

The Intersection of Forensic Science and Technology with Criminal Justice in Massachusetts:

Interview with David Siegel

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David M. Siegel, a Professor of Law at New England Law | Boston, is a founding member of the New England Innocence Project, which has addressed the use of various technologies in forensic science. He teaches Comparative Criminal Procedure, Criminal Advocacy, Criminal Law, Criminal Procedure, Clinical Evidence, Evidence, and Mental Health Issues in the Criminal Process. His scholarship examines ethical obligations of criminal defense lawyers and prosecutors, domestic and foreign law governing recording interrogations, and involuntary medication of criminal defendants. Professor Siegel was a Fulbright Senior Specialist, and previously worked as a Senior Assistant Public Defender for the Office of the Metropolitan Public Defender in Nashville, Tennessee.

On November 20, 2015, Professor Siegel sat down with me to discuss local criminal justice reform efforts, particularly respecting forensic science. We spoke in-depth about how many practices developed for forensic use (e.g., finger print analysis, tool mark identification, bite-mark analysis) arose without customary scientific research, outside the academic or research culture through which traditional science and medicine produces analytic techniques.¹ Although, this is not necessarily the case for all forensic disci-

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plines (DNA-technology, for example, which has been transformative for court proceedings, both pre-trial and post-conviction, was developed in a traditional scientific setting),² it is the case for practices that arose from within the forensic community itself. DNA-technology, by contrast was originally developed for the study of genetics, without the prosecution or defense in mind as consumers.³ Many legal advocates in Massachusetts have worked tirelessly to provide protections for individuals in our communities who are most affected by our criminal justice system. One of those efforts was the enactment of the Post Conviction Access to Forensic and Scientific Analysis Act.⁴ The following is an edited transcription of my conversation with Professor Siegel regarding its enactment and forensic science in general.

INTERVIEW WITH DAVID SIEGEL

Ressl-Moyer: We see on one hand, the use of forensic DNA evidence leads to innocent people being convicted for crimes which they did not

SCL., STRENGTHENING FORENSIC SCIENCE IN THE UNITED STATES: A PATH FORWARD 22–23 (Aug. 2009), <https://www.ncjrs.gov/pdffiles1/nij/grants/228091.pdf> (detailing, *inter alia*, the need for forensic science to develop better methods for research); *see also* DIANE C. BLANKENSHIP, APPLIED RESEARCH AND EVALUATION METHODS IN RECREATION (2010) as excerpted on HUMAN KINETICS, <http://www.humankinetics.com/excerpts/excerpts/steps-of-the-research-process> (detailing the “scientific research process” and the importance of research which produces a record fellow scientists can recreate in order to confirm or dispel the initial finding).

2. *See* Dep’t of Just., *Advancing Justice Through DNA Technology: Using DNA to Solve Crimes* (Sept. 9, 2014), <http://www.justice.gov/ag/advancing-justice-through-dna-technology-using-dna-solve-crimes> (“DNA technology is increasingly vital to ensuring accuracy and fairness in the criminal justice system.”); Jeremy Travis, *Technology in Criminal Justice: Creating the Tools for Transformation*, NAT’L INST. OF JUST. (Mar. 13, 1997), <http://www.nij.gov/about/speeches/past-directors/pages/acjs.aspx> (“[T]he technological revolution that is sweeping the nation and the world has not spared the criminal justice system from its broad sweep. Like other areas of public and private endeavor, the work of police agencies, court systems, correctional institutions, community groups and the other institutions that collectively constitute our response to the twin challenges of crime and justice are caught up in the hurricane of technological change.”).

3. J.D. WATSON, F.H.C. CRICK, MOLECULAR STRUCTURE OF NUCLEIC ACIDS: A STRUCTURE OF DEOXYRIBOSE NUCLEIC ACID (1953), *reprinted in* PETER S. HARPER, LANDMARKS IN MEDICAL GENETICS: CLASSIC PAPERS WITH COMMENTARIES 216 (Oxford Uni. Press 2004) (“This structure has novel features which are of considerable biological interest.”); *cf.* John H. Reif & Thomas H. LaBean, *DNA Nanotechnology and its Biological Applications* BIO-INSPIRED AND NANOSCALE INTEGRATED COMPUTING 350 (2009) (discussing how aspects of DNA research require the use of biochemistry, physics, chemistry, material science, computer science, and mathematics).

4. *See generally* MASS. GEN. LAWS, ch. 38, § 278A (2012) [Post Conviction Access to Forensic and Scientific Analysis Act].

commit,⁵ but on the other hand, the use of forensic DNA evidence leads to the exoneration of convicted people for crimes which they did not commit.⁶ Professor Siegel, how do new legal advocates reconcile this?

Siegel: Like all other forensic disciplines, forensic DNA evidence is subject to human interpretation and interpretations can differ or be wrong.

It is certainly possible for forensic evidence to lead to the conviction of factually innocent persons.⁷ Cases of partial DNA profiles, degraded evidence, mixtures of biological material from multiple persons, or mishandling of biological material are all ways in which you could have a DNA profile from a factually innocent person appear incriminating.⁸ Some of these problems increase as DNA testing becomes more sophisticated and sensitive.⁹ When a DNA profile can be extracted from a smaller and

5. Three hundred and thirty-seven individuals have been exonerated post-conviction from serious crimes in the United States using forensic evidence. INNOCENCE PROJECT, Feb. 8, 2016 <http://www.innocenceproject.org/free-innocent/improve-the-law/fact-sheets/dna-exonerations-nationwide>; see also *Glossip v. Gross*, 135 S. Ct. 2726, 2757 (2015); Jason Felch & Maura Dolan, *When a Match is Far From a Lock*, L.A. TIMES (May 4, 2008), <http://articles.latimes.com/2008/may/04/local/me-dna4> (“The case is emblematic of a national problem, The Times has found. Prosecutors and crime labs across the country routinely use numbers that exaggerate the significance of DNA matches in ‘cold hit’ cases, in which a suspect is identified through a database search.”); see also *Glossip v. Gross*, 135 S. Ct. 2726, 2757 (2015).

6. There have been two hundred and ninety-four exonerations of people wrongfully convicted of serious crimes using flawed forensic evidence. Brandon L. Garrett, *Claiming Innocence*, 92 MINN. L. REV. 1629, 1635 (2008); Adam Liptak, *Study of Wrongful Convictions Raises Questions Beyond DNA*, N.Y. TIMES (July 23, 2007), http://www.nytimes.com/2007/07/23/us/23bar.html?_r=0 (“In April, Jerry Miller, an Illinois man who served 24 years for a rape he did not commit, became the 200th American prisoner cleared by DNA evidence. His case, like the 199 others, represented a catastrophic failure of the criminal justice system.”).

7. See Britton Douglas, *“That’s What She Said”: Why Limiting the Use of Uncorroborated Eyewitness Identification Testimony Could Prevent Wrongful Convictions in Texas*, 41 TEX. TECH L. REV. 561, 566–68 (2009). See generally Charles I. Lugosi, *Punishing the Factually Innocent: DNA, Habeas Corpus and Justice*, 12 GEO. MASON U. CIV. RTS. L.J. 233, 238–42 (2012) (explaining the science behind DNA evidence).

8. One out of every five forensic laboratories does not meet proper accreditation standards set forth by the American Society of Crime Lab Directors/Laboratory Accreditation Board. See generally Randolph N. Jonakait, *Forensic Science: The Need for Regulation*, 4 HARV. J. LAW & TECH. 109, 170 (1991) (discussing the need for forensic regulation in regard to its use in criminal justice). See also Catherine Greene Burnett, *“If Only”: Best Practices for Evidence Retention in the Wake of the DNA Revolution*, 52 S. TEX. L. REV. 335, 354–55 (2011) (“Literature is replete with tales of evidence found in leaky warehouses, mislabeled containers, and conditions that caused samples to degrade.”); *Unvalidated or Improper Forensic Science*, INNOCENCE PROJECT, <http://www.innocenceproject.org/causes-wrongful-conviction/unvalidated-or-improper-forensic-science> (last visited Jan. 11, 2016).

9. SHELDON KRIMSKY & TANIA SIMONCELLI, *GENETIC JUSTICE: DNA DATABASES*,

smaller amount of biological material, there is a greater risk that contamination could affect the process.¹⁰ This is particularly a concern for certain types of biological material that are more commonly found all around us than bodily fluids, so called “touch DNA.”¹¹

Another danger or risk of DNA evidence is that its probative value can be misunderstood or overvalued by jurors.¹² For example, when there are innocent or non-incriminating explanations for why a person’s biological material would be found somewhere. The fact that their biological material is found in any place, presented in probabilistic terms, can make the jury forget or not focus on that fact that there are innocent explanations for the presence of the material.

The key point to bear in mind is that DNA is not magic, it is just a tool. But it is a tool with much more discriminating power—with much greater accuracy and reliability for answering a specific type of question—than anything the criminal justice system had without forensic analysis.¹³ That doesn’t mean it is perfect or flawless, but it does mean that it enabled us to reach factual conclusions with a high degree of certainty about contested situations. This then allows us to examine all the other factual conclusions that the criminal justice system has reached, with much lower degrees of

CRIMINAL INVESTIGATIONS, AND CIVIL LIBERTIES xvi (2010) (“With the birth of DNA data banks, crime scenes have become a reservoir of biological trace materials like bloodstains, hair, semen, and skin cells from which DNA can be obtained and potentially matched with that of on-file suspects. Rapid developments in molecular genetics have made DNA analysis the fastest-growing forensic tool in criminal investigation since fingerprints were first introduced more than a century ago.”).

10. Commonwealth v. Mattei, 920 N.E.2d 845, 853 (Mass. 2010) (stating that the term “inconclusive” refers to results that have “insufficient sample material” or “contamination”); Kimber Cogdell Bouies, *Misuse of DNA Evidence is Not Always a “Harmless Error”*: DNA Evidence, Prosecutorial Misconduct, and Wrongful Conviction, 17 TEX. WESLEYAN L. REV. 403, 412 (2011).

11. Joe Minor, *Touch DNA: From the Crime to the Crime Laboratory*, FORENSIC MAG. (Apr. 12, 2013, 6:27 AM), www.forensicmag.com/articles/2013/04/touch-dna-crime-scene-crime-laboratory (“Epithelial or touch DNA evidence can be defined as evidence with no visible staining that would likely contain DNA resulting from the transfer of epithelial cells from the skin to an object.”) (emphasis omitted).

12. William C. Thompson, *Evaluating the Admissibility of New Genetic Identification Tests: Lessons from the “DNA War”*, 84 J. CRIM. & CRIMINOLOGY 22, 24, 31 (1993) (“[N]ew DNA tests were poorly validated and may be considerably less probative than juries have been led to believe.”); *contra* Commonwealth v. Lorenzo, No. 14-P-321, 87 Mass. App. Ct. 1123, at 3 (2015).

13. DAVID H. KAYE, *THE DOUBLE HELIX AND THE LAW OF EVIDENCE* 2 (2010) But it is the criminal justice system that has benefited the most from forensic DNA identification, in terms of both exonerating the innocent and of convicting the guilty. When judges and lawyers first heard that the ‘almost magical technique’ of DNA profiling could identify the source of biological trace evidence such as blood or saliva, they were stunned.

accuracy and reliability, which we can now say were incorrect.¹⁴

Ressler-Moyer: In the scope of the criminal justice reform dialogue currently surging through the United States,¹⁵ what makes forensic DNA evidence so compelling in our criminal justice system?

Siegel: Scientific evidence in general is seen as quite probative by fact-finders, but unlike all other types of forensic scientific evidence,¹⁶ DNA evidence has actually been established as valid and reliable through the scientific method.¹⁷ A major 2009 report by the National Academy of Science found that the forensic sciences essentially were not—their fundamental validity had not been established.¹⁸ So, you could not tell if an analyst opining about a bite mark, tool mark, hair, or fibre was using a method that actually analyzed anything real. You could not tell if their methods had been shown reliable. For example, if there were not reference standards, or error rates in order to determine that one analyst’s findings could be replicated by another using the same method.¹⁹

Ressler-Moyer: What do you mean by “anything real”?

Siegel: For example, the process of comparing bite marks assumes that when someone bites something, like a part of another person’s body, it leaves a specific kind of mark. This may seem commonsensical, because everybody is familiar with teeth, everybody is familiar with skin or arms. However, it is not enough to say: if you bite somebody’s finger, it is going to leave a mark. That mark has no utility if it is not reliably or predictably different than a mark when someone drops a brick on their finger or when

14. See generally Wayne G. Plumtree, *A Perspective on the Appropriate Weight to be Given to the National Academy of Sciences Report on Forensics in Evidentiary Hearings: The Significance of Continued Court Acceptance of Fingerprint Evidence*, 42 SW. L. REV. 605 (2013).

15. See generally Lauren Victoria Burke ‘We’re Arresting the Wrong People’: Top Cops Talk the Talk on Reform, THE ROOT (Oct. 22, 2015, 3:00 AM), http://www.theroot.com/articles/politics/2015/10/_we_re_arresting_the_wrong_people_the_nation_s_top_police_officers_talk.html.

16. See Hon. Donald E. Shelton, *Twenty-First Century Forensic Science Challenges for Trial Judges in Criminal Cases: Where the “Polybutadiene” Meets the “Bitumen”*, 18 WIDENER L.J. 309, 371–72 (2009) (discussing the benefit of scientific evidence to jurors when rendering verdicts).

17. See generally Dep’t. of Just., *supra* note 3 (noting that DNA can be used with incredible accuracy when biological evidence exists).

18. NAT’L ACAD. OF SCI., *supra* note 2, at 1–35 (2009).

19. See *id.* at 7.

someone closes their finger in the door.²⁰ The mark has utility only if it is a certain kind of mark which routinely or reliably leaves a certain distinct impression.²¹ This analysis may involve the shape of peoples' teeth, the strength of their bite, or the resilience of skin (if we are talking about someone's flesh).²² It is these types of variables which have not really been studied. Of course, dentists study teeth and shapes and how to repair them and keep them healthy. But that is not the same as what kind of dents and impressions teeth make in different kinds of objects.

Ressl-Moyer: That is interesting, I would have thought that this research already existed.

Siegel: Exactly. That is exactly the critical finding of this report;²³ that basic underlying mechanism, that you quite reasonably made the assumption would have already been studied. So yes, people understand how fingerprints leave marks. And they understand the biology of how people get fingerprints. But understanding it at that level is not the same as understanding the frequency of certain patterns; or what kinds of things, if any, affect those kinds of patterns. Those kinds of studies, at that level, have not been done for most forensic sciences used in the court room.²⁴

To illustrate my point, if you go to the doctor because you always feel tired, the doctor may do a blood test to determine if you have a variety of conditions. There are ways to validate these tests. The blood tests measure things that can be chemically isolated, such as high or low levels of which have been shown to cause certain conditions, the symptoms of which include fatigue. And if you get a significant test result, the doctor will repeat the test to confirm it. That is because the tests are reliable, and they have error rates that are established, and confidence levels about their outcomes.²⁵

None of these features, or peer review and replicability, exist for forensic science, with the exception of forensic DNA.²⁶ DNA is unique because it has been developed for medical and scientific purposes, rather than for

20. See Anoop K. Verma, Sachil Kumar & Sandeep Bbattacharya, *Identification of a Person with the Help of Bite Mark Analysis*, 3 J. ORAL BIOL. CRANIOFACIAL RES. 88, 88 (2013) ("Forensic odontology is still new to criminal justice officials and its success in the criminal justice field is also not so well researched.").

21. *Id.* at 89.

22. *Id.*

23. See NAT'L ACAD. OF SCI., *supra* note 2, at 3, 14–15.

24. *Id.*

25. See *id.* at 116–17.

26. See *id.* at 114–15 ("In the case of DNA analysis, studies have evaluated the precision, reliabilities, and uncertainties of the methods. This knowledge has been used to define standard procedures that, when followed, lead to reliable evidence.").

forensic purposes.²⁷ One of the basic challenges in trying to make forensic sciences more “scientific” is that they were developed for a single user: law enforcement, which has a systemic interest in not undermining the probative value of its techniques.²⁸ That interest is sort of the opposite of the approach by which science is supposed to work, at least in theory.

Scientists are supposed to put their results out into the world and other scientists are supposed to try to replicate them, and if they cannot, that raises questions about the initial finding.²⁹ Science advances by researchers trying to undermine the conclusions and findings of others.³⁰ This scientific practice is markedly different from consumers of other forensic science, namely law enforcement.³¹ Law enforcement has an understandable interest in the finality—as well as the validity and reliability of forensic science—because the outcome of criminal investigations and cases depend upon it.³²

Ressl-Moyer: In 2012, the Post Conviction Access to Forensic and Scientific Analysis Act went into effect, making Massachusetts the forty-ninth state granting inmates the right to test their DNA evidence.³³ Concurrently, the Act also delegated broad regulation authority to the State Police Crime Lab for retention and preservation of such evidence.³⁴ The original bill passed unanimously, indicating some really powerful advocacy behind the

27. See Rana Saad, *Discovery, Development, and Current Applications of DNA Testing*, 18 BAYLOR U. MED. CTR. PROC. 130, 130 (2005) (describing the origin of DNA analysis in medical research).

28. DONALD E. SHELTON, FORENSIC SCIENCE EVIDENCE: CAN THE LAW KEEP UP WITH SCIENCE? 192 (LFB Scholarly Publ'g, 2012) (“In the criminal forensic science field, however, most of the testimony has no origin or basis outside of the context of criminal investigation and litigation. The testimony was developed expressly for purposes of testifying in the prosecution of alleged criminal activity in court.”).

29. DARYL E. CHUBIN & EDWARD J. HACKETT, PEERLESS SCIENCE: PEER REVIEW AND U.S. SCIENCE POLICY 1-2 (St. Univ. of N.Y. Press, 1990).

30. *Id.*

31. *Developments in the Law—Confronting the New Challenges of Scientific Evidence*, 108 HARV. L. REV. 1481, 1484 (1995).

32. *Id.*

33. See MASS. GEN. LAWS ch. 278A, § 3 (2012); see also Massachusetts House of Representatives Unanimously Passes DNA Access Bill!, NEW ENG. INNOCENCE PROJECT (Feb. 8, 2012), <http://www.newenglandinnocence.org/news/massachusetts-house-of-representatives-unanimously-passes-dna-access-bill/>.

34. See MASS. GEN. LAWS ch. 278A, § 16(b) (2012); David M. Siegel & Gregory I. Massing, *A New Tool for Determining Factual Innocence: Massachusetts' Post-Conviction Access to Forensic and Scientific Analysis*, BOS. B. J. (May 16, 2012), <http://bostonbarjournal.com/2012/05/16/a-new-tool-for-determining-factual-innocence-massachusetts-post-conviction-access-to-forensic-and-scientific-analysis-by-david-m-siegel-and-gregory-i-massing/>.

efforts. What was your role in its enactment?

Siegel: Many, many people were involved in this effort, and virtually all of them were far better advocates than me. The very first draft of the bill was co-written by a long-time colleague and co-counsel in an early case to get post-conviction testing, Judi Goldberg, who is now a Senior Policy Analyst for the Massachusetts Office of Inspector General.³⁵ She is an excellent drafter, and a very far-sighted legal analyst who really developed the basic framework for the legislation. Several state legislators were early supporters, such as then-representative Patricia Jehlen³⁶ and Cynthia Creem³⁷ from Newton, but it was difficult to interest a wider range of people initially. One of the first Massachusetts DNA exonerees, Dennis Maher,³⁸ who is now on the board of the New England Innocence Project, was a critical and loyal witness whenever the bill came up for consideration. The bill was initially filed in 2003 and refiled many times.

There was a bit of a boost when the Innocence Protection Act of 2003 (Protection Act) was passed at the federal level.³⁹ The Protection Act provided funding for DNA-related programs to the states, but required that they have a mechanism that allowed persons who claimed they had been wrongfully convicted to access evidence and have it tested.⁴⁰ This was important as an incentive, or lever, to get states to enact testing and access legislation.⁴¹ In some respects—perhaps because Massachusetts has such an old history with respect to its legal system and a well-deserved reputation for fairness—it can be a challenge to introduce newer ideas that suggest the system has shortcomings. It’s not much of an argument in Massachusetts to say “most states do it differently,” you really need to be able to

35. See Judith A. Goldberg & David M. Siegel, *The Ethical Obligations of Prosecutors in Cases Involving Postconviction Claims of Innocence*, 38 CAL. W. L. REV. 389, 389 n.*, 410–12 (2002).

36. *About*, PAT JEHLLEN, <http://www.patjehlen.org/about> (last visited Jan. 29, 2016) (“Jehlen’s most satisfying legislative achievement as a state representative was the Wrongful Convictions bill which allows people who have been incarcerated but later proven not guilty to receive compensation.”).

37. See *Massachusetts House of Representatives Unanimously Passes DNA Access Bill*, *supra* note 36.

38. Archive of New England Exonerees – Dennis Maher, NEW ENG. INNOCENCE PROJECT, <http://www.newenglandinnocence.org/exonerees/dennis-maher/> (last visited Jan. 26, 2016).

39. See Samuel R. Wiseman, *Waiving Innocence*, 96 MINN. L. REV. 952, 957 (2012).

40. Innocence Protection Act of 2004, 18 U.S.C. § 3600(a) (2004).

41. 42 U.S.C. § 14136, note (2)(A)(i)–(ii) (2014) (Incentive Grants to States to Ensure Consideration of Claims of Actual Innocence); see Joseph L. Hoffmann & Nancy J. King, *Rethinking the Federal Role in State Criminal Justice*, 84 N.Y.U. L. REV. 791, 829 n. 139 (2009).

explain why Massachusetts could do it better—thereby be the best.

Ressl-Moyer: And this makes legislative advocacy in Massachusetts unique?

Siegel: There are other ways in which Massachusetts approaches criminal justice reform differently. Unlike most states, Massachusetts does not have a Code of Evidence; it has a guide but not a code.⁴² Massachusetts does not have a criminal code that is based on a uniform set of definitions; it still relies on largely common law definitions.⁴³ Massachusetts also does not have sentencing guidelines, although there are some proposed ones.⁴⁴ These are the kind of things that render the fact that “Massachusetts is different” not much of an argument.

That being said, the effort to move forward really got a tremendous push from the Boston Bar Association’s 2008 President, Kathy Weinman,⁴⁵ a partner at Collora, who made accuracy in the criminal justice system a signature issue. She created a Task Force led by two very distinguished former prosecutors, David Meier,⁴⁶ now a partner at Todd & Weld, and Martin Murphy, now a partner at Foley Hoag, who recruited the law enforcement personnel, prosecutors, forensic scientists, public defenders, and defense lawyers to examine all the ways that the risk of wrongful conviction could be reduced. The Task Force produced an influential report in 2009, *Getting it Right*, which included a proposed bill for post-conviction access and testing.⁴⁷ The real architect of the bill, which drew heavily on

42. MASS. G. EVID. § 102:2 (MCLE 2015); MARC G. PERLIN & DAVALENE COOPER, MASSACHUSETTS PROOF OF CASES EVIDENCE § 67:2 (database updated Dec. 2015).

43. See *Commonwealth v. Sexton*, 680 N.E.2d 23, 25 (Mass. 1997) (defining “dangerous weapon” using common law, because its definition is absent in the statutory definitions).

44. See MASS. CT. SYS., SENT’G GUIDELINES LEGIS. QUESTIONS AND ANSWERS, <http://www.mass.gov/courts/court-info/trial-court/sent-commission/sentencing-guidelines-legislation-q-and-a-gen.html> (lasted visited Jan. 28, 2016) (listing proposed legislation concerning sentencing guidelines).

45. See John J. Regan, *Thank You Kathy Weinman*, 53 BOS. B.J. 1, 2 (2009), http://www.bostonbar.org/pub/bbj/bbj_online/bbj0910/Fall2009/bbj_fall_09.pdf (“Kathy, as a white-collar criminal defense lawyer, has seen the injustice of wrongful convictions, both for the defendant and for the victim’s family when the real perpetrator remains free. She convened a Task Force to Prevent Wrongful Convictions, drawn broadly from the law enforcement and criminal defense bars, whose report, with its specific suggestions for follow-up legislation, will soon be available. This will be an enduring legacy of Kathy’s year as BBA President.”).

46. See *Boston Bar Task Force Releases Roadmap for Criminal Justice Reform*, BOS. B. ASS’N, (Dec. 16, 2009), <http://www.bostonbar.org/public-policy/public-policy-archive/2009/12/16/boston-bar-task-force-releases-roadmap-for-criminal-justice-reform>.

47. CHRISTOPHER J. ARMSTRONG ET AL., *GETTING IT RIGHT: IMPROVING THE*

our original draft but simplified the process somewhat by limiting its procedural scope to simply access and testing,⁴⁸ was a lawyer in the Executive Office of Public Safety, Greg Massing, who is now a judge on the Appeals Court.⁴⁹ He was instrumental in refining the language of the bill so that it focused only on access and testing and did not go beyond that in defining the effects on the status of convictions. This was done on the premise that there are well-developed bodies of law dealing with motions for a new trial that can be accessed depending on the outcome of testing. This refinement garnered support from the Administration and (at least) acquiescence from virtually all law enforcement personnel.

The BBA had an outstanding lobbyist, Kathleen Joyce (who is now Senior Counsel at the BRA),⁵⁰ who led the Task Force members through the legislative process, which was extremely helpful. Then-Project Coordinator of the New England Innocence Project Gretchen Bennett (who is now Chief Counsel to the Judiciary Committee) did a fantastic job keeping all the various constituencies aligned and moving the process forward.⁵¹

The bill did pass unanimously in both houses, which was great since many people thought it should be non-controversial in principle,⁵² but even non-controversial principles have to be hammered out in detail in legislation, and that always engenders controversy. The Act gave the DNA lab regulatory authority along with the Forensic Science Advisory Board (FSAB), which was supposed to broaden the input with a wider range of stakeholders, to promulgate regulations for evidence retention and preservation.⁵³ (The Task Force also proposed revisions to the FSAB to broaden

ACCURACY AND RELIABILITY OF THE CRIMINAL JUSTICE SYSTEM IN MASSACHUSETTS 6 (2009).

48. *Boston Bar Task Force Releases Roadmap For Criminal Justice Reform*, *supra* note 49.

49. ARMSTRONG ET AL., *supra* note 50, at 1; *Gregory I. Massing Sworn in as Appeals Court Associate Justice*, MASS. GOV'T, <http://www.mass.gov/courts/court-info/appealscourt/news-brief-gregory-massing-sworn-in-appeals-court.html> (last visited Jan. 25, 2016).

50. *BBA Legislative Advisory Committee*, BOS. B. ASS'N, <http://www.bostonbar.org/public-policy/helpful-information/legislative-advisory-committee> (last visited Feb. 5, 2016).

51. *Staff*, BOS. REDEVELOPMENT AUTH., <http://www.bostonredevelopmentauthority.org/about-us/staff/staff-detail?id=1186> (last visited Jan. 26, 2016).

52. *See generally* DNA Access Bill Becomes Law!, New Eng. Innocence Project (Feb. 17, 2012) (noting that both houses unanimously passed the bill), <http://www.newenglandinnocence.org/news/dna-access-bill-set-to-become-law-today/>; *Boston Bar Task Force Releases Roadmap for Criminal Justice Reform*, *supra* note 49 (identifying that the members that collaborated in the Task Force came from broad areas of the legal community).

53. ARMSTRONG ET AL., *supra* note 50, at 61.

its membership and increase the number of its members with scientific expertise.)⁵⁴ This was a critical and new statewide obligation, and courts, court clerks, labs, and lawyers are still developing mechanisms to implement it. It is very important, though, because as technology improves, more items should be subject to forensic analysis, or to more accurate or discriminating forensic analysis, so you do not want to forego the ability to get better results.

It is also important to understand that the Act is not limited to DNA testing—it is about post-conviction forensic and scientific analysis. The words “DNA” (or deoxyribonucleic acid) never appear in the statute because it is about “analysis,” defined as “the process by which a forensic or scientific technique is applied to evidence or biological material to identify the perpetrator of a crime.”⁵⁵ The results of the analysis have to be admissible in Massachusetts courts, but they can be anything.⁵⁶ That was quite deliberate; to permit the development of an acceptance of new analytic techniques.

Ressl-Moyer: When you point out that more items are subject to forensic analysis, do you mean to highlight that limitation was an issue?

Siegel: Not necessarily, but there are purposefully no limitations in the statute. The idea is that as scientific and forensic techniques improve, smaller amounts of biological material are subject to forensic analysis. Material previously thought to be devoid of scientific significance now has significance. Digital evidence is a good example. The idea that cellular phone data would yield evidence about where someone was, who they were with, or what they were doing would have been incomprehensible a number of years ago. An entire area of forensic analysis that you might think, “This is something for which someone who was wrongfully convicted five or ten years ago—well wait a minute, someone needs to be able to access the cell site information that was relevant in that case.”⁵⁷ The universe of

54. *Id.* at 8.

55. MASS. GEN. LAWS ch. 278A, § 1 (2012).

56. *See generally* Commonwealth v. Wade, 5 N.E.3d 816, 825–31 (Mass. 2013) (holding that a defendant does not need to assert his innocence on every conceivable theory of guilt in order for a hearing on a motion for post conviction forensic DNA testing; instead, defendant was required to assert his innocence with respect to the offense of conviction, which was felony murder predicated on aggravated rape).

57. In 2014, the Massachusetts Supreme Judicial Court grappled with the admissibility of Cell Site Location Information. Commonwealth v. Augustine, 4 N.E.3d 846, 853–54 (Mass. 2014) (“A cellular service provider has a network of base stations, also referred to as cell sites or cell towers, that essentially divides the provider’s service area into ‘sectors.’ Cell site antennae send and receive signals from subscribers’ cellular telephones that are operating within a particular sector. Additionally, if a subscriber begins a call connected to a particular cell site and then moves closer to a different one, the call is automatically ‘handed

things that is subject to scientific analysis is only likely to grow because the analysis is getting more intelligent. You do not want to make a statute that locks in the technology of today.

Ressler-Moyer: How was it determined that the Legislature was the appropriate means for reform in DNA forensic evidence?

Siegel: Lawyers had been litigating individual cases for several years around the state, with varying degrees of success.⁵⁸ It was obvious that there was a need for a systemic response to the issue, and that the response ought to be essentially non-adversarial as a process. But since the issue always arose in an adversarial context, it was hard to craft a solution through litigation that would reach that result.

Ressler-Moyer: Do you think that was the right decision?

Siegel: Very few solutions to legal issues are unqualified successes, but it significantly advanced the process of enabling persons who claim they were wrongfully convicted being able to show that they were.

off” to that closer cell site. When a subscriber makes or receives a call, the cellular service provider records the identity of the cell site utilized. Through such ‘network-based location techniques’, a cellular service provider can approximate the location of any active cellular telephone handset within its network based on the handset’s communication with a particular cell site.”).

58. In 2004, Stephan Cowans was exonerated by DNA evidence after six and a half years in prison, resulting in Commissioner Kathleen O’Toole’s decision to shut down the Boston Police Department Latent Print Unit. JENNIFER HANNAFORD, ACCREDITATION OF THE BOSTON POLICE DEPARTMENT LATENT PRINT UNIT I <http://www.shirleymckie.com/documents/Bostonlatentprintpaper.pdf> (last visited Feb. 17, 2016). Cowans had been convicted for killing a police officer based on a single eyewitness identification and a finger print analysis. *Commonwealth v. Cowans*, 756 N.E.2d 622, 624 (Mass. App. Ct. 2001). However, an investigation into forensic analysis revealed that the print identification was “clearly erroneous, known to be erroneous, and that the error was intentionally concealed by [the testifying police officer] and others throughout Cowans’ trial and conviction.” *Cowans v. City of Boston*, No. 05-CV-11574-RGS, 2007 WL 28419, at *1 (D. Mass. Jan. 4, 2007). *Cf.* Joseph Lazazzero, *Justice Undeterred: A Call for Massachusetts Legislation on Post-Conviction DNA Access*, 44 SUFFOLK U. L. REV. 231, 258 (2011) (citing Brandon L. Garrett & Peter J. Neufeld, *Invalid Forensic Science Testimony and Wrongful Convictions*, 95 VA. L. REV. 1, 73 (2009)). Cowans was later found dead in his home after receiving a settlement of \$3.2 million from the City of Boston for his wrongful conviction. David Abel, *A Future Reclaimed, A Windfall, A Life Lost*, BOS. GLOBE (March 3, 2008) http://www.boston.com/news/local/articles/2008/03/03/a_future_reclaimed_a_windfall_a_life_lost/?page=full. *See also* *United States v. Hebshire*, 754 F. Supp. 2d. 89, 112–15, 128 (2010) (holding Hebshire’s counsel was ineffective for failing to challenge the validity of admitted scientific testing and DNA evidence at his trial).

Ressl-Moyer: What now? What are the other obstacles that organizations like the New England Innocence Project face?

Siegel: There are always new challenges; new discoveries that investigative or forensic practices or techniques are flawed, that specific personnel provided inappropriate or inadequate work in the criminal justice system, or that individuals for whatever reason (and there are typically multiple reasons) were subjected to a flawed process.⁵⁹ There are challenges of supporting efforts like this (i.e., raising money), and developing sensitivity to the need for them among the public at large.

Ressl-Moyer: You are a law school professor, quoted as saying “[it is] important for academics to be actively engaged with reform and improvement of the legal system.” Why academia as your path in criminal justice reform?

Siegel: You find that people interested in systemic improvement are in all facets of the criminal justice system, law enforcement, prosecutors, public defenders, the private bar, the judiciary, practice and bar associations, and academia too. I have never found the argument compelling that academics, at least in law, should be divorced from practice. Charles Hamilton Houston had this great quote that a lawyer’s either a social engineer or a parasite on society.⁶⁰ I realize it’s not fashionable to think of oneself as a potential social parasite, but when you consider that lawyers are a largely self-regulated guild with an extraordinarily valuable license for operating in a society that is by and large subject to the rule of law, foregoing the opportunity to rectify wrongs seems to be squandering a rare opportunity. Lawyers who are also academics have the tremendous luxury of largely controlling their schedules, and the ability to come at things without an

59. See *Commonwealth v. Scott*, 5 N.E.3d 530, 535–38, 545 (Mass. 2014) (providing background on the circumstances surrounding Annie Dookhan’s criminal activities and holding that the drug lab’s conduct was the source of the false identification of the defendant in his case); cf. Memorandum of Decision & Order on Defendant’s Motion to Dismiss Counts Two & Three, *Commonwealth v. Dookhan*, No. SUCR201211155, 2013 WL 6148058, at *1 (Mass. Supp. 2013) (listing the grand jury indictments of the defendant for perjury, misleading another person in connection with a criminal proceeding, tampering with records or proceedings, and pretending to hold a degree relating to her position as a chemist at the Hinton State Laboratory and testimony she gave as an expert witness for the Commonwealth in connection with two criminal trials).

60. Genna Rae McNeil, *In Tribute: Charles Hamilton Houston*, 111 HARV. L. REV. 2167, 2169 (1998) (“Long after the 1930s, Charles Hamilton Houston’s oft-quoted assertion—‘A lawyer’s either a social engineer or . . . a parasite on society’—lingered in the memories of students.”).

organizational or office-based disposition. So, for those reasons I think Charles Hamilton Houston was correct.