SLATE

Junk Science Has Taken Over Criminal Trials. Here's What the Supreme Court Could Do About It.

Ketanji Brown Jackson's experience as a public defender is a valuable asset.

BY TIM REQUARTH
APRIL 04, 20221:28 PM

Ketanji Brown Jackson is on the path to becoming the first Black woman to sit on the nation's highest court. But there's another less-discussed first about Judge Jackson's background: She'll be the first Supreme Court justice in more than 30 years to have served as a public defender.

This might seem like a bit of CV esoterica, but judges' backgrounds are important for how justice does, or doesn't, get served. Public defenders safeguard the constitutional right to be represented by a lawyer, regardless of the defendant's means. In an adversarial system, they are one team, or half the system.

And yet, across the nation, surprisingly few judges have a background as defense attorneys. According to the Cato Institute, former prosecutors outnumber former defense attorneys by a factor of 4 at the federal level. At the federal appeals court level, according to the Center for American Progress, that proportion is whittled down even further, to 1 in 100. This matters because ex-prosecutor judges tend to sympathize with prosecutors. Former prosecutors are more likely to incarcerate defendants, and a prosecutor-dominated justice system could explain why criminal courts are less likely to view evidence skeptically and more likely to drag their feet to overturn wrongful convictions.

This judicial bias is a huge problem because America has a troubling wrongful conviction rate. Even in death penalty cases—which receive far more post-conviction scrutiny than do other cases—1 in 25 people set to be executed will have been wrongfully convicted. For non-capital cases, the wrongful conviction rate is likely to be much higher, meaning tens of thousands of innocent individuals languish in America's vast carceral state.

Many factors contribute to wrongful convictions, but one of the more pernicious forces is the sorry state of forensic science. Despite their acceptance in the courtroom, prominent scientists and criminal justice experts have raised serious doubts about the validity of many of the "pattern-matching" disciplines that rely on comparisons of bite marks, hairs, shoe prints, tire tracks, or even fingerprints. According to the Innocence Project, junk forensic science factored into about

half of all wrongful convictions in which the defendants were later exonerated by DNA testing. Judges are supposed to keep flawed science out of the courts, yet they've failed repeatedly. One reason may be that former prosecutors are reluctant to root out what used to be one of their most powerful tools in the courtroom—and may even call into question some of their own past convictions.

To learn about what the confirmation of Judge Jackson means for forensic science, wrongful convictions, and public defense, I spoke with M. Chris Fabricant. Fabricant is the Innocence Project's director of strategic litigation, a former public defender in the Bronx, and author of a new book, *Junk Science and the American Criminal Justice System*, which is publishing on Tuesday. Our conversation has been edited and condensed for clarity.

Tim Requarth: It seems like for all of the shortcomings of the legal system, forensic science would be on solid ground. It's science, right? But in your new book, you say that's wrong. So could you break that down at a high level for someone whose knowledge of forensic science mostly comes from *CSI*?

M. Chris Fabricant: It's interesting you mention *CSI*. Shows like *CSI* that propagate the infallibility of forensics have been around for a long, long time, and as a result, judges and juries are less likely to question forensic expert testimony. People in my industry even have a name for it: the *CSI* effect. In my book, I try to dispel this myth of infallibility that has led to wrongful convictions and wrongful executions.

So is this more about more people misusing solid science, or are there problems with the science itself?

Well, it really depends on the technique that we're discussing. Forensic techniques such as matching bite marks, or matching microscope patterns on hair, they really have no business being used in criminal trials at all because there is no valid scientific foundation.

Fingerprints have been used to identify people successfully for more than 100 years. But do we know whether a *partial* print discovered from a crime scene could only have come from a specific person to the exclusion of everybody that's ever been born? There's no statistical basis to make those claims, so that's exaggerated testimony. And then there's DNA analysis, which, if done correctly, is scientifically valid.

In your book you talk a lot about bite mark matching, where forensic analysts take a dental mold of a suspect's teeth and match it to a bite mark on a victim's body. Even some bite mark analysts now acknowledge that the technique is junk science. Why is that?

Matching bite marks is not possible. And that's not just an opinion—that's what the literature now demonstrates. Even trained forensic dentists are no better than flipping a coin. They misidentify other marks like animal bites as alleged human bite marks. There are a lot of issues, but one major problem is that human skin changes, either through decomposition or healing, and that really torpedoes the entire field.

So are you saying that all of forensic dentistry is a hoax? I thought we identified plane crash victims by dental records all the time.

These two fields have been conflated deliberately in court to piggyback junk science on a valid technique to identity human remains. It's like a geologist claiming that because they can identify rocks, they can identify the exact rock that was used to bash in somebody's skull.

Could you walk me through how junk science like bite mark analysis gets into court?

The Food and Drug Administration requires clinical trials before a toothpaste is introduced into the general population [if it includes an ingredient that is connected to specific health claims]. But there's no FDA for forensics. There's no research to see whether a forensic technique is capable of the claims that the experts are making.

So we make life-and-death decisions with forensic science and yet hold toothpaste to higher standards.

Exactly.

OK, so if there's no FDA for forensic science, who allows junk science into the courtroom?

Judges are the gatekeepers. A lot of forensic techniques—and bite mark analysis is no exception—emerged not from a laboratory but from a crime scene. Prosecutors and forensic scientists present a new technique to the judge, there's a hearing on its admissibility, and then the judge decides if the evidence can be used in court. And once a judge accepts a type of evidence into court, it generally stays in court because other judges rely on precedent from previous rulings. So a single ruling by a scientifically illiterate judge that's sympathetic to the prosecution can have a huge effect on the entire court system. Bite mark analysis, for example, was introduced in a 1974 manslaughter case, *People v. Marx*. *Marx* has been cited in hundreds of cases and even sent people to death row.

Since then, bite mark analysis has been discredited by virtually every scientific entity that's ever examined the foundational assumptions of the technique. But still today, as you and I sit here talking in 2022, not a single published opinion in American criminal courts excludes bite mark evidence from use in trial. Not one.

"We make life-and-death decisions with forensic science and yet hold toothpaste to higher standards."— Tim Requarth

That's astonishing.

Let me give you an example of what we're up against. Right now, I'm working on the case of a man named Charles McCrory, who was convicted of murdering his wife in 1985. The original analyst had testified in the case that he'd matched McCrory to a bite mark on his wife's dead body, which was the only physical evidence in the case. About a year ago, the original analyst recanted his opinion. The presiding judge cut and pasted the prosecution's brief that relied on

this case called *Hadley* in the Alabama Supreme Court that cites back to the *Marx* case, saying that this stuff is so elemental, that it doesn't even require an expert witness, that the jurors themselves can eyeball it. The judge renders the expert's recantation meaningless, so Charles McCrory, an innocent man, remains in prison. That's how important and impactful a precedent-establishing case like *Marx* is.

So it seems like most judges tend to be unskeptical of forensic techniques in the first place, and then reluctant to change their minds once the science changes. How does the fact that most judges are former prosecutors play into this?

Prosecutors and forensic analysts work closely together. You're a prosecutor—are you going to follow the scientific method and not tell the forensic analyst any of the facts of your case because you want to have a blinded analysis? Or are you going to tell this forensic analyst that this is the only evidence that we have against this guy, he's gotten away with this twice before, and we need to get him off the streets, so hey, does this bloody fingerprint match his? So in the routine course of investigation, prosecutors bias the analyst towards a certain conclusion, and then because none of the science is ever really challenged in court, the defendant gets convicted, which prosecutors declare is vindication of the science. It's all a bit circular. I don't think most prosecutors knowingly use shoddy science. They are true believers because, from their perspective, it's been perfectly reliable.

OK, but it's an adversarial system. Prosecutors can say what they will, but aren't public defenders supposed to challenge them?

Let me tell you about my time as a public defender in the Bronx. At my first arraignment shift, I must have had seven, eight people who had done absolutely nothing wrong, were entirely innocent of any crime. And that happened in every arraignment shift I went to. I was just astonished by it. It was suddenly as if the entire criminal legal system exploded all around me. It was a real eye-opener. Virtually all of my clients were people of color. All of them were indigent. So many of them were innocent. And virtually none of them actually get a trial.

I became a triage lawyer, and I was juggling crisis after crisis after crisis after crisis. And so the notion that I would be able to sit down and really unpack scientific evidence that was being leveled against a client of mine—even something like a presumptive drug test, which is notoriously unreliable and used all the time—it would be very hard to find the time or the platform to even make an argument against the science.

So the background of a judge would influence their view of forensic science—and even whether someone is likely innocent or guilty. Why are most judges former prosecutors?

One of the most significant is the fact that judges, by and large at the state level, are elected judges. And despite current progressiveness in left-leaning cities around the country, overwhelmingly, judges run on law-and-order platforms. There are very clear steppingstones for political power, and those run through prosecutor offices, not through public defender offices.

This is anecdotal, but every public defender I know didn't get into the work with an eye toward running for office. But I know a whole lot of prosecutors who have done that. They come into court, and they wear blue suits, and they have American flags on their lapels, and they're all law and order. And that messaging has traditionally won elections.

I'd imagine another factor is attack ads.

The Constitution requires that everybody is entitled to a lawyer, and you as a lawyer are required to do your best to defend your clients. That's just the way our Constitution works, and you can be attacked for it. Just look at Judge Jackson's confirmation hearings [where senators have brought up her past cases defending child pornographers and terrorists]. She's attacked just for doing her job.

Despite the attacks, it's looking like Judge Jackson will be confirmed. How would her confirmation affect the state of forensic science?

When you've experienced the triage work of public defense firsthand, and you sat in those arraignment cells, it gives you a view of really what's happening with mass incarceration and our legal system. It's a view that I think every Supreme Court justice should have, every judge should have.

When I was a clinical law professor, I would have students that were largely privileged, and they had never really had any experience in criminal trials or in criminal court, or really had any understanding of the criminal legal system outside of shows like *CSI*, even though they were law students. So I had this clinic that we worked in the South Bronx for the experience of representing people, guilty or innocent. And there were plenty of innocent people, which was a radicalizing, transformative experience for the students.

And although Judge Jackson was a federal public defender, which is a little different, she will certainly have much more of that perspective than anybody else in the court. As it relates to the use of unreliable evidence in criminal trials, I can only hope that her background will give her an eye toward the ultimate target of those forensics, which is the criminal defendants. Although a single judge can't make a difference alone, I'm hopeful that her perspective will offer an important voice, as the Supreme Court weighs matters of life and liberty, and the sciences used to deprive people of their life and liberty.

In an ideal world, what could the Supreme Court actually do to improve the state of forensic science?

What they should do is create and establish due process right to be convicted on reliable scientific evidence. A Supreme Court case in 1959 created a due process right not to be convicted on false testimony. And that doctrine should be extended to include not just witnesses that are lying on the witness stand, but science that's lying in court. If a technique has been discredited by the progress of science, using it should be a due process violation.