

**INTRODUCTION TO THE *WEST VIRGINIA LAW REVIEW*  
FLAWED FORENSICS AND INNOCENCE SYMPOSIUM**

*Valena E. Beety\**

A chimera is the unique situation where the DNA of multiple people is collected in a single human being—twins joined together in the womb, for example.<sup>1</sup> Such an anomaly is as likely as a convention of the best-known experts in both forensics and law to discuss ideas, setbacks, and advancements in the field of legal forensics. In Appalachia. In the winter. Indeed, the collection of scholars in both disciplines together, in a single locale anywhere, anytime, is rare.

While legal scholars and forensics experts frequently identify similar challenges and problems in the field, we generally examine those issues—and their potential solutions—in our own disciplinary silos. Unfortunately, the lack of a common gathering of *both* legal and forensics experts interested in changing the use of courtroom forensics impedes a more collaborative approach. The *West Virginia Law Review*'s symposium, "Flawed Forensics and Innocence," provided us an opportunity to take a different tack.

Collaboration is crucial given the disciplines' similar goals: creating a more robust and dynamic relationship between public defenders and crime labs; establishing state-level review of convictions based on prior flawed testimony, like the FBI's nation-wide announcement of hair analysis cases; and strengthening the connection between bench lab analysts and academic forensic research. Journalist Radley Balko, who gave the keynote address, and Innocence Project founder Barry Scheck, who spoke over lunch, provoked a rich discussion regarding both national developments and local setbacks at the intersection of forensic science and innocence.

The importance of these conversations—and our interdisciplinary collaboration—cannot be understated. We are all relying on increasing federal and state oversight to bring standards, rigor, and greater reliability to the forensic disciplines, but what does this mean? Moreover, scientific courtroom evidentiary admissibility thresholds are in as much—if not greater—need for enhanced standards.

West Virginia University has been a leader and innovator in interdisciplinary collaborations at the intersection of forensics and the law. The

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\* Associate Professor of Law, West Virginia University; Director, West Virginia Innocence Project. Many thanks for the generous support of the WVU College of Law, and the Hodges Research Grant in particular, for supporting my scholarship on forensics and the law.

<sup>1</sup> *Definition of Chimera*, MEDICINET.COM (Aug. 28, 2013), <http://www.medicinenet.com/script/main/art.asp?articlekey=8905>.

University's Forensics & Investigative Sciences (FIS) Department, which is nationally and internationally renowned, and the College of Law joined forces to develop the nation's first Forensic Justice Master of Laws (LL.M.) degree. The *West Virginia Law Review* extended the trend by hosting the very first "Flawed Forensics and Innocence" symposium. Throughout the symposium, Law and FIS faculty led cutting-edge, forensic-centric discussions, challenging statisticians, scientists, journalists, lawyers, and professors to strategically engage and join the debate. Indeed, nothing better reflects the symposium's scope, breadth, and public educational value than the six Articles contained in this Issue of the *West Virginia Law Review*.

In the first Article, Professor Simon Cole, Director of the National Registry of Exonerations, queries the troubling role of scandal in driving forensic reform in his piece *Scandal, Fraud, and the Reform of Forensic Science: The Case of Fingerprint Analysis*. Cole points to the innocence crisis, and in particular two wrongful convictions based on fingerprint analysis, as external crises that not only resisted being cast as irrelevant aberrations, they also affirmatively reformed the discipline of fingerprinting. Yet what reliable reform can be wrought by such an unstable and volatile means as crisis? Professor Cole's piece reminds readers that a temporary uptick in attention due to the crisis of the week is insufficient. His article encourages ongoing focus and a federal forensic oversight program like the National Institute for Forensic Science originally envisioned by the National Academy of Sciences (NAS) Committee in their 2009 Report.

Paul Bieber, a fire investigator, and Parisa Dehghani-Tafti, an innocence attorney, outline the unique difficulties of understanding fire science and challenging arson convictions in their Article *Folklore and Forensics: The Challenges of Arson Investigation and Innocence Claims*. Most importantly, their Article emphasizes separating the collection of evidence about a fire from the leap of determining intent.

When courts ask fire investigators to determine whether a fire was incendiary (i.e. intentional) the usual lack of evidence to support intent means little evidence exists likewise to *refute* intent. By its nature, arson is a crime that destroys traditional evidence such as fingerprints and DNA. A troubling example noted by the authors takes place when a fire investigator misidentifies the originating area of the fire, thus making it impossible to find the true ignition source unless the investigator looks beyond his designated area of origin. Finding no ignition source, the fire investigator can simply determine that the source—a lighter, for example—has been removed, concluding the fire was incendiary with intent, although without evidence.

Despite the self-identification of fire investigation as an art rather than a science in the 1990's, courts remain reluctant to reverse convictions if rebuking the underlying findings simply leaves an unanswered case. Although the National Fire Academy now includes a module entitled "myths and legends" in its training course, courts continue to uphold convictions based on

these fictions. By appealing to standard methodologies and procedures, the authors attempt to solidify a distinction between fire investigation and a determination of arson and human intent.

Brandon Garrett and Gregory Mitchell write together on *Forensics and Fallibility: Comparing the Views of Lawyers and Jurors*. Noting how the vast majority of criminal cases end in guilty pleas rather than trials, these professors surveyed both attorneys and jurors to determine the accuracy of the defense lawyer and prosecutorial assessments of evidence, as well as their assessments of juror comprehension. Attorney anticipation of how a jury will evaluate forensic evidence shapes plea negotiations, yet attorneys can be ill informed. The essay presents one survey that queried how lawyers view DNA evidence and fingerprint evidence and how they think jurors view this evidence, and a second survey asking lay people how they view DNA evidence and fingerprint evidence.

Complementing Cole's piece on fingerprint scandals, Garrett and Mitchell highlight in their study of 254 lay people that 25.9% called fingerprint evidence "very reliable" and 50.6% called it "reliable," with almost 95% of respondents stating fingerprints are unique and do not match anyone else. Even after the advancements noted within the scientific community by Cole, lay people continue to view fingerprints as unique, individual, and infallible. Indeed, more respondents viewed fingerprints as unique than believed DNA was unique. While prosecutors may raise CSI-effect concerns, this survey and others suggest jurors are quite willing to believe forensic evidence presented.

Lawyer insight into forensic evidence remains dependent on knowledge and access. Access to forensic evidence differs for defense attorneys and prosecutors because prosecutors have direct access to crime labs, while indigent defendants are typically unable to retain their own forensic experts. This lack of access may be compounded by incomplete discovery presented by the prosecution to the defense. Yet, even with the unfettered access of prosecutors, criminal attorneys in general lack training to evaluate and understand scientific evidence. The findings of Garrett and Mitchell emphasize the importance of greater education and forensic understanding, both inside and outside of the courtroom.

Vanessa Meterko, a research analyst at the Innocence Project, uses her database of DNA exoneration cases to explore how science can contribute to wrongful convictions in *Strengths and Limitations of Forensic Science: What DNA Exonerations Have Taught Us and Where to go From Here. The Innocence Record*, an online repository of DNA exoneration case summaries and documents, exposes the tragic role of faulty forensics.<sup>2</sup> Meterko's piece examines individual forensic disciplines and their connections with DNA

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THE INNOCENCE REC.,  
[https://www.innocencerecord.org/Pages/Home.aspx?ReturnUrl=%2f\\_layouts%2fAuthenticate.aspx%3fSource%3d%252f&Source=%2f](https://www.innocencerecord.org/Pages/Home.aspx?ReturnUrl=%2f_layouts%2fAuthenticate.aspx%3fSource%3d%252f&Source=%2f) (last visited Nov. 9, 2016).

exonerations, ultimately arguing for steps to make these disciplines more internally consistent and reliable.

In *An Uncivil Action: Criminalizing Daubert in Procedure and Practice to Avoid Wrongful Convictions*, Professor Jessica Cino notes the reckless admission of forensic science evidence, without any supportive information to establish the validity of the discipline or the accuracy of the results. Professor Cino in particular breaks down the false assumptions in court that forensic science is “(1) generally accepted, (2) science, and (3) reliable.” Cino notes a “*Daubert* disparity” between the challenges and oversight of forensic testimony in civil cases, and the absolute lack of engagement in criminal cases. Ultimately, she focuses on state guidelines, as well as Federal Rule of Evidence 702, to propose raising the standard for expert testimony in criminal cases.

Sandra Guerra Thompson, a law professor at the University of Houston and a member of the Board of Directors for the Houston Forensic Science Center, is the perfect voice for explaining just how Texas is leading the country in forensic reform. In *Building the Infrastructure for “Justice Through Science”<sup>3</sup>: The Texas Model*, Professor Thompson and her co-author Nicole Bremner Cásarez construct a timeline for the changes in Texas, leading to its present position as a bulwark for challenging faulty forensic evidence and recognizing wrongful convictions. Thompson’s Article discusses conviction integrity units, reformed habeas statutes, and the legislature’s involvement in expanding prosecutorial accountability, as well as access to court for inmates. Hopefully, as Texas goes, so goes the nation.

A common thread in the symposium and in these pieces is the ongoing need for standards, uniformity in practice, and research to establish population pools and reliability. Many of the speakers are currently in working groups to create said standards. Hopefully at the next gathering, we can reflect on progress made—together.

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<sup>3</sup> “Justice Through Science” is the motto of the Texas Forensic Science Commission. See TEX. FORENSIC SCI. COMMISSION, <http://www.fsc.texas.gov/> (last visited Nov. 9, 2016).