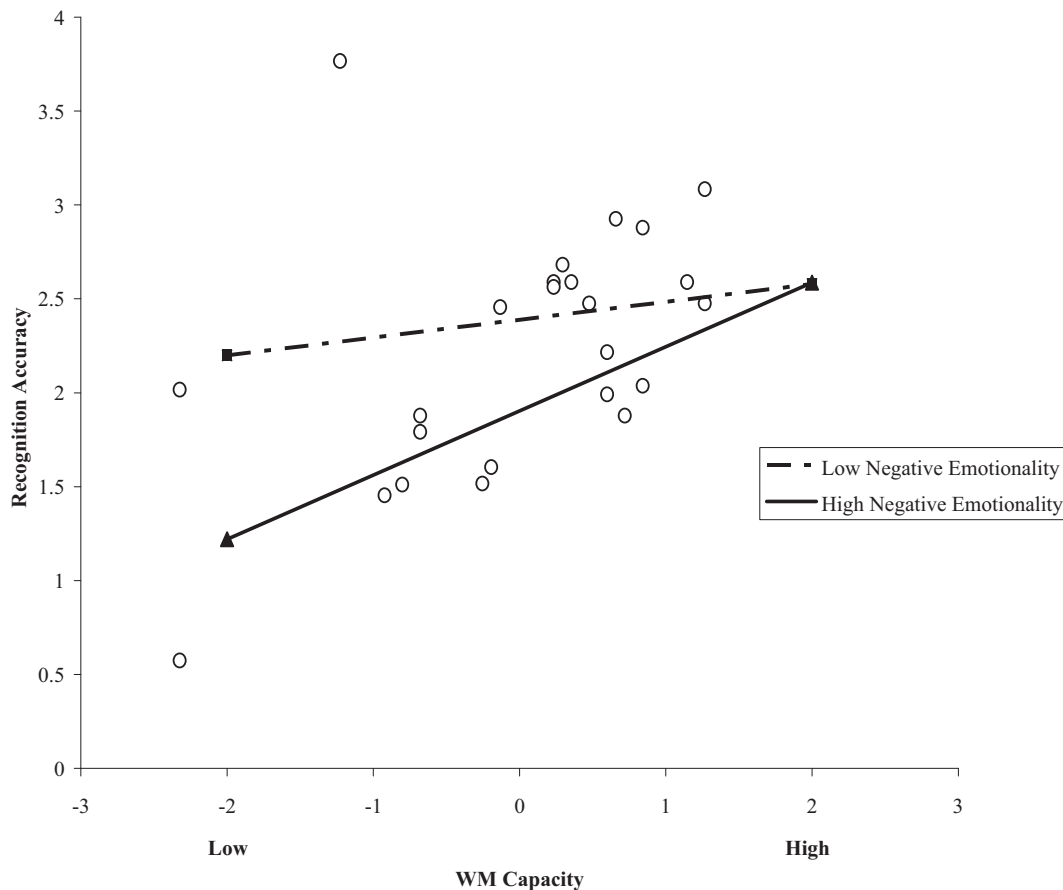
#### Shooting Decisions

Police officers in the field are required to make controlled decisions regarding when to use their weapon, and the ability of the officer to suppress automatic responses (e.g., shoot under any threat) influences those shoot-decisions. For example, Kleider and Parrott (2009) presented participants with a male target holding either a gun or a neutral object (e.g., cell phone). Participants were to "shoot" (via key press) the target if he was holding a gun, but to withhold firing (via key press) if the target held a neutral object. Results demonstrated that LWMC individuals were more likely to shoot unarmed targets compared to those with HWMC. Authors suggest that LWMC individuals made

more errors because suppressing the automatic shoot response required more processing power than participants had available. This finding suggests that having LWMC increases the likelihood of people, including police (see Kleider, Parrott, & King, 2010), making errors in shoot decisions.

### Working Memory Load

Stressful conditions for police officers and how such conditions influence WMC have real-world implications for decision-making, as the wrong decision can carry severe consequences. Numerous studies have examined how reduced WMC impacts decision-making across a variety of contexts, and have found that decision-making is compromised under working memory load because overall processing capacity is reduced (Dilchert, Ones, Davis, & Rostow, 2007; Hinson et al., 2003; Payne, Jacoby, & Lambert, 2004). For example, numerous studies have demonstrated the adverse effects of stress on WMC, which has implications for the potential cognitive loads that police officers might experience in the field (e.g., Joëls, Pu, Wiegert, Oitzl, & Krugers, 2006; Morgan, Doran, Steffian, Hazlett, & Southwick, 2006; Taverniers, Van Ruysseveldt, Smeets, & von Grumbkow, 2010). In one such study, Wood, Vine, and Wilson (2015) had subjects view the name of a color (e.g., blue) in the center of a display with two colored circles on each side of the display. The ink color of the word displayed was either congruent or incongruent with the name of the color displayed as a word. Subjects read the name of the color and shot the colored circle that corresponded to the word, rather than the ink color. Results showed that those with LWMC exhibited reduced shooting accuracy compared to those with HWMC when the word and ink color were incongruent. Those with LWMC then showed even lower accuracy when under the stress of threat from a potential shooter. However, HWMC individuals were not adversely affected by either the incongruent word/color pairings or the threat of being shot. Similarly, using police officers, Taverniers et al. (2010) investigated the effect of stress on working memory processing in a police scenario wherein the officer entered and searched the house of a suspect with a history of violent behavior. The experimental group that was under threat of being shot experienced more subjective anticipatory and subjective distress, causing increased cortisol secretion. Performing under stress (i.e., threat of being shot) acted as a load on WMC, reducing WMC and thereby the capacity with which officers had to make judicious decisions. Negative affect and emotional arousal have also been associated with reductions in WMC. For instance, Kleider et al. (2010) [see Figure 1] found that LWMC police officers who experienced increased negative emotionality while under threat shot more unarmed targets and fewer armed targets compared to HWMC officers (however, see Kleider & Parrott, 2009 for an instance of when emotional arousal did not act as a load on WMC for a college-age sample). Authors suggested that the experienced negative emotionality acted as a load upon working memory. This resulted in poor shoot decisions, because LWMC officers lacked the cognitive resources to engage controlled processing versus automatic processing. Fatigue has also been shown to act as a load on WMC,



**Figure 1.** Plot of regression lines depicting the relationship between Police officer WM capacity and discriminability in the shooting task at low ( $-1$  SD) and high ( $+1$  SD) levels of negative emotionality (i.e., cognitive load). Previously published in: Kleider, H.M., Parrott, D.J. & King, T.Z. (2010). Shooting behavior: How working memory, arousal and affect influence police officer shoot decisions. *Applied Cognitive Psychology*.

reducing processing resources (Ma et al., 2013; Macrae, Milne, & Bodenhausen, 1994; Vila, Kenney, Morrison, & Reuland, 2000). Further, research shows that attempting to regulate an emotional response may act as a cognitive load for those with LWMC (Schmeichel & Demaree, 2010; Schmeichel, Volokhov, & Demaree, 2008).

### Working Memory Load and Racial Shooting Bias

Recent media attention focused on police shooting of Black men raises the question of whether WMC and the potential reliance on racial heuristics or stereotypes (e.g., Correll, Wittenbrink, Crawford, & Sadler, 2015), which are less resource-demanding than other cognitive processes, may influence an officer's decision to shoot a weapon. For example, the Black-man-criminal stereotype has been shown to activate expectations of violence, which influences how ambiguous stimuli are interpreted (e.g., Correll, Urland, & Ito, 2006; Correll, Hudson, Guillermo, & Ma, 2014; Payne, 2001). Correll et al. (2007) compared the shooting performance of police and community members and found that police officers' overall performance was better than community members. Although officers did not demonstrate racial bias in their shoot decisions (accuracy), they did show differences in their reaction times based on suspect race such that officers were faster to shoot

armed Black men compared to armed White men and faster to "not shoot" unarmed White men compared to unarmed Black men. Authors posit that the Black man-crime stereotype is activated in officers, even though they can avoid acting on it through use of controlled processes (likely due to extensive training). However, this study did not impose any type of working memory load on officers. So, while this finding holds in laboratory situations, it may not hold true during a real shoot situation when an officer is laboring under a cognitive load of fear, stress, or fatigue. To test the idea that the differences in biased shooting may be due to expertise, Correll, Wittenbrink, Axt, Goyle, and Miyake (2013) investigated the impact of working memory load on biased shoot decisions in a group of undergraduate college students. Undergraduates either received extensive shooting task training or no training. During the shooting task, working memory load was varied across three levels. Results showed that under no load, novices, but not experts, shot Black men more often than White men. As working memory load increased, however, experts began to show increasing racial bias in their shoot decisions. Experts under high load showed as much bias as novices under no load, suggesting there may be a point where training is ineffective in suppressing automatic processes while under cognitive load. Authors concluded that cognitive resources are needed to override the use of automatic stereotypes. When resources are not available for controlled responses,

stereotypes are likely to be used, resulting in increased biased shooting. This result is likely to hold for police officers, although this has yet to be tested directly. See [Correll et al. \(2014\)](#) for a review of the effect of racial bias in shoot decisions. Overall, these studies suggest that individuals, and likely police officers, require adequate WMC to make controlled shoot decisions. When forced to rely on automatic/heuristic decision processes, biased shooting decisions are more likely.

### Interrogation and Non-Verbal Behavior

Research suggests that a police officers' ability to process and interpret witness and suspect information during an interrogation influences whether they believe the suspect is truthful, which ultimately plays a role in whether their case proceeds to trial. Most law enforcement officers are trained via the [Inbau, Reid, and Buckley \(2011\)](#) technique (Reid technique) wherein officers presume guilt when engaging in interrogation and learn to interpret nonverbal behavior (e.g., unfriendly facial expressions, anxiousness, crossed arms, contrived emotion) to determine the current mental state of witnesses and suspects (e.g., whether they are lying) ([Colwell, Miller, Lyons, & Miller, 2006](#); [Kassin et al., 2007](#); [Leo, 2004](#)).

### Working Memory and Nonverbal Cue Decoding

Although police officers undergo extensive training to effectively interrogate suspects, including how to decode nonverbal cues, research suggests that the effectiveness of that training may be influenced by officers' cognitive abilities. For example, using a community sample to test this idea, [Phillips, Channon, Tunstall, Hedenstrom, and Lyons \(2008\)](#) found that when participants completed an emotion labeling task either alone or with a concurrent 2-back working memory task, WMC impacted the veracity of emotion judgments. Participants with a cognitive load incorrectly chose emotional labels to describe faces more often than no-load participants. This finding also held for decoding social interactions of people in video-clips ([Phillips, Tunstall, & Channon, 2007](#)). However, when judging video-clips, participants in lower-load conditions did not demonstrate a reduction in decoding ability, suggesting that amount of load influences processing ability more than the presence of load ([Phillips et al., 2007](#)). However, similar to earlier findings, a recent study found that ambiguous facial expressions accompanied by negative words were perceived as more fearful when participants performed a concurrent spatial location working memory task than when judging faces alone, even though level of load was not manipulated ([Lim, Bruce, & Aupperle, 2014](#)).

Extending these findings to police officers and jurors' heuristic expectations of emotional cues, rape victims are perceived as more credible by both police officers ([Jordan, 2004](#)) and jurors ([Calhoun, Cann, Selby, & Magee, 1981](#)) when their emotional responses are consistent with expected behavior of an upset victim. Specifically, rape victims are perceived to be more truthful when giving emotional compared to neutral statements. [Ask and Landström \(2010\)](#) found that this was exacerbated when participants held a cognitive load (digit memory task) while watching a video of the victim's statement. Moreover, archival case files

revealed that Tom Sawyer, a man accused of sexual assault and murder, was presumed guilty by police officers because they interpreted his 'flushed' face, as a sign of deception. It was later determined that he was actually a recovering alcoholic with social anxiety issues, thus causing the flushed appearance ([Kassin, 2005](#); [Leo & Ofshe, 1998](#)). This case study is consistent with lab-based studies suggesting that misattribution errors are exacerbated by load ([Gilbert, Pelham, & Krull, 1988](#)).

In further support of the WMC-cue interpretation link, research on patients with frontal lobe brain lesions suggest that deficits in social cue decoding are correlated with working memory deficits ([Bryson, Bell, & Lysaker, 1997](#); [Channon & Crawford, 2000](#)). Further, injuries to certain areas of the frontal lobe disrupt both the ability to complete working memory tasks as well as the ability to decode nonverbal behavior (e.g., facial expressions). This suggests an overlap in the brain areas that govern working memory and social perception ([Mah, Arnold, & Grafman, 2014](#)), and that load or a reduction in capacity could make interpretation especially difficult for interrogating officers. It follows that impairment in an officer's ability to detect or interpret these cues could arise when they have a predisposition to LWMC or are under cognitive load, since working memory and social cue interpretation have been shown to activate the same brain structures ([Mah et al., 2014](#)).

Together, these findings suggest that misinterpreting nonverbal behavior and emotions may be due to insufficient access to the cognitive resources required to make controlled, rather than heuristic or automatic, interpretations of nonverbal cues. Although police officers were not specifically tested in the reviewed studies, findings do have application to cases of actual police officer errors as described in the Tom Sawyer case. Police officers trained to interpret unexpected nonverbal behaviors as indicators of deception (e.g., [Inbau et al., 2011](#)), may be more likely to rely on heuristic expectations when under cognitive load.

### Jury Decision-Making

Synthesis and evaluation of trial evidence is incumbent upon the jury. The extent to which members can accurately carry out this task will determine the validity of their judgment, and ultimately the outcome of the trial. Although the juror-role is a crucial part of the trial process, little research has focused on individual differences in the cognitive processes of jurors that may impact their ability to determine defendant culpability. Among the handful of studies investigating jurors' cognitive ability, the focus has been on cognitive load, which encompasses the complexity of materials, high emotions, dual tasks, and how measures of one's cognitive capacity (working memory, need for cognition) impact a juror's ability to make correct decisions in a high-load context.

### Biased Jury Decisions

When cognitive resources are strained, people are inclined to use heuristic processes (e.g., criminal stereotypes), which provide an automatic and less resource-demanding alternative to controlled decision process. Studies have found that high



cognitive load coupled with LWMC increases mock-juror reliance on stereotypes. For example, Kleider, Knuycky, and Cavrak (2012) presented mock-jurors with ambiguous evidence criminal cases committed by Black or White defendants. Participants made verdict decisions while either performing a dual task (load) or not (no load). Working memory capacity and prejudice level were assessed. When “loaded” and prejudiced against Black individuals, Non-Black LWMC individuals meted harsher penalties to Black compared to White defendants, and were more confident in their decisions than those not performing the dual task. In the no-load condition, harsher penalties were ascribed to the White defendants regardless of WMC or prejudice attitude. Authors suggest that LWMC individuals who are cognitively taxed do not have sufficient processing resources to make unbiased decisions, and therefore must rely on automatic/heuristic decision processes. Similarly, mock jurors who read case information including stereotype-consistent (e.g., prior prison sentence) and stereotype-inconsistent information (e.g., trustworthy) focused more on the stereotype-consistent evidence, gave higher estimates of guilt and harsher punishments, and remembered more incriminating information when loaded (task presented quickly) than when not loaded (self-paced) (van Knippenberg, Dijksterhuis, & Vermeulen, 1999). Also see Giner-Sorolla, Chaiken, and Lutz (2002) for similar findings.

Jurors’ ability to weigh evidence and avoid bias also extends to monetary awards in civil cases, in which jurors assigned blame and penalties to the most obvious party in a suit whenever an alternative decision required unavailable cognitive resources (Goldinger, Kleider, Azuma, & Beike, 2003). Also, counterfactual decisions (i.e., imagining various ways events could have turned out differently), which are spontaneous and require controlled processing to avoid, influenced mock-juror judgments regarding fault and monetary awards in civil law suits when people were cognitively loaded and had LWMC, compared to their HWMC counterparts. For example, victims in no-fault accidents who took a different route home from work and got into an accident were judged to be at fault when mock-jurors did not have the cognitive resources to suppress the counterfactual idea that the victim should have taken his regular route home (Goldinger et al., 2003). Horowitz, ForsterLee, and Brolly (1996) demonstrated that in real-world circumstances, juror decisions are influenced by other load manipulations. They found that increasing both information load and trial complexity (e.g., number of plaintiffs, discussion of evidence) resulted in a decrease in blame, despite contrary evidence (lenient bias). Additionally, using complex language resulted in inappropriate compensation. Appropriate, evidence-based outcomes occurred in low-load/low-complexity conditions (also see Park, 2011 for a review of trial complexity and juror ability). Similarly, in a recent study, Reyna et al. (2015) tested whether the inconsistency and variability that occurs in civil case damage awards was influenced by jurors’ need for cognition (NFC), which is the disposition to engage in analytical and deliberative thinking. NFC has been shown to be highly correlated with WMC (Cacioppo, Petty, & Kao, 1984) (but see Hill et al., 2013 for another view point). Authors found that although NFC did not

influence monetary judgments, it was associated with less variability in judgment, suggesting that NFC may influence how a juror evaluates case facts. Whether it is lab-induced cognitive load or information load commensurate with actual trials, an overload to cognitive resources reduces the likelihood that jurors can appropriately assign fault or associated damages when evaluating case evidence. This effect is exacerbated with LWMC individuals.

### Capital Punishment

When jurors must support a death penalty over a life sentence, the obvious gravity of this decision engages a mix of emotional (hot system) and rational (cold system) decision systems (Green & Phillips, 2004; Green, Williams, & Davidson, 2001; Hauser, Cushman, Young, Jin, & Mikhail, 2007). Arguments around this dual-process idea suggest that the hot system is susceptible to emotion-based decision making, which is automatic and requires fewer cognitive resources. The logic-based cold decision making system requires effortful, controlled use of attentional resources. In moral decision-making research, LWMC individuals are more reliant on the hot/automatic decision making system than HWMC individuals when faced with a moral dilemma that is cognitively taxing on available resources. For example, in the classic trolley problem, one must decide whether to sacrifice one person to save many others. In this scenario, because the death of the one person is inevitable, the logical decision is to support the sacrifice of one for all. Moore, Clark, and Kane (2008) found that HWMC individuals were more consistently in support of the one-for-all decision than were the LWMC individuals. In essence, the HWMC individuals were able to ignore the emotionality of the situation and make the most logical choice. In another study where the hot and cold systems were indexed using NFC, a disposition to rely upon logic-based, systematic processes; and the Faith in Intuition (FI) scale, a disposition to process information based on gut feelings, emotions and intuition, researchers asked mock-jurors to review case facts in a murder trial and make a sentence decision. Results showed that high FI led to a higher likelihood of a death penalty decision whereas high NFC lead to more life sentence decisions, suggesting that high FI people may base decisions on emotional-state (Miller, Wood, & Chomos, 2014). Within the framework of the hot-cold cognition system and the extent to which that system models logic-based or controlled processes, it seems that the ability to effectively weigh and evaluate evidence in capital trials may map onto a juror’s ability to engage one system over the other. This seems to be indicative of cognitive ability, including WMC.

Although the context and manipulations in lab-based studies cannot approximate the real-world stress or difficulties that come with weighing evidence over a long trial (see Daftary-Kapur, Dumas, & Penrod, 2010 for review), together the findings suggest that cognitive overload impacts juror-type decisions and facilitates heuristic processes. This remains true even in a relatively low-stakes laboratory setting, compared to the higher cognitive burden of an actual trial (see Park, 2010).

## Working Memory in the Legal System

To what extent should we be concerned about the impact of cognitive processing ability on injustices in the Criminal Justice System, and what can be done about it? The extent to which a person can engage cognitive resources in a resource-demanding situation is a predictor of accuracy and logical decision making in laboratory studies across a variety of factors, but in the “wild”, WMC may potentially influence whether a person is convicted of a crime. While the majority of the studies reviewed here test cognitive overload in a controlled laboratory environment, the same cognitive mechanisms at work in laboratory studies are also likely to be engaged in the field. That is, people rely on automatic/heuristic processes rather than controlled processes when their cognitive resources are taxed. Unfortunately, few studies have addressed these issues directly. What we do know is that police officers acting as the front-line decision makers for the legal system are often extrinsically and intrinsically loaded with high emotion, which may supplant their ability to make controlled decisions. Research suggests that emotional load increases reliance on automatic or heuristic processes, which impacts shoot decisions—a tendency exacerbated by LWMC. Moreover, detectives who conduct interrogations and determine whether or not the case should be pursued are more likely to misread nonverbal and emotional expressions when cognitive resources are taxed, leading to errors in decoding cues. Further, jurors as the “triers of fact” ultimately must have the cognitive resources to weigh evidence and determine culpability, and in the most extreme circumstances, must decide on a life or death sentence. Research suggests that jurors are more likely to make biased or inconsistent decisions when their cognitive resources are overburdened. We are not suggesting that police and jurors’ WMC should dictate who is equipped to play a role within the legal system. Rather that, in certain situations, individual differences may impair controlled-decision making, and it is in these situations that a stop-gap may be warranted.

## Solutions

There are three avenues to increase or maximize cognitive ability that could potentially impact people’s decision-making in the legal context: Increase WMC, reduce cognitive load, or channel people to tasks that do not overtax their abilities. These avenues are best approached in terms of systems variables (variables within control of the legal system) and estimator variables (outside of system control).

## Estimator Variables

Current research is investigating whether WMC can be expanded with training is finding mixed results. The majority of the findings suggest that WMC training does not readily transfer to cognitive tasks beyond the task used for training (Redick, 2015) (see Biggs, Cain, & Mitroff, 2015 for another point of view). To date, there is no concrete evidence that WMC is modifiable through training, thus capacity expansion does not currently seem to be a viable option. However, Chambers, Lo, and Allen (2008) suggest that mindfulness training focused on attentional

control may help improve symptoms of depression and anxiety, as well as increase performance on working memory tasks by way of ‘sustained attention.’ Specifically, participants recruited from a 10-day meditation (mindfulness group) demonstrated significant improvement on a digit span working memory task from the start of the meditation course to the end, compared to participants who did not attend the meditation course (control group). This suggests that mindfulness training or other ways to focus attention may be a way to increase available cognitive capacity.

## Systems Variables

Clearly, cognitive load cannot be reduced in situations that are inherently highly-loaded (e.g., stressful criminal interaction, trial evidence complexity). However, the impact of load on the individual may be addressed. For example, Oudejans (2008) found that training police officers under realistic, high stress situations (threat of being shot) increased shooting performance. The author posits this is due to accustomizing officers to performing in high stress situations under the perception of threat, so that stress and fear do not occupy as much WMC while they are in the field. Other research has found that training police also reduces racially biased shoot decisions in a lab setting (Plant & Peruche, 2005; Sim, Correll, & Sadler, 2013). However, this finding has not been replicated in realistic police scenarios.

Trial complexity and fast paced evidence presentation increases load on juror decision making. However, several studies show that note taking by jurors during the trial can reduce cognitive burden and increase understanding and recall of facts (for review see: Hope, Eales, & Mirashi, 2014, see Heuer & Penrod, 1994 for another viewpoint). Additionally, cross-examining expert witnesses in a way that educates jurors about the scientific validity of the studies presented aids the jury’s ability to understand complex scientific information (Austin & Kovera, 2015).

A final solution is to discourage individuals from performing tasks when they are feeling overburdened. Everyone has a point where their processing ability is overtaxed, due to the information’s emotional content, volume, complexity, or difficulty (i.e., choking under pressure). Subjective and objective measures to index when controlled decision making may be compromised should allow individuals to assess when they are overburdened. For example, police officers could take such an assessment after a shift that could determine whether they are cognitively equipped to work a double shift.

## Future Directions

Understanding whether and how cognitive capacity influences decision making in real-world settings is relatively new, and extending lab-based findings to the legal system is especially challenging. The potential ramifications of ignoring effects of WMC on civil and criminal proceedings justify the call for more applied research. Moreover, identifying situations where overtaxing cognitive capacity is frequent and problematic opens the door to finding solutions to address these issues. More field research is needed to better understand whether capacity limitations are problematic for decision making within the legal

system as suggested by others (Park, 2011) and to test or develop intervention strategies.

### Conflict of Interest Statement

The authors declare that they have no conflict of interest.

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