



### **A145 The Evolution of Forensic Anthropology and the Influence of Court Rulings, Legislative Actions, and Social Trends**

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After attending this presentation, attendees will better understand the impact of court rulings, legislative actions, and social trends on the evolution of forensic anthropology. Several recent Supreme Court rulings, legislative actions, and social trends will be reviewed and the ways in which each impacts the field of forensic anthropology will be investigated.

This presentation will impact the forensic science community by emphasizing the importance of awareness of court rulings, legislative actions, and social trends that influence the practice of forensic science. Some of these influences may appear ancillary, but each has the potential to directly impact laboratory policy, admission of forensic testimony, and available funding.

Forensic anthropology has experienced significant growth during its relatively short history. In the past 45 years, since the first meeting of the Physical Anthropology section of the American Academy of Forensic Sciences, the field has experienced great change often driven not by forensic anthropological research and technical development, but by court rulings, legislative actions, and social trends. Some external influences are well known by practitioners (e.g., *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, the 2009 National Academy of Science Report *Strengthening Forensic Science in the United States: A Path Forward* (NAS Report), and The Innocence Project), yet others are less familiar (e.g., *Bullcoming v. New Mexico*).<sup>1-3</sup> Despite the low level of awareness, each of these influences affects the practice of forensic anthropology.

The NAS Report showcased systemic weaknesses in the field of forensic sciences. The Report emphasized the fact that few forensic science methods adequately measured inherent uncertainty or accuracy of inferences made by forensic scientists. Further, the Report presented concerns for contextual bias, drawing into question what “working in the blind” means for forensic science and how it can strengthen or limit analyses. As a response to the Report, anthropologists have focused research on defining method error rates, with specific attention on non-metric methods. Yet, the field has done little to explore error rates associated with analyst inference. Further, the trending concern for contextual bias has influenced some anthropology laboratories to require their analysts to perform analyses without contextual information; however, the field has not responded by investigating errors stemming from this approach.

*Bullcoming v. New Mexico* focused on the Sixth Amendment Confrontation Clause giving the accused the right to confront the witnesses against him. During the trial, the forensic analyst who completed, signed, and certified the toxicology report was on unpaid leave and unavailable. The State called another analyst to validate the report. Bullcoming’s counsel objected, asserting that introducing the report without the opportunity to cross-examine the analyst was in violation of the Confrontation Clause. Ultimately, the Supreme Court ruled that the laboratory report was out-of-court testimony; therefore, it could not be introduced unless the analyst was available at trial or the accused had prior opportunity to confront the witness. This ruling should directly impact a laboratory’s policy for co-signing reports.



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Recent media coverage of court cases has brought forensic science under increased public scrutiny. For example, ProPublica, collaborating with PBS's *Frontline* and NPR, reported on the conviction of a Texas man for the homicide and sexual assault of a 6-month-old child. During the trial, the medical examiner and hospital workers provided testimony describing the injuries the child sustained. The Texas Court of Criminal Appeals overturned the conviction after hearing testimony from a different pathologist who concluded the child had been afflicted by a severe blood-clotting disorder. This type of media coverage increases the public's scrutiny of forensic science, in return causing prosecutors to seek more analyses, leading to a trickle-down effect as pathologists reach out to anthropologists for consultation on difficult cases. Popular culture has also affected the public's opinion of forensic scientists. Juries now disregard arguments not based on solid forensic evidence or they believe that the information provided on television shows (e.g., *Bones*) and in films accurately depicts the work of forensic scientists; therefore, conflicting information can be legitimately (in their minds) disavowed.

The NAS Report, *Bullcoming v. New Mexico*, and the ProPublica report are three of many examples of external influences that impact the direction of change in forensic anthropology. Understanding these influences is important to ensure the field's responses are appropriate and deliberate. Without such an understanding, forensic anthropologists may follow practices and develop policies that are detrimental to the field.

### Reference(s):

1. *Daubert v. Merrill Dow Pharmaceuticals, Inc.* 509 U.S. 579, 113 S. Ct. 2786, 125 L. Ed. 2d 469, 1993 U.S.
2. National Research Council of the National Academies, *Strengthening Forensic Science in the United States: A Path Forward*. Washington, DC: National Academies Press, 2009.
3. *Bullcoming v. New Mexico*. 564 U.S. \_\_\_, 131 S.Ct. 2705, 180 L.Ed.2d 610 (2011).

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### Forensic Anthropology, Court Rulings, Legislation