

## TARGET ARTICLE

Psychological Myths About Evidence in the Legal System:  
How Should Researchers Respond?Kathy Pezdek<sup>1</sup> and Daniel Reisberg<sup>2</sup><sup>1</sup> Department of Psychology, Claremont Graduate University, United States<sup>2</sup> Department of Psychology, Reed College, United States

We consider six myths regarding mistaken beliefs about psychological processes (perception, memory, judgment) shaping legal evidence, and we offer research to debunk each. These myths include the idea that identification evidence provided by police officers is more reliable than similar evidence provided by civilians, that officers can reliably detect deception, that officers' memories are not compromised by stress, and the claim that providing one sleep cycle after a use-of-force incident improves officers' memories. We also consider cognitive mechanisms that contribute to the maintenance of these myths. In debunking the myths, we take on the more general issue of why myths related to cognitive processing in the real world should be addressed and suggest multiple vehicles for doing so. We consider both the benefits and the obstacles for each path, and end by suggesting a novel resource for debunking myths in the legal system.

*General Audience Summary*

Jurors, judges, attorneys, and police officers often make assumptions about psychological processes (perception, memory, judgment) that can shape the evidence used within the legal system. We provide evidence, though, that many of these assumptions are actually myths—claims that have no basis in fact. These myths include the idea that identification evidence provided by police officers is more reliable than similar evidence provided by civilians, that officers can reliably detect deception, that officers' memories are not compromised by stress, and the claim that providing one sleep cycle after a use-of-force incident improves officers' memories. We discuss the evidence refuting six of these myths, and then turn to the broad question of what researchers can and should do to debunk these myths.

*Keywords:* police officers' perception and memory, stress and memory, sleep and memory, body-worn cameras, lie detection

Every year, academic colleagues provide input to the legal system—advising law enforcement or legislatures, testifying in court. In many cases, this input is aimed at correcting “myths” about memory, perception, and judgment—mistaken beliefs commonly held by police officers, attorneys, judges, and jurors. Often, though, legal decisions are made with no participation by academic colleagues, leading us to ask: At the broadest level, what can researchers do to counter these myths, with the hope of

improving the accuracy of the conclusions reached by police and the courts?

In this article, we catalog some of the myths about cognition that we have routinely encountered in our work with the legal system. For each myth, we review evidence showing these widely held beliefs are (at best) without basis and, in many cases, flatly false. We then turn to the policy question, asking what researchers' role should be in countering these myths. We argue that the response to the

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myths must proceed on many fronts, and we discuss the advantages and limitations of each.

### Myths About Evidence: Some Initial Issues

We start with several overarching issues. First, we emphasize that the myths we will discuss are just a subset of the mistaken claims often offered in the legal system. We focus on myths that shape police investigations, and also evidence that is brought into the courtroom. We are confident, though, that readers will be able to identify other myths not addressed here. Our intention, therefore, is not to catalog every instance in which claims made in a police station or courtroom are contrary to empirical evidence. Instead, our intention is to argue more broadly that there is a problem here, with well-established empirical evidence not penetrating into the legal system.

Second, and related, we highlight these six myths because they are, in our experience, endorsed by many participants in the legal system and often reflected in policy documents that govern both law enforcement and legal procedures. We have also focused on myths for which the contrary evidence seems particularly clear.

Third, for each myth, we discuss some of the research that contradicts the myth. In some cases, we also highlight reasons why the myth is on its own implausible; in still other cases, we highlight the complete absence of any evidence supporting the myth. We emphasize, though, that given the limited space, we do not provide exhaustive coverage of the research on any topic. When possible, however, we refer the reader to reviews that provide more extensive coverage of relevant research.

Fourth, why should readers care about these myths at all? Actions within the legal system, particularly the criminal legal system, are deeply consequential. In many instances, an error at any stage in the system can lead to a factually innocent person receiving punishment, while the actual perpetrator walks free (and perhaps commits further crimes). Plainly, then, we have reason for concern if false information of any sort is being used in, and is guiding, this system. More specifically, when that false information includes assumptions about cognitive processes (as it does in these myths), surely researchers are motivated to address the problem.

Finally, one might ask how these myths arose in the first place. We believe the answer is multifaceted, and we return to this question later in the article, in the expectation that, to some extent, pursuit of this issue may help us understand how best to counter the myths. For now, we suggest that part of the explanation for these myths is sociological, reflecting shared priorities and professional incentives among those who investigate and prosecute crimes. Part of the explanation is likely to be political—including value-laden judgments about the importance of prosecuting the actually guilty, compared to the cost of protecting the falsely accused. And part may reflect an understandable amount of self-congratulation (e.g., Myth #1 and Myth #6) or some amount of self-protection (e.g., Myth #3). Given this mix, we look forward to insights coming from colleagues better positioned to pursue these sociological, political, and historical themes. For now, the central point is that these myths *are* myths, and are, in various ways, undermining efforts toward truth-seeking in the legal system, and thereby undermining the cause of justice. It is this blunt point that invites efforts toward refuting these mistaken claims.

### Myth #1: Officers Are More Accurate Eyewitnesses Than Civilians

Several surveys confirm that judges, jurors, and many others believe that law enforcement personnel are more credible than other witnesses when they testify in court (e.g., [Leippe, 1994](#); [Yuille, 1993](#)) and, moreover, that officers are more accurate eyewitnesses than civilians (e.g., [Benton et al., 2006](#); [Yarmey, 1986](#)). One possible explanation for this (alleged) eyewitness advantage is that officers know how to direct their attention when encountering a complex scene, so they notice and remember more of the forensically relevant aspects of the scene. Another possibility rests on the idea that police training prepares officers for exposure to stressful situations ([Vredeveldt & van Koppen, 2016](#)), making them less vulnerable to the effects of stress on performance. (We return to the topic of stress shortly.) But there are also less plausible proposals, including claims that officers' experience somehow "rewires" their visual systems. For example, one of us worked on a case ([United States v. Harper, 2014](#)) in which the prosecution argued that a police officer was better able to see in the dark because of a history of working night shifts. (To be sure, neural plasticity has wide effects, but it seems highly unlikely that experience can affect the structure or photochemistry of the retina.)

A related claim is that *identification evidence* provided by police officers is more reliable than identification evidence provided by civilians. Related, courts sometimes assume that, when an officer makes an identification, there is no need for the safeguards generally required when civilians are asked to make an identification—safeguards that include proper instructions before the identification, a properly constructed lineup, and so on. In fact, a New Jersey Appellate Court recently ruled that the safeguards required of civilian eyewitnesses (often termed the Henderson principles, after [State v. Henderson, 2011](#)) may not apply to police officers. Specifically, the court questioned whether

those best practices and safeguards apply when the eyewitness is a police officer, who may have received specialized training and may have developed expertise through experience on how to observe, recollect, and memorialize the physical traits and facial features of the suspects with whom the officer interacts.<sup>1</sup>

Likewise, consider a 2017 order issued by the Alaska Superior Court in [State of Alaska v. Faofua Afasene \(2016\)](#). The defense had argued that an identification in the case, made by a police officer, should be excluded as evidence because the steps that led to the identification failed to follow the relevant procedures. The court argued that the identification was nonetheless reliable, asserting (without evidence or explanation) that "as a police officer, Officer Blair's training may have increased his ability to provide more accurate identifications than an average citizen."

What is the reality? On the positive side, someone's focus of attention is guided by their beliefs and expectations (for classic data, see [Yarbus, 1967](#)). On that basis, it is plausible that officers will provide more useful accounts of what they saw at a crime scene—not because they saw more, but, instead, simply because they knew

<sup>1</sup> Unpublished opinion available online: <https://www.njcourts.gov/attorneys/assets/opinions/appellate/unpublished/a1603-19.pdf?c=dc6>. We note that, as an unpublished opinion, this decision has no precedential weight. Even so, the opinion provides a glimpse of how judges think about these issues.

where to point their eyes. Of course, this means these officers may gain *less* information about other aspects of the scene, information that may be important but was unanticipated. Indeed, Smart et al. (2014) reported no difference between officers and civilians in the frequency of change blindness (a phenomenon in which observers fail to notice seemingly salient alterations in visual input), again indicating that police officers are not more observant overall.

This pattern is confirmed in a study by Vredeveldt et al. (2017), in which memory was compared among civilians, uniformed police officers (with an average of 9 years on the force), and specially trained surveillance detectives (with an average of 20 years on the force, 9 years as a detective). Each viewed a 15-min video of a drug transaction and then answered questions about the incident. For crime-relevant details, detectives answered questions more accurately than both civilians and uniformed police officers; the latter two groups did not significantly differ from each other.

Perhaps the more critical aspect of eyewitness memory, however, is being able to identify the perpetrator, and here research indicates no advantage for police officers. Lindholm et al. (1997) had officers (with up to 30 years of professional experience) and civilians view a film of a simulated violent robbery. When tested with a photographic lineup, there was no significant difference between these groups in the proportion who identified the correct person nor in the frequency of misidentification. Similarly, Christianson et al. (1998) had participants view a sequence of slides depicting an assault; the participants were university students, high school teachers, recruits in police training, or police officers with up to 35 years of professional experience. These researchers also reported no statistical difference among groups in the proportion of participants who correctly identified the perpetrator or the proportion who made misidentifications.

The Vredeveldt et al.'s (2017) study mentioned earlier also included an identification task, but the differences reported across groups were mixed, and so bear closer scrutiny. In this study, when the photographic lineup included the actual perpetrator, detectives (with an average of 20 years on the force) were more accurate identifying the perpetrator than either civilians or officers. As one concern, however, the study involved only 42 of these experienced detectives, and we might ask how these individuals gained their position as elite surveillance detectives. (Did they perhaps have better memory from the start, independent of their experience as detectives? Perhaps this is why they were selected for these positions in the first place.) In addition, for target-present lineups, the largest difference between the civilians (50%) and the detectives (21%) was in their use of the "don't know" response option (rather than hits or false alarms), inviting the concern that the groups differed substantially only in response criterion.

Holding the surveillance detectives to the side, though, the civilians and uniformed officers in this study did not differ in identification accuracy, and this null result is echoed in several other studies (Kaminski & Sporer, 2016; see Vredeveldt & van Koppen, 2016, for a review). Moreover, researchers and legal scholars have been especially concerned about the problem of eyewitnesses mistakenly "identifying" someone innocent, when a photographic lineup does not include the actual perpetrator (Wells et al., 2020). For this crucial ("target-absent") situation, Vredeveldt et al. (2017) found no differences among the groups (detectives, uniformed officers, civilians) in the frequency with which someone was misidentified.

Furthermore, a handful of studies suggest that, in some settings, police officers may be *less* accurate than civilians in their identifications (see Vredeveldt & van Koppen, 2016, for a review). In these studies, the officers were more likely to make false-positive errors (i.e., falsely choosing from the lineup someone who is innocent). Overall, then, we regard this myth—a claim of superior eyewitness memory by police officers—as plainly contrary to the evidence (for related findings, showing no advantage for police officers in recognizing a suspect in grainy CCTV footage, see Burton et al., 1999).

It has also been claimed that officers have superior memory for conversations, and so (for example) can recount an unrecorded interview or interrogation verbatim from memory, sometimes months later. This claim, too, is without merit. Kassin et al. (2017) recorded interrogations by 16 experienced police officers investigating a mock crime. Officers filed reports on the interrogations, and these reports were compared to the recordings. There were numerous discrepancies, including frequent omissions and a consistent understatement of officers' use of various interrogation tactics. In a similar study, Lamb et al. (2000) compared 20 transcripts of child interviews with the interviewers' contemporaneous notes. The interviewers' notes failed to mention 57% of their own utterances and frequently reported as a statement by the child, a statement that had actually been uttered by the interviewer. It is unclear whether these multiple distortions reflect memory lapses or motivated misrepresentation; in either case, it is plain that conversations are inaccurately reported both by police personnel and by civilians (for a broad review of research on memory for conversations, see Davis & Friedman, 2007).

## Myth #2: High Stress Improves the Accuracy of Memory

Another common myth is the belief that stressful events are better remembered—and, in fact, are remembered accurately, completely, and with little or no forgetting as time goes by. This notion has a long history, with William James writing over a century ago that "an impression may be so exciting emotionally as almost to leave a scar upon the cerebral tissues" (James, 1890, p. 670). Likewise, early discussions of so-called flashbulb memories seemed to take the accuracy of these memories for granted, and many of us were surprised when Neisser and others documented the errors that sometimes permeate these memories (e.g., Neisser & Harsch, 1992).

There is a kernel of truth to this myth. A large-scale meta-analysis (drawing on 113 independent studies with a total of over 6,000 participants) showed that elevated stress at encoding did improve memory for materials directly related to the stressor (Shields et al., 2017). However, for materials outside of this narrow focus, the meta-analysis showed the opposite effect, with stress impairing memory. Similarly, in a review of the effects of stress on memory, Wolf (2009) confirmed the negative impact of acute stress at encoding and provided support for hormonal and brain-based mechanisms underlying this effect. The meta-analysis by Shields and colleagues additionally revealed a temporal aspect to the effects of stress, with stress also impairing memory for events just *after* the stressful episode. This pattern is plausibly due to changes in body chemistry, with peak cortisol response roughly 20 min from the onset of the stressor (Kiecolt-Glaser, 2009). Whatever the mechanism, research suggests that, after a stressful situation, the brain shifts into "minimal encoding mode," leading to inaccurate and incomplete recall of events

following the stressful episode (Cadle & Zoladz, 2015; Diamond et al., 2007).

Marr et al. (2021) urged caution about these claims, suggesting that the effects of stress may differ between tasks typical of fundamental memory studies and those typical of eyewitness memory studies. This view seems at odds, however, with the empirical evidence. For example, with a specific focus on the recall of crime-related details, Deffenbacher et al. (2004) reported a pattern just like the one observed with laboratory tasks—with high levels of stress impairing the accuracy of recall. Similarly, Hope et al. (2016) reported that stress impaired police officers' memory in critical incidents, again a finding in line with the laboratory data. A similar pattern has also been observed in other tasks outside the laboratory, with the high stress experienced in natural settings leading to long-lasting memory for the "bare-bones" gist of the event, but impaired memory for other aspects of the event (e.g., Baker-Ward et al., 2009; Edelman et al., 2004; Salmon et al., 2002).<sup>2</sup> Likewise, studies of how people remember horrifying events (like the attack on the World Trade Center in 2001; Hirst et al., 2015; Pezdek, 2003) document large numbers of substantial errors, again a finding contrary to the notion that stress and high emotion essentially "burn the event into the brain." Finally, evidence suggests that memory for stressful events, just like memory overall, can be influenced (and distorted) by postevent misinformation, yet another point challenging the special status of memory for stressful events (Morgan et al., 2013).

Are law enforcement personnel more resistant to the effects of stress on their memory, perhaps because of their training and experience? The evidence suggests otherwise and shows that officers suffer perceptual and memory distortions when under stress, just as civilians do. This pattern has been documented in a variety of studies examining officers involved in highly realistic (and stressful) training exercises, including a live simulated scenario involving a weapon (Hope et al., 2016), an active shooter scenario (Rojek et al., 2012), a virtual reality simulation with a "shoot/no-shoot" scenario (Stanny & Johnson, 2000), and with Special Forces candidates following a vigorous prisoner of war exercise (Taverniers et al., 2013).

Of course, through training and experience, officers are likely to be more effective in evaluating a potentially stressful situation and responding appropriately. Officers may also (through training and experience) become to some extent inured to stress, and therefore less likely to experience the psychological and physiological effects of stress. Nonetheless, as just described, the evidence tells us that, once officers are experiencing acute stress, their memory for what ensued, just like that of civilians, is likely to be impaired by the stress.

On a related point, it might be argued that memory for a stressful event is more accurate for officers actively participating in the event than for people who are bystanders to it—perhaps because involvement somehow moderates the effects of stress. However, Hope et al. (2016) reported that officers who participated in an event actually reported fewer correct details about the critical phase of the event than those who simply observed it.

### Myth #3: A Sleep Cycle After a Use-of-Force Incident Improves Memory

Some years ago, Dallas Police Chief David Brown responded to concerns about police action by offering a set of policy proposals,

including a provision that, after using their weapons, police would be given a 72-hr "cooling-off period" before being questioned about the episode (Balko, 2014).<sup>3</sup> Similar provisions are included in model legislation, supported by many police unions, under the title of a "law enforcement bill of rights" (Keenan & Walker, 2004; Riggs, 2012).<sup>4</sup> In some cities, the proposed cooling-off period is quite long: 10 days.<sup>5</sup>

Similarly, consider a recommendation from the International Association of Chiefs of Police (IACP), a highly regarded law-enforcement organization whose policies serve as a model for policy in many jurisdictions. Their "officer-involved shootings investigative protocols" state that, "whenever feasible, officers should have some recovery time before providing a full formal statement. At least one night's sleep is beneficial prior to being interviewed."<sup>6</sup>

In explaining their proposal, the IACP suggests this delay will provide officers "the opportunity to regain their composure," and notes also that the officer's "mental and physical wellness" depends on the officer getting "sufficient sleep." We see no quarrel with these points. It seems likely that a high level of stress or agitation can compromise someone's ability to offer a coherent narrative about their experience. If, therefore, an officer is experiencing high stress or agitation after an event, it seems reasonable that questioning should be delayed for an hour or two, so that the officer can regain composure. Similarly, if an officer is indeed sleep deprived, it seems plausible that questioning should be delayed until the officer gets some rest. These points, however, provide no explanation for why, as a general rule (independent of considerations of agitation or sleep deprivation), questioning should be delayed. These points also provide no justification for the 72-hr delay suggested for Dallas (and other cities), much less the 10-day delay suggested in some jurisdictions.

In support of these more ambitious claims, some sources offer a different rationale, namely that someone's memory gets *better* as time goes by, and it is this view that we count as Myth #3.<sup>7</sup> What underlies these beliefs? Several authors appeal to the notion of consolidation. Honig and Lewinski (2008), for example, explain

<sup>2</sup> There are exceptions to this pattern in the research literature, but we are unpersuaded by them. As one example, Price et al. (2022) report no effects of stress on participants' accuracy in choosing (or willingness to choose) from a lineup. However, the stress in their study was created by the Trier Social Stress Test, and the levels of stress were surely less than would be experienced by actual crime witnesses. Further, for studies of the effect of stress on eyewitness identification, it is crucial that the induced stress be linked to the to-be-remembered event itself, and, for that matter, linked to the encoding of faces (Pezdek et al., 2021). This seems an important procedural limitation in the Price study and others in the literature.

<sup>3</sup> <https://www.washingtonpost.com/news/opinions/wp/2014/01/16/two-and-a-half-cheers-for-dallas-police-chief-david-brown/>.

<sup>4</sup> <https://reason.com/2012/10/19/how-special-rights-for-law-enforcement-m/>.

<sup>5</sup> <https://www.usccr.gov/files/pubs/2018/11-15-Police-Force.pdf>.

<sup>6</sup> [https://www.theiacp.org/sites/default/files/2018-08/OIS\\_IP\\_Trifold\\_Web.pdf](https://www.theiacp.org/sites/default/files/2018-08/OIS_IP_Trifold_Web.pdf).

<sup>7</sup> Honig and Lewinski (2008, p. 142), for example, assert that the "passage of time, in and of itself, generally has a positive effect on memory recall and consolidation. Research has shown that within 24 hours, approximately 30% of information will be recalled, with 50% recalled after 48 hours and 75 to 95% recalled after 72 to 100 hours." Honig and Lewinski do not expand on these strong claims, but instead point readers to a paper by Grossman and Siddle (2004, p. 1) that does assert that, "within 72 hours, the final and most complete form of memory will occur . . ." Ironically, Grossman and Siddle continue this sentence with a warning that, after 72 hr, the memory "will be at least partially 'reconstructed' (and therefore 'contaminated') after the inevitable process of integrating available information from all other sources."

their claim that “memory for specific emotionally charged events improves over time,” by noting that “sleep combined with the development of a personal narrative to tie incident information together speeds memory consolidation and facilitates recall” (p. 143). Likewise, an often-cited article by Artwohl (2002, p. 71) asserts that “REM sleep in particular is important in integrating memories and facilitating learning and memory retrieval” (also see Geiselman, 2010).

There is again a (small) kernel of truth in these claims: Memory consolidation is the biologically defined process that serves, in essence, to “cement” memories in place (Hardt et al., 2010; Wang & Morris, 2010). If consolidation is interrupted, for example, through extreme fatigue or trauma, the process of establishing the memory is disrupted (and may not happen at all), and subsequent recall will inevitably be impaired (e.g., McNally, 2003). Also consistent with the claims just quoted, evidence suggests that consolidation is, in fact, promoted by sleep (e.g., Ackermann & Rasch, 2014; Berres & Erdfelder, 2021; Giuditta, 2014; Rasch & Born, 2013).

However, the key here is to bear in mind that memory consolidation is sensibly named: It is a process through which a memory is made more “solid,” more durable. Memory consolidation does not add to memory, or enrich memory, or improve memory, and so the assertion that the “passage of time, in and of itself, generally has a positive effect” on memory (Honig & Lewinski, 2008, p. 142) is flatly wrong.

More directly, a number of studies explicitly refute this myth. McClure et al. (2020) assessed memory in police officers after two different simulated lethal-force encounters (a high-risk traffic stop, and a workplace violence incident). They found that delayed reporting led to impaired memory, leading these authors to suggest that “officers should be interviewed as soon as reasonably possible after a lethal force incident” (p. 248). Similar results were reported by Alpert et al. (2012; for a broad review, see Noble & Alpert, 2013; for yet another line of evidence showing no benefit in an eyewitness identification task from a period spent asleep, see Morgan et al., 2019).

We note one setting, though, in which the passage of time (and, specifically, sleep) might improve memory—namely, in the learning of new motor sequences. However, Rickard et al. (2022) argue that there is a severe problem of publication bias on this topic; and that, once steps are taken to correct for this bias, there is no performance gain in motor learning following sleep. More importantly, we emphasize that this type of learning is entirely separate from the types of testimonial memory needed in the legal system, and so, with or without this recent critique, this line of research does not support Myth #3.

What is the cost associated with Myth #3? One of the best-established principles of memory is that memory tends to fade with the passage of time (Ebbinghaus, 1885/1964), and so memory reports will generally be more accurate when tested immediately than after a delay. All things being equal, then, it would always be better to assess an officer’s memory as soon as is feasible after a critical incident. In addition, delay in reporting creates a risk that the officer (or any other witness) will encounter information that can merge with their original memory, undermining memory accuracy (Grady et al., 2016). Source monitoring errors (e.g., who said what) are also more likely to occur with a time delay (Bornstein & Lecompte, 1995). Of course, the obvious way to minimize concerns about postevent information or source confusion is to question the

officer before these concerns can arise—a policy that is inconsistent with Myth #3.

Before moving on, we note that—of course—some events are sufficiently memorable to be recalled without problem even after a few days delay. It is inevitable, then, that some studies will detect little-or-no cost from delayed questioning. Thus, Schnell et al. (2021) found that a 2-day delay after a stressful training scenario had no effect on officers’ memory accuracy. Similarly, Porter et al. (2019) found that a 2-day delay, after an “armed offender” training scenario, caused memory impairment for some details about the target event, but not for details directly associated with the threat stimulus. These observations, however, do not change the fact that Myth #3 is a myth, because delay generally erodes, and never improves, memory accuracy or completeness.

#### Myth #4: Double-Blind Lineups Are Unnecessary

For photographic lineups, a double-blind procedure is one in which the lineup is administered by someone not involved in the investigation, so that neither the administrator nor the witness is told which photo shows the police suspect. With this procedure in place, the witness makes a selection guided only (one hopes) by the witness’s recollection of the actual culprit’s appearance.

It is clear that double-blind lineups diminish bias in identification procedures (Wells et al., 1998, 2020; also see Rosenthal, 2002). Specifically, studies show that *nonblind* lineup administrators often engage in behaviors that draw attention to the suspect—for example, smiling when a witness is looking at the suspect rather than a filler. *Nonblind* administrators are also more likely than *blind* administrators to ask the witness questions about the suspect’s picture (Charman & Quiroz, 2016; Zimmerman et al., 2017). Then, once a witness has made a choice, *nonblind* administrators can provide signals (e.g., smiling in response to the choice) that can inflate witness confidence (Kovera & Evelo, 2017, 2020).

*Nonblind* administrators can also shape a witness’s behavior in ways that might seem nondirective. For example, imagine a witness who comments “I guess it could be #3 or #5,” and let us say that #2 is actually the suspect. In that situation, the officer might end the procedure and record “No I.D.” But, in contrast, what if #5 (one of the options mentioned by the witness) was actually the suspect? Here, the officer might say, “keep looking; take your time” and thus prolong the procedure whenever the officer believes that the witness may be moving toward the “correct” choice. In this way, the procedure is biased toward (and increases the likelihood of) choosing the police suspect.

Double-blind procedures guard against all of these concerns. Nonetheless, many jurisdictions continue to use *nonblind* procedures, in which the lineup administrator does know the identity of the suspect. In fact, Kovera and Evelo (2017) reported that, at the time of their writing, half of the states in the United States had no requirements of using a double-blind procedure.

One barrier to the use of double-blind lineup procedures might be the administrative difficulty of doing so, especially in smaller communities. Yet, Haw and Fisher (2004) reported that simply having the lineup administrator positioned behind rather than in front of the eyewitness reduced the rate of false identifications without reducing the rate of hits. Various “low-tech” protocols for “blinding” are also available (Wells et al., 2020). We suspect, therefore, as suggested by Lindsay and Mah (2021), that police

officers persist in using nonblind lineups because they believe that they can help witnesses identify guilty suspects without increasing the risk of false identifications of innocent suspects.

This perspective is not restricted to U.S. police officers. A survey of 153 police officers in the United Kingdom (Pike et al., 2021) examined beliefs about identification procedures. These officers reported that, if any changes were needed in these procedures, they should be changes to increase the rate of positive identification, rather than steps to avoid misidentifications. Few (if any) officers indicated a desire to shift toward double-blind procedures. In fact, Pike et al. quote one officer as saying “Not sure why we need to find persons not involved in the case, just to escort witnesses. This is an insult to an officer’s integrity” (p. 25). Pike et al. expand on this notion, suggesting that “policing practitioners have been reluctant to engage with recommendations regarding double-blind line-ups, because they see the suggestion that they may provide the witness with even unconscious and non-verbal cues as an affront to their professionalism” (p. 26).

Myth #4, therefore, has multiple elements. First, there may be a belief in some law-enforcement circles that guidance (deliberate or inadvertent) of witness selection is a nonissue because officers know to avoid this guidance. If officers hold this belief, however, they are mistaken because clear cases of undeniable guidance and/or feedback have been reported (e.g., Thompson-Cannino et al., 2009). With this, Wells et al. (2020) discuss multiple jurisdictions in which nonblind lineup administrators are less likely to report potentially exculpatory *filler* identifications, a different concern that can be addressed through double-blind procedures.

As a second element of the myth, there is the notion that anyone “leaking” cues to a witness is somehow unprofessional. To the contrary, the cues (verbal or nonverbal) that can guide a witness can be quite subtle—and so even a well-intentioned, enormously careful officer might “leak” these cues. We provided examples of these cues earlier in this section, and these same examples refute a third element of the myth—the idea that guidance from a lineup administrator requires obvious and overt signaling.

Finally, and most importantly, we know of no reason to believe officers are able somehow to avoid leaking cues that can influence a witness’s lineup selection and also the witness’s subsequent statement of confidence. In other words, our claim of “myth” here rests in part on the total *absence* of evidence that officers are immune to the problems created by nonblind lineups.

### Myth #5: Viewing BWC Footage Does Not Contaminate Officers’ Memory

Following a use-of-force incident, officers are required to complete a report describing what transpired. This report is critical in the process that follows, a process that can include both civil and criminal litigation. Given the pervasive use of police body-worn cameras (BWCs; see Pezdek, *in press*), many use-of-force incidents are also recorded on the officer’s BWC. The question addressed here is whether the officer should view their BWC footage prior to completing their report or whether viewing the BWC video of an event alters the officer’s memory for the incident.

Police departments and police unions are motivated to protect the standing of police officers by giving them the opportunity to make their report as “accurate” as possible, and this often includes the belief that officers should be given the opportunity to view their

BWC footage prior to completing their report. In fact, in a response to a recommendation that officers do *not* review the video, New York City’s Police Commissioner commented that this was a recommendation “that we strongly, strongly disagree with and will not support under any circumstance.” He went on to explain his concern: “I am not intending to use the cameras to play a game of gotcha with the cops” (for discussion, see Pezdek, 2015).

This stance makes little sense unless we assume that these jurisdictions are relying on Myth #5—that viewing the BWC footage will increase the accuracy of an officer’s memory rather than contaminating their memory with information that they did not actually observe. This myth hinges, however, on a problem in defining what is “accurate.” One construal of “accuracy” rests on the idea that, when investigating a use-of-force incident, we want to know what actually happened—how exactly the event unfolded, in light of the totality of the available evidence. For this purpose, the BWC video provides useful (but imperfect) information, and so should be consulted.

There is, however, another important construal of “accuracy.” If a police report seeks to characterize a police officer’s thoughts, evaluations, and reactions at the time of an event (including, perhaps, a police officer’s decision to use force), then the video might well provide information that was not within the officer’s awareness initially and might also serve to correct mistaken or unjustified assumptions the officer had made during the event (Grady et al., 2016). The video might also serve to provide information bolstering decisions for which, at the time, the officer had no justification. In these ways, if we seek a veridical record of the officer’s thoughts during the event itself, reliance on the BWC footage is likely to move the report away from accuracy, not toward it.

The key here is that, in obvious ways, the BWC video does not duplicate the perspective of the officer. The video camera may be pointing in a different direction than the officer’s eyes. The video camera sees less than the officer (because the officer has a greater range of peripheral vision) and also sees more than the officer (because the information taken in by the officer is necessarily constrained by the limits of attention capacity). The video footage is also not influenced (for better or worse) by beliefs and expectations the officer might have brought to the scene. The question, though, is how these various differences might influence the officer’s report.

Two areas of research are relevant on these points: research on postevent suggestion (starting with early research by Loftus, 1975, and Pezdek, 1977) and research on source monitoring (starting with early research by Johnson et al., 1993). Both areas of research suggest that information encountered after an event can alter memory for the event, producing a “source monitoring error” (for more recent discussion of this research see, among others, Schacter, 1999, 2002). Thus, decades of research suggest a forceful refutation of Myth #5.

More directly, Myth #5 is also refuted by the results of recent experiments. Pezdek et al. (2022) had experienced police officers participate in two officer-involved shooting training scenarios with their BWC recording their participation. Officers answered questions about each scenario shortly afterward. They then answered the same questions after having viewed their BWC video footage for one scenario but not for the other. Viewing the video altered both their memory for their state of mind during the incident and also

their memory of the event itself. For event-memory test items, memory accuracy improved from Time 1 to Time 2, and this change was greater when officers had viewed their BWC footage than when they had not. Crucially, though, the more accurate event information recalled at Time 2 was information gleaned from the recording, information that was not initially remembered from the incident itself. In other words, viewing the BWC video did improve officers' overall description of the event but *undermined* their memory for what they themselves had experienced. The video provided the officers with actually not-remembered information, and this information was simply absorbed into their eventual "memory" report—exactly the pattern expected based on decades of research on postevent suggestion.

Vredeveldt et al. (2021) reported similar results in a study with Dutch officers. In that study, officers responded to a staged emergency call. In one condition, after they completed their written report, the officers viewed the BWC video of their participation in the event, and then were permitted to revise their written report. There was a significant increase in the amount of information recalled the second time and, in most cases, the additional information was information derived from the video, information that had not been included in officers' original report (for related results, see Adams et al., 2020).

What we do not know in these studies is whether officers could distinguish at Time 2 between details remembered from the event itself and those remembered from the video. However, given what is known from research on source monitoring, it is unlikely that officers could consistently make this distinction. Even if they could make this distinction, the fact remains that, after viewing the video, officers' reports (even if not their memories) were less accurate in reflecting the officers' actual experience of the event.

In addition, this refutation of Myth #5 takes special importance in the context of police use-of-force incidents. In *Graham v. Connor*, the U.S. Supreme Court ruled that the evaluation of police use of force should be "judged from the perspective of a reasonable officer on the scene, rather than with the 20/20 vision of hindsight" (*Graham v. Connor*, 1989). Hence, what we want to know is how the officer perceived the event as the episode was unfolding in real time. This assessment would certainly be undermined by any influences that alter the officer's recollection of that experience and viewing their BWC video of the event is one such contaminating influence.

### Myth #6: Police Officers Can Accurately Detect Deception

As part of their investigations, police officers collect information from many people—witnesses, victims, and suspects. And, of course, these people sometimes choose not to be truthful with the investigators, perhaps hiding what they know or perhaps offering deliberate falsehoods to the investigator. Officers do what they can to detect this deception, and they often indicate (either overtly or by implication) that they are successful in this effort. In our work on actual cases, for example, we routinely encounter police reports that contain officers' assertions about the veracity of people being interviewed, comments that presuppose an officer's ability to tell when someone is being deceptive.

These points lead us to Myth #6—the notion that police officers can perceive and correctly identify cues to deception, and thereby

judge whether someone is lying or being truthful. With this, Myth #6 states that officers can detect deception more accurately than civilians. The science on these points, however, is clear. First, most people are quite poor at detecting lies. To understand the data, bear in mind that there are two response options in a lie-detection task: either the person is telling the truth or they are telling a lie. If participants, therefore, choose a response by *tossing a coin*, they will get the right answer 50% of the time. It is daunting, therefore, that the observed level of accuracy of most lie-detection procedures is in the vicinity of 55%—only slightly better than coin tossing. One meta-analysis, for example, found an average accuracy rate for detecting deception among untrained participants of 53.5% (Bond & DePaulo, 2006). Another meta-analysis reported an average detection rate of 54.2% (Aamodt & Custer, 2006).

Second, and more important for our purposes, law-enforcement professionals seem to have no advantage on this task. Ekman and O'Sullivan (1991) reported that in a sample of 126 experienced robbery investigators, 74% achieved accuracy levels of only 60% or less; the average accuracy level was 55.8% (also see Aamodt & Custer, 2006; Vrij et al., 2010). The accuracy levels for polygraphers and judges were similarly poor (with means of 55.7% and 56.7%, respectively). The data also showed little difference between scores of these professionals and scores of college students (with an average accuracy level of 52.8%). At the same time, these professionals seem to overestimate their own ability. Kassin et al. (2007) surveyed 600 police officers across the United States. These officers acknowledged that their lie-detection performance was far from perfect, but, even so, their self-assessment was quite generous—with the officers claiming, on average, that they could spot lies 77% of the time, a level notably higher than objective measurements reveal. Overconfidence in officers' lie-detection ability was also reported by Ekman and O'Sullivan (1991) and Leach et al. (2004).

Related points concern the effects of training in lie detection. This training generally makes professionals more confident in their ability to detect lies but does not improve accuracy (Akehurst et al., 2004; Kassin & Fong, 1999). The data suggest, in fact, that training and years of experience seem only to shift the interviewers' response criterion (Meissner & Kassin, 2002; but also see Burgoon & Levine, 2009). As a result, trained interviewers are less likely to miss detecting a lie, but more likely to produce false-alarm responses, that is, declare a truth-teller to be a liar. (For related findings, showing that police are no better than civilians in distinguishing true and false confessions, largely because they overbelieve false confessions, see Kassin et al., 2005; also see Honts et al., 2014, 2019).

Overall, then, the idea that people can reliably detect deception seems to be a myth. The idea that law-enforcement professionals are especially skilled in lie detection also seems to be a myth. And, finally, the idea that training and experience can improve lie detection seems (for many types of training) to be yet another myth.<sup>8</sup>

<sup>8</sup> Here, we add a note of caution: The last few decades have seen a shift in how researchers approach issues of lie detection. More recent approaches emphasize the cognitive effort needed to construct a lie, and these approaches seem to yield greater lie-detection accuracy (e.g., Mac Giolla & Luke, 2021; Vrij et al., 2017). With this, training regimens that encourage lie detectors to focus on the *verbal content* of a statement (as opposed to, say, visual cues like shifty eyes or leg movements) do seem to have a benefit (Hauch et al., 2016). It remains to be seen whether these approaches will be incorporated into officer training, and, with this, whether we will at some point reach a situation in which Myth #6 might lose its status as a "myth."

## Challenges and Recommendations Regarding Myth-Busting

### Cognitive Roots of the Myths

We emphasize again that the myths discussed here are just a subset of the myths encountered in the legal system. In all cases, though, these myths can undermine the quality of the evidence used in the legal system—sometimes leading to a neglect of appropriate safeguards; sometimes leading to an overweighting of questionable evidence; and sometimes actually distorting the evidence. What can (or should) the research community do in response?

Numerous scientists have expressed concern that, in many settings, citizens deny the truth of well-established, deeply important research findings. Of course, science denial is not a new phenomenon; as an example, the International Flat Earth Society was founded in 1956, well after Magellan circumnavigated the globe in the 1500s. Concern about science denial has, however, been especially prominent in the last few years, plausibly because the issues at stake (e.g., climate-change denial or disputes about vaccines) are so consequential and because the relevant science is so persuasive.

Many authors have discussed the mechanisms that lead to science denial and the steps that academics can take to persuade the deniers (e.g., Echterhoff, 2013; Ellsworth, 2021; Lewandowsky et al., 2017; Lewis & Wai, 2021). In important regards, however, our concern in this article is different from those of these other authors. For issues like climate change or vaccine efficacy, the relevant data are publicly available and widely discussed. For the myths we have described here, in contrast, the scientific results are typically not in view of the broader public. Likewise, people will have no difficulty locating seemingly authoritative sources (e.g., on the internet) denying the reality of climate change or asserting the dangers of vaccines; consequently, they have the option to choose which “authorities” they will trust. For the myths we have described, people will likely have encountered no authoritative voices at all and so may have no formal guidance in forming their views.

In short, for the myths we are considering, a large part of the challenge lies in calling attention to the fact that the beliefs at stake involve empirical claims, subject to rigorous test, and then calling attention to the relevant, systematically collected scientific data. Making this challenge more difficult, though, the myths we are considering are likely to be sustained by two powerful cognitive mechanisms: confirmation bias and a reliance on the availability heuristic. “Confirmation bias” refers to a family of tendencies, all serving to protect someone’s current beliefs from challenge. The availability heuristic refers to the tendency to judge past frequency (and thus likelihood in the future) on the basis of how readily relevant examples come to mind (e.g., Tversky & Kahneman, 1973). These two mechanisms are distinct but influence each other. Thanks to confirmation bias, someone is likely to notice events consistent with the various myths and to remember these events. As a result, these events will be numerous in memory and probably easy to access. This pattern, in turn, will bias availability-based frequency estimates.

In addition, circumstances in the world may help to sustain these myths. For example, if an officer makes an identification and this leads to a prosecution, the resulting sequence of events will be extensive and likely memorable. On the other hand, if the same officer is unable to make an identification, there may be no prosecution so that there is literally less to remember. This contrast

may contribute to officers (and others in the legal system) remembering “successful” officer identifications and therein may help to perpetuate Myth #1 (that officers have superior eyewitness memory). This view is also fostered by the finding of Meissner and Kassin (2002) reported above, that officers with more years of training and experience showed a response bias in deception detection (i.e., a bias toward responding “deceitful”) with no difference in discrimination accuracy. Without corrective feedback, these officers would have more available memories for what they believed to be deceitful than nondeceitful interviewees.

As another example, Gilovich (1991) discussed “definitional asymmetries” and offered the example of the belief, “I can always tell when someone has had a facelift.” The problem, of course, is that, by definition, the person has no way to know how many facelifts have been overlooked. Similarly for Myth #6: An officer who is deceived by a liar has obviously failed to detect the lie, and hence has no way to know that a “lie-detection failure” had occurred. The resulting asymmetry, knowing when lies had been detected but not realizing when lies had been overlooked, can increase the officer’s expressed confidence and contribute to the myth. And, insofar as confident witnesses are more likely to be perceived to be accurate witnesses (Cutler et al., 1988), this and all of the myths presented herein apply to both officers and civilians.

These considerations tell us (perhaps unsurprisingly) that myth-busting will not be easy. Even so, given what is at stake, we ask: What can we do?

### The Role of the Academic Journals in Myth-Busting

Considering the degree to which these myths are entrenched in current practices, policy positions, and court rulings, the response to these myths must involve multiple prongs. One prong will obviously involve the continued effort by researchers to study the beliefs and practices central to the myths, both in laboratory studies and in carefully conducted translational research. This effort is immensely important, and our rebuttal to the various myths in this article obviously relies on this peer-reviewed research. Further research, strengthening and extending the available evidence, must always be welcome; with this, scientists need to be mindful of the need for professional “modesty” (knowing and acknowledging the limits of what research has shown us so far), a point persuasively described by Lewis and Wai (2021).

In addition, we applaud efforts by academic journals to reach a broader audience. Target articles in this journal often include specific policy proposals (e.g., Brewer & Doyle, 2021), and the invited commentaries for these targets are sometimes written by professionals outside of the academic world, including police officers and attorneys. The journal *Law & Human Behavior* has published a succession of “White Papers,” describing the state of the science on crucial topics and including specific policy recommendations (e.g., Wells et al., 2020). Likewise, the journal *Psychological Science in the Public Interest* tackles topics of considerable importance outside of the academic world, and articles are written in a fashion accessible to nonscientists.

Moreover, some journals require that articles include a summary accessible to a broad audience. For example, *JARMAC* requires a “General Audience Summary.” *Law and Human Behavior* requires a “Public Significance Statement.” And many journals (including *JARMAC*) are published under the aegis of a professional society



that has some sort of “public information office,” charged with communicating the contents of the journal to nonacademics.

The fact remains, though, that, even with all these efforts, the myths we have described (and many others) remain in place. Why is this? As one concern, it is not obvious that these various publications reach those who believe the myths. On this point, we would welcome empirical evidence that might allow us to assess the readership and impact of the various publications just listed. As one illustration of what this work might tell us, consider the study mentioned earlier by Pike et al. (2021). They surveyed 153 U.K. police officers and, among officers who actually worked in identification suites, 20% said they “did not know that researchers had made recommendations” about ID procedures, and another 43% either had “no idea” what the recommendations were or only had a “vague idea.” Among police officers not working in identification suites, 89% either had no knowledge of the research recommendations or only had a “vague idea” what the recommendations were.

In addition, publishing research on these myths might sometimes be counterproductive. At the least, such publications could draw attention to the myths—giving them “airtime”—and plausibly create a situation in which proponents for a myth might demand an opportunity to respond. If this opportunity is given, it seems likely that one “side” of the issue would represent the thoughtful consensus of a significant majority of scientists, while the other “side” represents the view of a less-informed, less-careful source. Even so, research suggests that this “balanced” presentation (view plus opposing view) can encourage readers to give comparable weight to both sides of the issue, leading people to believe there is less agreement among experts than there actually is (Imundo & Rapp, 2021; Koehler, 2016). This type of presentation, then, might do more harm than good.

### The Challenge of Persuading Police Officers

Law-enforcement officers are often witnesses to wrongdoing, and their accounts of what they have seen obviously depend on their perception and their memory. In addition, officers often have to make assessments of other witnesses' evidence and, indeed, officers testifying in the courtroom sometimes blur the line between “fact witness” and “expert witness”—offering testimony, routinely described as based on their “training and experience,” about a variety of topics concerning perception, memory, and more. This testimony is important for many reasons, including a belief we have already mentioned, Myth #1 (that police officers are more credible than other witnesses when they testify in court; Leippe, 1994; Yuille, 1993).

Plausibly, then, a key aspect of myth-busting should involve communication with the police, and persuading them to abandon the myths (for evidence documenting police officers' *mistaken* or *limited* beliefs about perception and memory, see Benton et al., 2006; Tupper et al., 2019; Wise et al., 2011; Wogalter et al., 2004). The path forward here will likely involve publications in magazines (e.g., *Sheriff and Deputy Magazine*) and websites that law-enforcement professionals routinely read. Pike et al. (2021), for example, found that more U.K. police officers gained their knowledge from “policing publications/magazines” than from any other source.

Some academics are already writing for such publications (e.g., Pezdek, 2015, 2022). Most academics, however, are unfamiliar with these publications and may be uncomfortable writing in the style appropriate for them. These publications are also not peer-reviewed (at least in the ways that academics insist on), and so an article

refuting a myth may sit side by side with an article affirming the myth. We should also mention that there is often little reward for this type of writing within traditional academic jobs. In addition, and most important, it is not clear whether this sort of publication will have the desired impact. As one concern, police officers might well be skeptical about academic studies, no matter how persuasive these studies are for scientists. Pike et al. (2021) describe some of the grounds for this skepticism, but also note that the police officers they surveyed said they would have a more favorable opinion about research if police were actually involved in the study. There is an obvious message here for researchers.

Beyond these considerations, we are mindful of a point raised by Lewandowsky et al. (2017): The importance of someone's “lived experience” in forming and maintaining their beliefs, and here we echo earlier comments about the availability heuristic. With an eye on Myth #1, for example, police officers may be called on to make multiple identifications during their careers and may receive no corrective feedback in many cases; any feedback they do receive may arrive long after the identification itself. Similarly, and as we have discussed, cases in which a police officer did indeed catch someone in a lie will likely be salient in legal proceedings; lies that went undetected will receive little or no notice. Likewise, officers' testimony about what they noticed at a crime scene will likely be far more prominent than testimony about what was overlooked, and this will perpetuate the myth that officers are especially observant witnesses (Myth #1). In these ways, the lived experience of police (and other legal professionals) will help perpetuate the myths we have described.

Finally, we have to acknowledge that some degree of self-service will likely undercut police officers' openness to myth-busting. Some of the myths we have discussed are flattering to officers—including Myth #1 (that officers are better eyewitnesses than civilians) and Myth #6 (that officers are better lie detectors). Other myths are useful for the police—including Myth #3 (that officers should have a “cooling-off period” before reporting on their actions) and Myth #5 (that officers should be allowed to review BWC videos before writing a report).

We do not want to overstate this concern about self-service. We have both worked with many careful, open-minded police officers who are deeply interested in the relevant science and determined to bring their procedures into alignment with evidence-based best practice. But this positive assessment must sit alongside a realistic understanding that persuading police officers of the claims we have discussed will be challenging. Nonetheless, we again endorse and encourage all efforts in these arenas.

### The Challenge of Persuading the Public and Legislators

As we have said, the response to these myths must have many prongs. Another path forward requires getting information to the people who vote, and to the people they voted for. There are, of course, many options for this broader effort of “giving psychology away” (Miller, 1969). Kassin (2017, p. 960) described a range of these options, arguing that there was a “dire need for psychological experts to raise public awareness.” Kassin noted that, among other steps, psychologists should be giving public lectures, writing op-ed articles, talking to journalists, and working with podcast and documentary filmmakers. Kassin suggested that this sort of broad public education offered a path toward inspiring change “from the bottom up.”

In line with Kassin's suggestions, we note the broad success of the Netflix productions *When They See Us* and *Making a Murderer*, both exposing deep concerns about police interrogation techniques. As an example closer to the myths at stake here, we note the various media discussions of the Ronald Cotton case, including coverage in a PBS documentary (*What Jennifer Saw*) and coverage on the CBS show 60 min (for more on this case, see Thompson-Cannino et al., 2009). We also note the contributions from podcasts, including *Serial*'s reporting on Adnan Syed's case (which led to a rehearing of the case), and the *In the Dark* coverage of the multiple trials in which Curtis Flowers was prosecuted for the same crime, coverage that led to the U.S. Supreme Court hearing the case.

Once again, we emphatically encourage these efforts, but we also flag concerns. Are the people who closely read an op-ed piece or attend a public lecture perhaps those already alert to these issues? We also need to ask how long lasting the effects of these lectures, documentaries, or podcasts might be. When television's *CSI* franchise became popular, several studies examined the possible influence of these shows, asking whether juries would come to expect in an ordinary trial the slew of sophisticated, high-tech evidence that was showcased on television. To the best of our knowledge, however, the impact of these widely viewed shows was small and short lived (Kim et al., 2009; Shelton, 2008), perhaps suggesting the limits of this means of persuasion.

### Persuading Attorneys and Judges

We reiterate that psychological scientists should pursue *all* of the avenues we discuss here. We have, however, saved for last the avenue we believe to be most promising: persuading attorneys and judges. As one advantage, trial attorneys are required to provide evidence; judges are required to listen. This is, therefore, a setting with a "guaranteed audience" that needs to address and resolve immediate concerns. Second, an argument in trial cannot just be a series of claims; instead, whether in a brief or a trial memo or oral argument, attorneys must lay out the basis for their claims, and so this is a forum in which the evidence can be presented, explained, and examined. Third, legal decisions have "staying power"; rulings set precedents.

Legal rulings can also constrain police procedures. As one example, in 2012, Oregon's Supreme Court defined new criteria for evaluating identification evidence (*State v. Lawson*, 2012). Soon after, the agency that trains all sworn officers in Oregon added to the "Basic Police Academy," material that explained the relevant law and specified the investigation steps that would lead to evidence admissible under the *Lawson* rules. In this way, a reform in the courts demanded a reform in law enforcement.

The question, of course, is how to reach attorneys and judges. We mentioned one option early in this article: serving as an expert witness in a legal proceeding. This step provides direct input to the legal system, with the prospect both of improving the evidence evaluation in a particular case and informing the judge and attorneys in a fashion that may guide their thinking in subsequent cases.

We acknowledge, however, that the American legal system is designed to be adversarial and is often ferocious. Academics stepping into the legal world are often the targets of *ad hominem* attacks, with attorneys free to ask questions suggesting that an expert is biased, or dishonest, or incompetent. The activity of being an expert witness is therefore valuable, but not well suited for the thin-skinned.

Ironically, though, there may be *benefits* from these adversarial attacks: It is always useful to subject scientific claims to criticism because the criticism forces researchers to consider possible objections to their claims. Moreover, criticism in a courtroom often approaches the scientific claims from a perspective different from the researchers', and this too can lead to a fruitful reexamination of the scientific evidence (for discussion of these points, see Ellsworth, 2016, 2021; Lewis & Wai, 2021).

Beyond these points, however, there is also a limited-availability problem, and the experts we know of (including the authors) are already handling as many cases as they can. To serve as an expert, one needs to know both the laboratory science and the results of translational research; one needs to have the time; and, as just noted, one needs thick skin. Hence, we reiterate a by-now-familiar theme: This sort of engagement is highly valuable and can make a large difference, but has to be just one part of our larger effort.

As a different path forward, attorneys are required to engage in a certain number of continuing legal education (CLE) hours each year, and sometimes academics are invited to speak at CLE sessions.<sup>9</sup> In addition, some academics have written books aimed directly at attorneys (e.g., Reisberg, 2014). We note, however, that, while attorneys are required to satisfy their CLE requirement, they are not required to do much reading beyond this. In addition, attorneys have pointed out to us that when they need information, they generally turn to their online professional databases (e.g., LexisNexis) and not to their bookshelves. These online searches are usually sharply focused, seeking information directly relevant to the case at hand; broader information about our science is less useful.

What about publications that are reachable through lawyers' professional databases, namely articles in law review journals? Law review articles are likely to be read by legal academics and, crucially, these are the professionals training the next generation of attorneys. In many cases, these are also the professionals called on to write *amicus* briefs that can inform and persuade the courts. These are also the professionals often appointed to the federal bench.

At the same time, outside of the academic world, it is not clear how many attorneys are sufficiently scholarly, and blessed with enough time, to do the research needed to find and digest law review articles. On the positive side, though, when there is a useful law review article, news of it spreads rapidly from attorney to attorney (e.g., through a professional listserv), and so this path forward, like the others, is of value. But once again, we would suggest that we need additional options.

### A Final Thought

We close this article, therefore, by proposing one more step that addresses many of the concerns and limitations we have been discussing. We have noted that attorneys (like many other people) do their "fact research" through online searches. We have also

<sup>9</sup> This sort of invitation is arguably a "side benefit" of expert testimony because the testimony identifies you as a resource and opens the door for other opportunities. In fact, those "other opportunities" provide one more path through which to reach elected officials. As examples, visibility in the legal community led to one of us (Reisberg) being invited to address groups within the state legislature and led to the other of us (Pezdek) being invited to participate on a state senate committee drafting new guidelines for police procedures in cases involving eyewitness memory and identification. That committee drafted language that has now been enacted as California Senate Bill 923, specifying how lineups should be conducted.

noted that, from a researcher's perspective, the activity of myth-busting takes time, particularly if one wants to pursue multiple myths (including others not cataloged here), and all the more so if one wants the myth-busting to be updated when new studies are published. We have also suggested that, for several reasons, our academic journals have been limited in what they can offer for effective myth-busting activity.

Consideration of these points leads us to a proposal that, we believe, would be enormously valuable. We urge the creation of a "myth-busting website" for issues related to eyewitness memory of police officers and civilians. What we envision is something like factcheck.org or snopes.com, websites that journalists and many others already use for fact-checking internet rumors. We assume that the entries on this website would be short pieces, with appropriate scholarly references, and not as extensive as a meta-analysis or White Paper. We propose that this website would be maintained and sponsored by relevant scientific and professional associations that could jointly appoint a committee (with rotating membership) to maintain the website.

There are obviously details of this proposal that would need to be worked out, but at this point that should not be a deterrent. We emphasize, though, that, by relying on a committee, rather than an individual author, the workload associated with this website would be shared and (we hope) thereby diminished. A reliance on a committee would also ensure a greater breadth of knowledge and a greater diversity of perspectives, addressing some of the concerns raised by Lewis and Wai (2021). By maintaining this site online, the information would easily be accessed by a wide audience, including attorneys but also journalists and policy advisors. By launching this website under the aegis of one or more highly regarded scientific and professional associations, any users of the information would be reassured that the information is reliable. Moreover, as an online resource, the website could easily be updated with new research or enlarged to counter new myths.

Other professional societies have already established what could be called myth-busting websites,<sup>10</sup> and we are encouraged by this; the existence of such sites suggests that our proposal is feasible. However, we stress that the extant sites serve a function different from the one we envision. The APS website, for example, is aimed at educating the broader public about psychological research. As such, the presentation is somewhat informal and does not tax readers with much of the scientific "muscle" that justifies the claims made on the site. In contrast, the site we propose would include sufficient scientific data (with relevant citations) to sustain arguments that could actually be used in a legal context. This type of resource for the legal system, thoroughly documented but easily accessible, is not currently available. It is our hope that the relevant professional societies will give this proposal the serious consideration that we believe it deserves.

<sup>10</sup> <https://www.psychologicalscience.org/topics/myths-and-misinformation>

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