IN THE UNITED STATES COURT OF APPEALS
FOR THE ARMED FORCES

UNITED STATES, Appellee	)	AMICUS CURIAE BRIEF OF FORDHAM UNIVERSITY SCHOOL OF LAW IN SUPPORT OF APPELLANT
v.	)	
Specialist (E-4) **ANDREW J. CRISWELL,** United States Army, Appellant	)	Crim. App. Dkt. No. 20150530
	)	USCA Dkt No. 18-0091/AR

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Interest of the Amici Curiae

Amici curiae are students at Fordham University School of Law who seek a judicial resolution that will treat eyewitness testimony fairly, particularly in cases where a brief, stress-influenced, cross-racial, eyewitness identification is the primary evidence against a defendant.

Summary of Argument

The military judge erred in refusing to suppress the witness's in-court identification, which was unreliable and further tainted by the single photo show-up. Mistaken eyewitness identifications are one of the leading causes of wrongful convictions and are often indispensable to the conviction. Cross-racial identifications are particularly unreliable. Based on scientific research and data about wrongful convictions, it is evident that to adequately safeguard the accused's due process rights, the decades-old *Biggers* factors must be applied based on post-*Biggers* scientific developments in research about the fallibility of memory, especially in cases involving cross-racial identifications. Affirming a conviction based upon a flawed application of the factors, especially where a cross-racial identification occurred following a brief and highly stressful encounter, will continue a dangerous trend that disregards the due process rights of the accused and results in further wrongful convictions. The irreversible damage caused by wrongful conviction harms the accused, victim, and society and undermines efforts to increase reporting of sexual assault cases. In cases where eyewitness testimony is the primary evidence linking the accused to the crime, it is imperative that courts undertake a detailed analysis of eyewitness testimony, applying the *Biggers* factors in a manner that is based in scientific understanding of memory. Therefore, this

Court should reevaluate the witness's in-court identification, reverse the decision of the lower court, and suppress the tainted in-court identification.

Argument

I. Eyewitness identifications are the leading cause of wrongful convictions because they are typically unreliable, and the *Biggers* factors should be applied based on recent scientific research about memory fallibility

Eyewitness testimony is one of the least reliable forms of evidence, especially when used to identify a stranger. Suzannah B. Gambell, *The Need to Revisit the* Neil v. Biggers *Factors: Suppressing Unreliable Eyewitness Identifications*, Comment, 6 WYO. L. REV. 189, 190 (2006). Eyewitness misidentification is the greatest contributing factor in more than 70 percent of wrongful convictions overturned by DNA testing. *Eyewitness Misidentification*, INNOCENCE PROJECT, https://www.innocenceproject.org/causes/eyewitness-misidentification/ (last visited Aug. 8, 2018). Biological evidence is available in fewer than 20 percent of all felony cases, so the full impact of misidentifications is unknown. Richard A. Leo, *Has the Innocence Movement Become an Exoneration Movement?: The Risks and Rewards of Redefining Innocence*, *in* WRONGFUL CONVICTIONS AND THE DNA REVOLUTION 73 (Daniel S. Medwed ed., 2017).

A. Eyewitness identifications are unreliable because memory functions more as a malleable puzzle than a recording

Research on perception and memory burgeoned in the decades following the Supreme Court's articulation of the *Biggers* factors for evaluating eyewitness

identifications. *See Neil v. Biggers*, 409 U.S. 182, 199 (1972); Keith A. Findlay, *Implementing the Lessons from Wrongful Convictions: An Empirical Analysis of Eyewitness Identification Reform Strategies*, 81 MO. L. REV. 377, 386-87 (2016); NAT'L RESEARCH COUNCIL, IDENTIFYING THE CULPRIT: ASSESSING EYEWITNESS IDENTIFICATION 18 (2014). Contrary to popular opinion, including those held by some judges, memory does not function like a video recording. *See* Joyce W. Lacy & Craig E.L. Stark, *The Neuroscience of Memory: Implications for the Courtroom*, 14 Nature Revs. Neurosci. 649, 649, 650 Box 1 (2013). Instead, it functions as a puzzle, integrating signals from different biological processes into a memory. Grant S. Shields et al., *The Effects of Acute Stress on Episodic Memory: A Meta-Analysis and Integrative Review*, 143 PSYCHOL. BULL. 636, 638 (2017). Due to the influence of hormones on neural pathways, highly stressful, traumatic memories can be disjointed and undetailed. *Id.* (explaining that stress hormones can negatively impact memory performance); Lacy & Stark, *supra*, at 650. Thus, the correlation between a witness's confidence and accuracy when remembering a traumatic event is often negative or weak at best. *Id.* Post-identification feedback, such as confirming that an identification matched that of other witnesses or unintentional body language cues by an investigator, can bolster a witness's confidence while having no effect on the accuracy of her description. *Id.* at 650-51.

B. Visual noise interferes with perception and memory encoding

"Visual noise," or stimuli such as light, glares, and shadows, can interfere with perception and memory encoding and affect both the quality and type of information a witness perceives. NAT'L RESEARCH COUNCIL, *supra*, at 15, 47. Noise includes factors external to a witness, such as time lapsed during observation, illumination, glares, and shadows, as well as internal factors, such as visual acuity, ocular scattering of light, and selective attention. *See id.* at 47, 50. Angular distance from a witness's center of gaze and restricted movement of the eyes, which is common during crimes, dramatically increase uncertainty in visual perception and can cause retinal distortions of facial features. *Id.* at 50-51, 56.

A witness must actively select the stimuli on which she focuses. *See id.* at 52. The selection may be the result of eye-catching stimuli, such as bright and rapidly moving lights, or internal direction, such as intentionally focusing on a specific location or object. *Id.* Emotions and the amount of noise present can influence selective attention. *Id.* at 53. Visual crowding—the close spacing of objects in a visual field, such as a crowded party—limits "the ability . . . to accurately perceive the facial features of a perpetrator." *Id.* at 54. When a witness is faced with stimuli that cause fear and anxiety, such as weapons or exposed genitalia during a sexual assault, emotional responses can "hijack" the witness's attention and prevent adequate observation of the perpetrator's features. *Id.* at 55.

C. Stress interferes with memory encoding, retention, and retrieval

Stress forces selective attention and renders a witness unable to effectively encode other peripheral details. Ralph Haber & Lyn Haber, *Experiencing, Remembering and Reporting Events*, 6 PSYCHOL., PUB. POL'Y & L. 1057, 1062 (2000). When a witness is highly stressed, she is less likely to accurately recall specific details of the event. *Id.* Further, studies show that stress has different effects on memory-related biological processes, based on factors such as a witness's sex or hormone levels, the type and time of the stress induced, relevance of the memory to the stressor, and even time of day. *See* Shields et al., *supra*, at 639-41. Memories are not permanently sealed once stored but are susceptible to being forgotten, reactivated, reconstructed, qualified, updated, and distorted. NAT'L RESEARCH COUNCIL, *supra*, at 60, 62. Although highly emotional memories may endure longer than benign memories, the accuracy of the memory may nevertheless diminish. *See id.* at 63-65; Lacy & Stark, *supra*, at 651 (noting that 37 percent of people, when asked to recall details about the September 11 attacks a year later, had diminished accuracy but maintained high levels of confidence).

D. The misinformation effect can distort a memory by exposing a witness to related, but misleading, information

The misinformation effect refers to the phenomenon in which a witness's memory is distorted after being exposed to false or misleading information about an event. C.A. Morgan III et al., *Misinformation Can Influence Memory for*

Recently Experienced, Highly Stressful Events, 36 INT'L J.L. & PSYCHIATRY 11, 11 (2013). A witness does not recognize she was exposed to incorrect information and subsequently believes she witnessed the erroneous details. *Id.* Exposure to misinformation can be as simple as showing a witness a photograph of the wrong perpetrator or inaccurate information from law enforcement or family and friends. Lacy & Stark, *supra*, at 651; *see* NAT'L RESEARCH COUNCIL, *supra*, at 65. This misinformation detracts from the true memory and creates a false memory in its place. Lacy & Stark, *supra*, at 651; *see* NAT'L RESEARCH COUNCIL, *supra*, at 65.

Over time, memories can be updated to match subsequent revelations, with a related increase in certainty of the identification, thereby increasing the risk of wrongful conviction. *See* BRANDON GARRETT, CONVICTING THE INNOCENT 47 (2011) (recounting the plight of a man wrongfully imprisoned for sixteen years based on a witness-victim's memories, which by the time of trial, had distorted to *perfectly* match the defendant's physical features). A witness's newfound, but unsupported, certainty gives the court a false sense of confidence in the identification. *See Watkins v. Sowders*, 449 U.S. 341, 352 (1981) (Brennan, J., dissenting) ("[T]here is almost nothing more convincing than a live human being who takes the stand, points a finger at the defendant, and says 'That's the one!'"). Given the susceptibility of stored memories to variation, the National Research

Council has long "question[ed] the validity of in-court identifications and their appropriateness as statements of fact." NAT'L RESEARCH COUNCIL, *supra*, at 65.

Even highly trained military personnel are not immune to these phenomena. *See* Lacy & Stark, *supra*, at 651; *see generally* Morgan III et al., *supra* (detailing a study of the misinformation effect among military personnel undergoing U.S. Navy Survival School training and mock prisoner of war exercises). In one study, military personnel were given verbal, photographic, or video misinformation relating to the physical appearance of their interrogator. *Id.* When later asked to describe their captor, despite prolonged face-to-face contact in a well-lit room, 45 percent of participants inaccurately described the physical build of the perpetrator. *Id.* at 15. Nearly half misidentified the perpetrator's facial shape, 62 percent misidentified eye color, 60 percent misidentified facial hair, and 73 percent misidentified ear shape. *Id.*

E. The way in which the *Biggers* factors have been applied is fundamentally flawed and does not accurately evaluate the reliability of eyewitness identifications

Although the *Biggers* factors were the logical evolution of case law over fifty years ago, the factors were never grounded in a scientific understanding of perception and memory. *See Manson v. Brathwaithe*, 432 U.S. 98, 114 (1977) (citing *Biggers*, 409 U.S. at 199) (consolidating factors for evaluating identification testimony from then-existing case law, including opportunity to view the

perpetrator at the time of the crime, degree of attention, accuracy of description, level of certainty during the confrontation, and time elapsed between the crime and the confrontation). As such, they have not been applied in a manner that accounts for the biological processes that undermine an accurate memory of a stressful event, and courts today repeatedly minimize the biological underpinnings of perception, memory encoding, retention, and retrieval. *See, e.g.*, *United States v. Stewart*, 2015 WL 1506608, at *2 (A. Ct. Crim. App. 2015) (affirming military judge's decision that "[t]his field is not overly complicated or scientific" when denying defendant's request for expert assistance on eyewitness identification). Instead, courts rely on a flawed application of the *Biggers* factors that is at odds with science, to determine whether an eyewitness's identification is reliable.

Taking into consideration the science underlying perception and memory, it becomes clear that a witness's opportunity to view the perpetrator is not simply a question of how close she was standing, for how long, and how much light was momentarily available to catch a glimpse of the perpetrator's face. A witness's opportunity to observe is also affected by her physiological response to multiple stimuli that inhibit selective attention on a perpetrator's physical features. *See* NAT'L RESEARCH COUNCIL, *supra*, at 56. A witness focused on physically moving away from a stressful situation may selectively focus on nearby escape routes, not a perpetrator's features. A witness who is influenced by an emotional response to

unwelcome physical contact, such as an attacker's genitalia during a sexual assault, may not focus on facial features. Rapidly moving lights in a pitch-black room compete for a witness's selective attention and diminish her ability to focus on a perpetrator's face. A witness may simply avert her eyes in an attempt to disengage from the situation, further limiting her ability to focus on her attacker's features.

Similarly, science undermines the weight given to a witness's purported degree of attention. *Contra Manson*, 432 U.S. at 115 (finding an undercover police officer's eyewitness identification credible because he was *expected* to pay close attention to detail). Research shows that witnesses overestimate their observation of a perpetrator's face and the duration of a stressful event. GARRETT, *supra*, at 71. Understanding this tendency can balance a witness's confident testimony that despite keeping her head down during an encounter and that there was not enough light to see the front of a shirt, she was able to accurately perceive facial features. In addition, positive reinforcement of a witness's misidentification bolsters self-perceptions of attentiveness and self-confidence in a misidentification. *Id.*

Relatedly, scientists emphatically disagree with the credence awarded to a witness's confidence in her identification at the time of confrontation. *See* Lacy & Stark, *supra*, at 650, Box 1. *Contra Manson*, 432 U.S. at 115 (crediting the witness's repeated assurances regarding the identification: "There is no question whatsoever."). A witness's confidence is not necessarily evidence of an accurate

identification, especially when the witness is the victim recounting a traumatic event. Lacy & Stark, *supra*, at 650. Victims account for more than 70 percent of eyewitnesses who misidentify a perpetrator. GARRETT, *supra*, at 50. Of those, *90 percent* confidently misidentified their perpetrator in court. *Id.* at 51, 63 ("There is absolutely no question in my mind . . . . That is one face I will never forget."). The unreliability of a witness's confidence only increases when law enforcement engages in suggestive tactics such as single photograph show-ups. Studies indicate that 36 percent of exonerated persons were misidentified by multiple eyewitnesses, casting doubt on whether a co-witness's ability to "identify" a perpetrator based on a witness's description is a reliable indicator of accuracy. *See id.* Indeed, research suggests co-witness contamination can influence one eyewitness to misidentify the same perpetrator as another. *See id.* at 51.

Confidence related to in-court identifications should be viewed with skepticism due to the trial preparation process. Not only does trial preparation confirm a witness's prior erroneous identification, but in-court encounters, including the trial, where the accused is clearly marked as the perpetrator, reinforce misidentifications and further distort a witness's memory. *See id.* at 65.

F. Cross-racial identifications are especially unreliable

Although eyewitness identifications are generally plagued by the aforementioned deficiencies, cross-racial identifications are particularly suspect.

Cross-racial misidentifications account for nearly 50 percent of all mistaken eyewitness identifications. GARRETT, *supra*, at 73. Of these, more than 75 percent involved a white woman misidentifying a black man. *Id.* It is generally accepted that a witness naturally categorizes faces by race, but the scientific basis for cross-racial misidentifications is still being explored. NAT'L RESEARCH COUNCIL, *supra*, at 58-59. However, it is well-documented that a witness is better at identifying the facial features of a perpetrator who is of the same race as the witness, a phenomenon known as own-race bias. *See id.* at 96. Conversely, a witness is less able to accurately identify facial features of a person of a different race. *Id.*

Possible explanations include favoritism and differential perceptual expertise. *Id.* at 97. Favoritism refers to the idea that a decision regarding members of one's own group are more important than decisions regarding members of a different group. *Id.* Differential perceptual expertise posits that own-race bias is the result of the degree of familiarity with the features of other races versus a witness's familiarity with the features of her own race. *Id.* Thus, while a witness may be able to recall a perpetrator's race, she may be unable to accurately distinguish between members of the perpetrator's race if it differs from her race. Some research indicates that own-race bias is crystallized by the time a child is nine months old. *See* David J. Kelly et al., *The Other-Race Effect Develops During Infancy: Evidence of Perceptual Narrowing*, 18 PSYCHOL. SCI. 1084, 1088 (2007). Mental

recreations of the context in which an encounter occurred, a tool often used to aid memory retrieval, are ineffective in increasing the accuracy of cross-racial identifications. NAT'L RESEARCH COUNCIL, *supra*, at 96.

II. The harm caused by cross-racial eyewitness misidentifications is irreversible and irreparable

A. The social and financial costs of wrongful conviction are staggering

When a person is wrongfully imprisoned, the real offender remains free. *See* GARRETT, *supra*, at 51, 213-15 (describing "one man crime wave" who continued murder spree for years until wrongfully convicted man was posthumously exonerated by DNA). Learning that an assailant remained free may re-traumatize victims and their families and reduces societal trust in the justice system.

Wrongful convictions impose financial costs on the wrongfully imprisoned, victims, state, and society. On average, a wrongfully convicted person loses fourteen years of wages, excluding pre-incarceration wages lost due to arrest, indictment, or trial. *See* Lacy & Stark, *supra*, at 649. Prisoners who cannot wait for pro bono groups incur high costs as they try to move their cases forward, including legal fees and the costs of finding and testing DNA. *See* GARRETT, *supra*, at 224-25. The state expends significant resources litigating appeals and habeas petitions, as well as providing court-appointed counsel for indigent defendants at trial and first appeal as of right. Ultimately, the state bears the cost of DNA testing if

ordered by a judge or agreed to by the state, as well as the cost of incarceration. *Id.* at 233; *id.* at 234 (highlighting that the state of Arizona spent $109,000 to imprison a wrongfully convicted person). Lastly, for those who are exonerated, the state bears the cost of compensation. *See* INNOCENCE PROJECT, COMPENSATION STATUTES: A NATIONAL OVERVIEW (2017), *available at* https://www.innocenceproject.org/wp-content/uploads/2017/09/Adeles_Compensation-Chart_Version-2017.pdf (detailing state and federal statutes mandating compensation for exonerated persons, generally up to $50,000 per year of confinement).

B. The impact of wrongful conviction on an innocent person can have lasting effects

Since testable DNA evidence is available in fewer than 20 percent of all felony cases, it is likely that there are many people who were wrongfully convicted based on eyewitness misidentification, but will remain imprisoned due to a lack of exonerating evidence. *See* Leo, *supra*, at 73. For the small number of wrongfully convicted persons able to use DNA evidence, the outlook remains grim. On average, a wrongfully convicted person spends fourteen years in prison before exoneration. Lacy & Stark, *supra*, at 649. Some are given pardons or commuted sentences, but their convictions are not vacated. *See* GARRETT, *supra*, at 234. Others are told that, despite compelling evidence of innocence, a conviction cannot be vacated for finality or procedural reasons. *Id.* at 227.

C. Courts are recognizing the pitfalls of eyewitness identification

After recognizing the devastating effects of misidentifications, some states have introduced reforms aimed at minimizing such occurrences while balancing the reality that eyewitness testimony is sometimes the only evidence available. *See* GARRETT, *supra*, at 51 (noting that the majority of rape cases, including those resulting in wrongful convictions, would not have proceeded had the witness been unable to identify the perpetrator). More than eighteen states have implemented some set of eyewitness identification best practices, including Colorado, Connecticut, Illinois, Louisiana, Massachusetts, Maryland, Nebraska, Nevada, North Carolina, Ohio, Texas, Vermont, West Virginia, and Wisconsin.

Indeed, military courts have begun to recognize the pitfalls of cross-racial eyewitness identifications. Some permit expert witness testimony about eyewitness reliability and cross-racial identifications where identification is the primary evidence. *See United States v. Rivers*, 49 M.J. 434, 446-47 (1998) (recognizing the increased allowance of expert witness testimony regarding eyewitness reliability). Military courts have urged the use of jury instructions about the reliability of eyewitness identifications and cross-racial identifications when requested by defense counsel. *See United States v. McLaurin*, 22 M.J. 310, 312-13 & n.2 (1986) (approving model jury instruction on cross-racial identifications).

Amici urge this Court to seize this opportunity to issue guidance that will minimize the incidence of wrongful convictions based on eyewitness misidentifications in the military justice system by holding that courts must apply the *Biggers* factors in a manner that conforms with scientific understanding of memory and thus, in-court identifications, tainted by impermissibly suggestive show-ups and zealous friends and family, cannot be admitted into evidence without violating the accused's due process rights. To rule otherwise would disregard the scientific realities of perception and memory, trample the due process rights of the accused, and increase the harm associated with wrongful conviction.

Conclusion

For the foregoing reasons, this court should grant Appellant's motion to suppress.

Respectfully submitted,

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CERTIFICATE OF FILING AND SERVICE

I certify that a copy of the foregoing was delivered to the Court and was transmitted by electronic means with the consent of the parties to counsel for Appellee CPT Natanyah Ganz, USA, natanyah.ganz.mil@mail.mil, (703) 693-0793; counsel for Appellant CPT Steven J. Dray, USA, steven.j.dray.mil@mail.mil, (703) 693-0725; and the Clerk of the Court Joseph R. Perlak, efiling@armfor.uscourts.gov, on August 30, 2018.

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/s/ J. Andrew Kent

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Dated: August 30, 2018