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Andrea Roth
Berkeley Law

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***Maryland v. King* and the Wonderful, Horrible DNA Revolution in Law Enforcement**

Andrea Roth*

INTRODUCTION

In *Maryland v. King*, the Supreme Court held that a Maryland statute authorizing forced DNA sampling from those arrested for certain serious felonies, for inclusion in Maryland's offender DNA database, did not violate the Fourth Amendment. At oral argument, Justice Alito declared that *King* was "perhaps the most important criminal procedure case that this Court has heard in decades."¹

That statement, while perhaps dramatic, reflects how the DNA revolution has transformed crime-solving. We are flooded daily with media reports about unresolved cases cracked by a "cold hit" between DNA from a crime scene and a convicted felon's DNA database profile. The Federal Bureau of Investigation [FBI] boasts that its Combined DNA Index System [CODIS], a group of state and federal databases containing over ten million profiles,² has been responsible for over 219,700 hits assisting in more than 210,700 investigations.³ And numerous Innocence Project exonerees have been freed only after a database hit identified the true perpetrator.⁴

It is no wonder, then, that states have scrambled, since the advent of CODIS, to add more and more offender profiles to the databases. In 2000, Congress authorized forced DNA sampling from convicted felons in federal custody and promised funding for states that added the samples of those convicted of certain serious crimes.⁵ In 2006, Congress authorized adding federal arrestees to CODIS,⁶ and so far 28 states have done the same.⁷ Meanwhile, some local police

* Assistant Professor, UC Berkeley School of Law. This essay benefited greatly from conversations with Erin Murphy; comments from Alan Michaels, Ty Alper, Giovanna Shay, Saira Mohamed, Kate Weisburd, John Reichmuth, and the editorial staff at the *Ohio State Journal of Criminal Law*; and research assistance from Preeti Khanna.

¹ Transcript of Oral Argument at 35, *Maryland v. King*, 133 S. Ct. 1 (2012) (No. 12-207), available at http://www.supremecourt.gov/oral_arguments/argument_transcripts/12-207.pdf.

² See FBI, CODIS—NDIS STATISTICS, available at <http://www.fbi.gov/about-us/lab/biometric-analysis/codis/ndis-statistics> (last visited Oct. 6, 2013).

³ See *id.*

⁴ See generally *DNA Exoneree Case Profiles*, KNOW THE CASES, <http://www.innocenceproject.org/know/> (last visited Aug. 20, 2013).

⁵ See DNA Analysis Backlog Elimination Act of 2000, 42 U.S.C. § 14135 (2000).

⁶ See DNA Fingerprint Act, 42 U.S.C. § 14135a(a)(1)(A) (as amended Jan. 5, 2006). The arrestee expansion went into effect in 2009. See 28 C.F.R. § 28.12(b).

⁷ See, e.g., JULIE SAMUELS ET AL., NAT'L INST. OF JUST., COLLECTING DNA FROM ARRESTEES: IMPLEMENTATION LESSONS 18 (June 2012), available at <http://www.nij.gov/journals/270/arrestee-dna.htm>.

departments have begun compiling their own “offline” databases. These unregulated databases contain profiles from numerous sources, such as DNA abandoned on coffee cups, DNA collected from crime victims, and DNA from suspects who voluntarily submit a sample in exchange for not being arrested.⁸ And the debate about a universal national citizen DNA database has already begun.⁹

Maryland’s law, which adds the DNA profiles of arrestees of serious crimes to the convicted felon profiles already in the state offender database, is squarely a part of this crime-solving frenzy. The law authorizes the testing of arrestees’ DNA after they have been formally charged with various serious crimes, and then provides for the uploading and comparison of their profiles against a national database of profiles from unsolved, unrelated crimes.¹⁰

One might be forgiven, then, for predicting that an opinion upholding that law would be an unapologetic paean to the crime-solving virtues of DNA databases. Yet the five-member *King* majority devotes only two sentences to the ability of DNA to solve crimes, and even then, the mention is simply of the “salutary effect of freeing a person wrongfully imprisoned” for an offense linked to an arrestee through a database hit.¹¹ Instead of justifying Maryland’s law as a reasonable crime-fighting measure, the majority reconceptualizes the law as deploying DNA typing as a “routine booking procedure” and focuses exclusively on the state’s interest in confirming arrestees’ identities and determining arrestees’ criminal history before making bail decisions. Justice Scalia, in a dissent joined by Justices Ginsburg, Kagan, and Sotomayor, describes the majority’s portrayal of Maryland’s regime as “tax[ing] the credulity of the credulous”¹² and maintains that suspicionless searches primarily for investigative purposes are always illegal.

In this essay, I suggest that in refusing to embrace the obvious—that Maryland’s law is all about crime-solving—the *King* Court was, consciously or not, hoping to ensure DNA’s continued use as a crime-solving tool while avoiding any expansion of the genetic dragnet that would sweep in the justices themselves. But the Court’s attempt to ignore the crime-solving rationale of the law is untenable. It should have either struck down the law, admitting that arrestees’ privacy rights outweigh the meager incremental benefit of adding them to a database that already includes convicts, or been willing to admit that if arrestees can be forced to submit their DNA for crime-solving purposes, the rest of us are

⁸ See, e.g., Joseph Goldstein, *Police Agencies Are Assembling Records of DNA*, N.Y. TIMES, June 12, 2013, at A1.

⁹ See, e.g., Michael Seringhaus, *To Stop Crime, Share Your Genes*, N.Y. TIMES, Mar. 15, 2010, at A23; Charles Wilson, *Experts: DNA Ruling Could Lead to National ID*, ASSOCIATED PRESS, July 6, 2013, available at <http://nesaranews.blogspot.com/2013/07/experts-dna-ruling-could-lead-to.html> (noting that scholar David Kaye has called for a national database).

¹⁰ Md. Pub. Saf. Code Ann. § 2-504(d)(1).

¹¹ *Maryland v. King*, 133 S. Ct. 1958, 1974 (2013).

¹² *Id.* at 1980 (Scalia, J., dissenting).

not far behind.

In Part I of this essay, I offer an explanation for the majority's curious logic. Part of the explanation is obvious: five justices were not ready to hold that a suspicionless search conducted primarily for crime-solving is legal so long as it is "reasonable." But the Court might also have been concerned that a crime-solving rationale would justify expanding databases beyond arrestees for serious offenses to arrestees for minor traffic offenses or even the general public, results that the justices—and other privileged Americans who are lucky enough never to have been arrested for a serious offense—might not quietly abide. In Part II, I explain that while the dissent is right in pointing out the Court's revisionist view of the law, the Court still might have written a coherent opinion upholding it. I ultimately suggest in Part III, however, that the norm the Court's opinion seems to set—drawing the line at arrestees—is the worst possible result. As long as arrestees are going to be swept up in the dragnet, the best policy choice – one that would avoid the severe racial inequities in current databases, maximize DNA's crime-solving power, and ensure a robust privacy debate, is a universal citizen database.

I. THE MAJORITY'S SUBTERFUGE

The Court, in an opinion by Justice Kennedy, started with the premise that the Fourth Amendment allows police to subject arrestees to "routine identification processes,"¹³ such as photographing and fingerprinting, as part of the "administrative steps incident to arrest."¹⁴ It identified "the legitimate government interest served" by the Act as simply being "the need for law enforcement officers in a safe and accurate way to process and identify the persons and possessions they must take into custody."¹⁵ The Court reasoned that Maryland's law is "no more than an extension of [these] methods of identification."¹⁶ Though it acknowledged that Maryland uploads arrestee DNA profiles into CODIS for comparison to profiles from unsolved crimes, the Court recast a suspect's commission of an unrelated crime as part of the suspect's "criminal history," and his criminal history as part of his "identity."

Next, the Court reasoned that the two privacy intrusions involved—a "quick and painless"¹⁷ cheek swab and the uploading of one's forensic DNA profile into CODIS—were no more invasive than fingerprinting.¹⁸ Moreover, arrestees are

¹³ *Id.* at 1976 (majority opinion).

¹⁴ *Id.* (quoting *Cnty. of Riverside v. McLaughlin*, 500 U.S. 44, 58 (1991)).

¹⁵ *Id.* at 1970.

¹⁶ *Id.* at 1977 (quoting *United States v. Kelly*, 55 F.2d 67, 69 (2d Cir.1932)).

¹⁷ *Id.* at 1968.

¹⁸ *See, e.g., id.* at 1967 ("[T]his particular noncoding region, while useful and even dispositive for purposes like identity, does not show more far-reaching and complex characteristics like genetic traits."); *id.* at 1968 (describing "junk" DNA as "only useful for human identity testing").

routinely subject to a range of intrusions upon being detained.¹⁹ On the state interest side, the Court cited the need to thwart disguises,²⁰ make informed bail decisions, and the incidental benefit—should the arrestee be found through a “cold hit” to have committed an unrelated crime—of freeing anyone wrongfully imprisoned for that offense.²¹

To be sure, the Court is correct on many fronts. Routine, forcible taking of fingerprints and mugshots and incidental use of such information to connect arrestees to unsolved crimes has never been invalidated on Fourth Amendment grounds. DNA could be used for, and would generally be the most accurate available means of, confirming a suspect’s identity and criminal history upon arrest. A cheek swab does seem as quick, painless, and unobtrusive as the inking of one’s fingers. And it is true, at least for the foreseeable future,²² that scientists can deduce no more sensitive genetic information from one’s twenty-six-number forensic DNA profile than sex and possible ethnic background.

Yet the majority parted with reality in its portrayal of Maryland’s regime as simply a means of ensuring the accurate identification of arrestees at the time of booking and bail decisions. On the contrary, the unmistakable purpose of the law is to facilitate crime-solving through “cold hits” to unsolved cases. Maryland’s law does not mention, much less emphasize, the use of DNA to identify suspects at the time of arrest. Indeed, the law does not allow the state to test the sample or enter the resulting DNA profile into the database until after he is arraigned.²³ In Mr. King’s case, his DNA profile was not developed until months after his initial arrest.²⁴ Moreover, King’s profile was compared not against the database of known offender profiles (as one would presumably do to confirm his identity), but against the database of profiles from scenes of unsolved crimes (as one would do to investigate Mr. King’s potential involvement in those crimes).²⁵ And the state’s decision to target only those arrested for *serious* offenses suggests that the state contemplates the arrest as a proxy for criminality rather than as a means of covering all those in custody whose identification needs confirmation.

All of this is not to say that a state could not write a coherent statute authorizing the use of DNA for identification purposes. One could envision a law allowing state officials to develop and catalog a suspect’s profile as soon as

¹⁹ *Id.* at 1978.

²⁰ *Id.* at 1971.

²¹ *Id.* at 1974.

²² A handful of recent media accounts have suggested that “junk” DNA might have more of a genetic purpose than original believed. See, e.g., Alice Park, *Junk DNA—Not So Useless After All*, TIME, Sept. 6, 2012, available at <http://healthland.time.com/2012/09/06/junk-dna-not-so-useless-after-all/>. Even so, there has thus far been no suggestion that the presence of certain alleles at the “junk” locations used by the FBI can predict genetic traits such as predisposition to diseases.

²³ MD. PUB. SAF. CODE ANN. § 2-504(d)(1).

²⁴ See *King*, 133 S. Ct. at 1984 (Scalia, J., dissenting).

²⁵ See *id.* at 1985.

possible upon arrest, and mandating immediate comparison of the profile with the database of known offender profiles to confirm the arrestee's identity. While Mr. King's profile took months to develop, other states have much faster turnarounds, and the technology for on-the-scene development of suspects' forensic DNA profiles is already being beta-tested in some police departments.²⁶ In any event, Maryland did not write such a statute.

One reason the majority nonetheless portrayed the law as focused on identification is obvious: the Court's precedent prohibits suspicionless searches for the primary purpose of general crime-solving. As Justice Scalia puts it, "[n]o matter the degree of invasiveness, suspicionless searches are *never* allowed if their principal end is ordinary crime-solving."²⁷ Accordingly, the Court in *City of Indianapolis v. Edmond*²⁸ held unconstitutional a roadblock during which officials checked for license and registration—but also used a police dog to sniff each car for drugs—because its "primary purpose was to detect evidence of ordinary criminal wrongdoing."²⁹ While the Court has carved out narrow exceptions to the individualized suspicion requirement, these exceptions—such as for so-called "special needs" searches³⁰—all involve justifications unrelated to general crime-solving. The majority appears to hedge its bets on this front by starting with the observation that "the ultimate measure of the constitutionality" of a search "is 'reasonableness,'"³¹ and that individualized suspicion is not an "irreducible requirement" of the Fourth Amendment.³² But the Court cites only "special needs" and public-safety roadblock cases for these principles. It declines to justify Maryland's law on the alternative ground that, even if its primary purpose is investigative, it is legal because it is reasonable, given the profound state interest and minimal privacy intrusion involved. This is not surprising, given that two members of the *King* majority—Justices Kennedy and Breyer—were also in the *Edmond* majority.

But the Court may have had another reason for downplaying Maryland's crime-solving rationale. By mooring the law's constitutionality to its use as a routine booking procedure, the Court ensured that the state interests it relied upon

²⁶ *Id.* at 1973, 1977 (majority opinion).

²⁷ *Id.* at 1982 (Scalia, J. dissenting).

²⁸ 531 U.S. 32 (2000).

²⁹ *Id.* at 38. Justice Scalia joined most of the dissent in *Edmond*. See *id.* at 48 (Rehnquist, C.J., dissenting). He agreed with the dissenters that a public-safety-related roadblock is not rendered illegal because of the subjective hopes of the officials involved or the presence of a drug-sniffing dog, which is not a "search" for Fourth Amendment purposes. See *id.* at 51–53. He declined to join the part of the dissent arguing that a "primary purpose" test, even if potentially appropriate in a search setting, is inappropriate in the less invasive automobile seizure setting. *Id.* at 53–56.

³⁰ See, e.g., *Skinner v. Railway Labor Executives' Ass'n*, 489 U.S. 602 (1989) (drug testing of railroad employees).

³¹ *King*, 133 S. Ct. at 1969 (quoting *Vernonia School Dist. 47J v. Acton*, 515 U.S. 646, 652 (1995)).

³² *Id.* (quoting *United States v. Martinez-Fuerte*, 428 U.S. 543, 560–61 (1976)).

in upholding the law flowed specifically from the collection of DNA from arrestees, rather than from the population as a whole. If the purpose of Maryland's DNA sampling regime is to thwart suspects' use of disguises at the time of arrest and ensure that recidivists are denied bail, then the justification for the law ends abruptly at arrestees.

If, however, the Court had acknowledged that the primary purpose of Maryland's law is to solve crimes, the line between arrestees and the general public would be blurred with respect to the state interests advanced. The more profiles in the database, the higher the likelihood of finding a match. If everyone in the country were in the database, we would presumably get a hit for most unsolved cases in which DNA is collected. One might argue that arrestees are more likely than the general population to have committed one of these unsolved crimes, but that logic is questionable. After all, convicted felons are already subject to DNA sampling in all fifty states and the federal system. The only contribution that arrestee laws, like Maryland's, make to the online rogues' gallery is to add those who have been arrested but *not* convicted—that is, those whose cases have been dismissed or have ended in acquittal. In doing so, such laws arguably—as the dissent puts it—“manage[] to burden uniquely the sole group for whom the Fourth Amendment's protections ought to be most jealously guarded: people who are innocent of the State's accusations.”³³ Moreover, the logic of including arrestees—if the purpose is simply to add more potential criminals to the database—is slippery. Why not also uphold a law that targets other sub-populations shown to have higher rates of offending, such as those with serious mental illnesses or those under age twenty-five? If the rejoinder is that these groups do not have a reduced expectation of privacy, one might also ask why an arrestee whose case will eventually be dismissed or end in acquittal should have a reduced expectation of privacy vis-à-vis the general population.

Even assuming the Court could plausibly maintain that the general population has a higher expectation of privacy in DNA than arrestees whose cases are dismissed, it would be hard-pressed to write a coherent opinion striking down a universal DNA database once it started from the premise that crime-solving is the primary goal and that the privacy intrusion is minimal. The interest in solving thousands more crimes, and in promoting the likely deterrent effect of such a complete database on the commission of crimes to begin with, would be profound. If one truly believes that the privacy interests in avoiding cheek swabbing or having one's forensic DNA profile searched are no more invasive than fingerprinting, then any selfish desire of a citizen to avoid such a minor indignity—to which millions of citizens are subject every day when applying for a driver's license or job—is clearly outweighed by the awesome crime-solving

³³ *Id.* at 1989 (Scalia, J., dissenting). Of course, the fact that one's case is dismissed, or that the state did not prove one's guilt beyond a reasonable doubt, does not equate to innocence. But it surely equates to a stronger presumption of innocence and a lower likelihood of recidivism compared to those convicted.

power of a national DNA database.

In turn, for reasons I discuss below, I suspect that some of the justices—and many Americans—might feel that the targeting of *their* DNA by the government would involve more than a minor indignity. In particular, I suspect many would be haunted by three possibilities: (1) being falsely accused of a crime through a coincidental or erroneous DNA “cold hit”; (2) losing one’s anonymity through the government’s bulk collection of biometric data capable of showing our movements and activities; and (3) having one’s sensitive genetic information—lurking in the DNA sample retained by the state after developing each forensic DNA profile—misused in the hands of government officials. While these concerns went unmentioned or were quickly dismissed by the *King* majority when the law at issue affected only arrestees, I would imagine they would take center stage in any discussion of the reasonableness of a national citizen database.

The first possibility, the chance of a coincidental or erroneous database match, is very real and would only increase as the database grows. A coincidental match between a full twenty-six-allele profile from a crime scene sample and a profile in the “known” database would, admittedly, be rare: even with a national database of 300 million people, the chance of someone in the database matching by coincidence would typically be very small—well under one in one thousand.³⁴ But many crime scene samples are degraded or of low quantity, resulting in only a partial profile, with fewer alleles to compare to the database of “knowns.” In such a case, the chance of getting numerous coincidental cold hits in a database search could be quite high, with scores or even hundreds of anticipated matches in a national database.³⁵ An erroneous match, on the other hand, could be the result of deliberate planting of a person’s DNA at the crime scene or in a place one would reasonably expect only the perpetrator to leave DNA;³⁶ interpretive error;³⁷ or contamination.³⁸ Indeed, last November, San Jose police were forced to admit that

³⁴ The “random match probability” (RMP) for most 26-allele profiles, meaning the chance that a person randomly selected from the population would match the profile by coincidence, is typically very small—one in a trillion or less. See Andrea L. Roth, *Safety in Numbers? Deciding When DNA Alone Is Enough To Convict*, 85 N.Y.U. L. REV. 1130, 1136–37, 1136 n.25 (2010). The chance of finding a match in a database of 300 million, assuming a profile with an RMP of 1 in a trillion, would be about 3 in 10,000.

³⁵ A cold hit in the recent California case *People v. Puckett*, for example, involved a partial profile from a degraded sample and an RMP of 1 in 1 million. See *id.* at 1131. In a database of 300 million people, one would expect to find at least 300 profiles that match the crime scene profile purely by chance.

³⁶ See Jay D. Aronson & Simon A. Cole, *Science and the Death Penalty: DNA, Innocence, and the Debate over Capital Punishment in the United States*, 34 LAW & SOC. INQUIRY 603, 626 (2009) (describing the real possibility of malicious planting of DNA evidence).

³⁷ See Erin Murphy, *The Art in the Science of DNA: A Layperson’s Guide to the Subjectivity Inherent in Forensic DNA Typing*, 58 EMORY L. J. 489, 503–08 (2008) (describing analyst subjectivity and various sources of interpretive error).

³⁸ See, e.g., Erin Murphy, *The New Forensics: Criminal Justice, False Certainty, and the Second Generation of Scientific Evidence*, 95 CALIF. L. REV. 721, 755 n.151 (2007) (noting the 1969

an alleged “cold hit” to convicted felon Lukis Anderson from the unsolved burglary and murder of millionaire investor Raveesh Kumra was the result of inadvertent DNA “transfer.” Anderson was in a hospital suffering from severe intoxication at the time of the offense; apparently, the paramedics who rushed him to the hospital were the same ones who responded to the Kumra murder scene a few hours later, presumably carrying Anderson’s DNA on their hands and transferring it to the scene.³⁹

Given the outcry over recent disclosures of the NSA’s program of bulk collection of Americans’ phone and Internet records, not to mention the outcry over red light cameras, it is not difficult to imagine that many might be concerned with the blow to anonymity resulting from a national DNA database. While DNA profiles are merely a string of numbers from non-coding DNA, they can be used to identify us, where we’ve been, and with whom we’ve been, in the same way (though even more so, given how easy it is to shed DNA) that our fingerprints or phone records or license plates can. Though the Court has never disapproved of forcible fingerprinting on privacy grounds, the *King* dissenters suggest that the law’s permissive stance toward fingerprinting is a function of oversight and momentum rather than logic. Justice Scalia gives a nod to Judge Alex Kozinski’s dissent in *United States v. Kincaide*,⁴⁰ in which the Ninth Circuit upheld compelled DNA sampling of those on federal supervised release. Kozinski notes that the “great expansion in fingerprinting,” culminating in the FBI’s database of nearly 50 million people, “came before the modern era of Fourth Amendment jurisprudence.”⁴¹ He “mourn[s] the loss of anonymity” in a “world where the government can keep track of everyone’s whereabouts,” and warns that allowing small intrusions on privacy in the name of security will establish a “new baseline” justifying future expansions.⁴² While the *King* majority embraces “routine fingerprinting” as clearly legal, one wonders how its stance would change if the fingerprinting analogy were used to justify a database that included not only arrestees, a disproportionate number of whom are poor, undereducated, and minority, but also—as Kozinski put it—“the people we really need to worry about.”⁴³

The third possibility that might concern Americans about a national citizen

Michigan murder case where a DNA “cold hit” implicated a convicted murderer who would have been four years old at the time of the crime, and where the cold hit was surely due to contamination at time samples were in same laboratory); William C. Thompson, *Tarnish on the “Gold Standard”*: *Understanding Recent Problems in Forensic DNA Testing*, 30 THE CHAMPION 10, 10, 13 (2006) (discussing two “false ‘cold hit[s]’” due to contamination).

³⁹ See Osagie K. Obasogie, *High-Tech, High-Risk Forensics*, N.Y. TIMES, July 25, 2013, at A27.

⁴⁰ 379 F.3d 813 (9th Cir. 2004).

⁴¹ *Id.* at 874 (Kozinski, J., dissenting).

⁴² *Id.* at 873.

⁴³ *Id.* at 872 (“namely you and me”).

database is the chance for government officials to surpass their authority and use our DNA samples, containing our full genome and a “treasure map”⁴⁴ of sensitive genetic information, for nefarious purposes. The *King* majority expressly disavows this concern, concluding that the law’s prohibition on probing DNA for information “that does not relate to the identification of” those sampled is a sufficient safeguard against unauthorized use.⁴⁵ But I wonder whether most Americans would feel sufficiently protected by such statutory prohibitions—the violation of which is punishable in Maryland by a mere misdemeanor—if the database reached everyone. One might recall the controversy over proposed background checks for certain firearm purchases, which some opponents claimed was a “thinly veiled national gun registration scheme,”⁴⁶ even though the bill required that the information be destroyed within twenty-four hours.⁴⁷ Or the speculation of many that the NSA’s big data program, notwithstanding the government’s “benign” current intentions, will lead to abuse and mission creep.⁴⁸ Reporters have speculated in the wake of *King* that DNA samples could be used not only to combat crime but “also, in theory . . . to track down our relatives, scan us for susceptibility to disease, or monitor our movements.”⁴⁹ Even the former prosecutor who now heads the Global Alliance for Rapid DNA Testing, which submitted an *amicus* brief in favor of Maryland, acknowledged that “[t]here is an argument to be made that . . . the government could go back and do other things with [the samples] that are not authorized by the law.”⁵⁰

While these privacy concerns apply equally to arrestees’ DNA, the *King* majority would have jeopardized, or at least complicated, its approval of Maryland’s regime by giving such concerns a richer treatment. Nothing about the truncated privacy discussion in *King* is particularly surprising. Americans want security, and we are willing to give up some privacy to get it, especially the privacy of others. As it so often turns out, the “others” are marginalized

⁴⁴ *King v. State*, 42 A.3d 549, 577 (Md. 2012).

⁴⁵ *Maryland v. King*, 133 S. Ct. 1958, 1980 (2013).

⁴⁶ See Glenn Kessler, *A McConnell Aide’s Over-the-Top Claim About a ‘National Gun Registration Scheme’*, WASH. POST, Jan. 30, 2013, available at http://www.washingtonpost.com/blogs/fact-checker/post/a-mcconnell-aides-over-the-top-claim-about-a-national-gun-registration-scheme/2013/01/29/bb358520-6a84-11e2-95b3-272d604a10a3_blog.html.

⁴⁷ H.R. CONF. REP. NO. 112-284, at 269 (2012), available at http://thomas.loc.gov/cgi-bin/cpquery/?&sid=cp112TVz23&r_n=hr284.112&dbname=cp112&&sel=TOC_783059& (“Section 511 permanently prohibits funds from being used to implement a Federal user fee for background checks conducted pursuant to the Brady Handgun Control Act of 1993, and to implement a background check system that does not require and result in the destruction of certain information within 24 hours.”).

⁴⁸ See, e.g., James B. Rule, *The Price of the Panopticon*, N.Y. TIMES, June 11, 2013, at A27.

⁴⁹ Jill Lawless, *Spread of DNA Databases Sparks Ethical Concerns*, ASSOCIATED PRESS (July 12, 2013), <http://news.yahoo.com/spread-dna-databases-sparks-ethical-concerns-072535306.html>.

⁵⁰ *Id.*

communities who have become inured to police contact. Thus, for example, the public's outrage over the NSA disclosures seems quite vehement relative to its concern over the profiling, intrusive interviewing, and use of informants targeting the American Muslim community since 9/11.⁵¹ A national DNA registry used for crime-solving purposes, on the other hand, places the privileged and poor on equal footing in terms of privacy and the risk of a false match from error or malfeasance.

II. THE DISSENT'S PARADE OF HORRIBLES

The dissent's primary argument is that Maryland's law is a regime of suspicionless searches for crime-solving purposes, and that such searches are categorically illegal. As explained above, the dissent's description of the purpose of Maryland's regime is unmistakably correct. But even had the Court acknowledged the law's true purpose, it still could have offered a coherent argument for allowing DNA sampling of arrestees as a crime-solving tool.

While *Edmond* ostensibly prohibits suspicionless searches conducted primarily for crime-solving purposes, no court has interpreted the case as prohibiting the comparison of arrestees' fingerprints to identification data from unsolved crimes. The dissenters try to distinguish fingerprinting by arguing that its investigative use is secondary. But when both investigative and administrative uses are overlapping and ever-present, it seems arbitrary to have the legality of the investigative use turn on which is given top billing. The purpose of booking procedures, when they yield identifying information about a suspect, will always be at least incidentally investigative as well as identification-focused. This characteristic arguably distinguishes DNA identification of arrestees from the drug-sniffing dog searches condemned in *Edmond*, which were a gratuitous add-on to, and not part and parcel of, license and registration checks. The dissenters in *Edmond*, including Justice Scalia himself, insisted that the subjective crime-solving motivations of state officials in conducting what would otherwise be a legal search are irrelevant.⁵² It is not clear why *King* should be different; would the *King* dissenters have joined the majority if Maryland's legislature had been more artful in writing its statute and more diligent in promptly developing King's profile? If not, is forensic DNA typing perversely cursed by the fact that its

⁵¹ See, e.g., Mohamad Tabbaa, *Suddenly, White People Care About Privacy Incursions*, SALON.COM, June 13, 2013, http://www.salon.com/2013/06/13/suddenly_white_people_care_about_privacy_incursions/; see also Kevin P. Donovan & Carly Nyst, *Privacy for the Other 5 Billion*, SLATE.COM, May 17, 2013, http://www.slate.com/articles/technology/future_tense/2013/05/aadhaar_and_other_developing_world_biometric_s_programs_must_protect_users.html (noting that Western donors have supported imposing vast biometric identification programs on India's 1.2 billion residents, even while such systems might be "outright rejected" in America); Sharon L. Davies, *Profiling Terror*, 1 OHIO ST. CRIM. L.J. 45, 51 (2003) (noting "broad-based support" in American public for racial profiling after September 11).

⁵² See *City of Indianapolis v. Edmond*, 531 U.S. 32, 48–53 (2000) (Rehnquist, C.J., dissenting). Indeed, if subjective motivations of those conducting the search were relevant to the search's legality, many searches incident to arrest and inventory searches would surely be suspect.

incidental ability to solve crimes is so much greater than that of fingerprinting? Neither position seems satisfying.

The Court could also have at least credibly, if radically, embraced the position that the Fourth Amendment takes no issue with warrantless searches so long as they are “reasonable.” Two outspoken adherents to this view, Akhil Reed Amar and Neal Katyal, have criticized the *King* dissent as “deeply flawed” and argued that nothing in the Amendment’s text distinguishes between intrusions for crime-solving purposes and those to preserve public safety.⁵³ They also argued, as others have maintained, that the Amendment was never intended to impose a warrant requirement; on the contrary, the Framers were wary of general warrants precisely because they were issued by a judge *ex parte*, gave officials the right to search, and limited the rights of citizens to complain.⁵⁴ To be sure, scholars and jurists have offered compelling arguments against this interpretation, such as that neutral magistrates, rather than police engaged in the “often competitive enterprise of ferreting out crime,” should be deciding whether a search is supported by probable cause,⁵⁵ and that “judgments couched in terms of ‘reasonableness’ slide very easily into the familiar constitutional rubric of ‘rational basis’ review—a level of scrutiny that has proven to be effectively no scrutiny at all.”⁵⁶ At the risk of sounding circular, one might cite *King* itself for this last proposition. In any event, the Court had coherent arguments at its disposal had it wished to uphold the search as a reasonable, suspicionless investigative search.

In turn, the majority could have coherently reasoned—even if it had more completely discussed the true privacy interests at stake—that Maryland’s law is reasonable. If it had, however, its logic—as the dissent points out—could not have coherently drawn the line of legality at arrestees for serious offenses.

On the state interest side, the benefit of adding *only* arrestees to Maryland’s database, above and beyond the convicted felons who are already there, is modest at most. While DNA is generally a more reliable identifier than fingerprinting, there is no identification confirmation crisis in state courts; as Scalia put it, “Does the Court really believe that Maryland did not know whom it was arraigning?”⁵⁷ Moreover, any identification benefit is offset by the vast cost of developing the profiles, and the opportunity cost in developing arrestee profiles at the expense of

⁵³ Akhil Reed Amar & Neal K. Katyal, *Why the Court Was Right to Allow Cheek Swabs*, N.Y. TIMES, June 3, 2013, available at http://www.nytimes.com/2013/06/04/opinion/why-the-court-was-right-to-allow-cheek-swabs.html?pagewanted=all&_r=0.

⁵⁴ *Id.*; see also Akhil Reed Amar, *Fourth Amendment First Principles*, 107 HARV. L. REV. 757 (1994).

⁵⁵ *Johnson v. United States*, 333 U.S. 10, 13–14 (1948); see also Thomas Y. Davies, *Recovering the Original Fourth Amendment*, 98 MICH. L. REV. 547 (1999) (arguing that the Framers did intend for warrants to curb police power).

⁵⁶ Carol S. Steiker, *Second Thoughts About First Principles*, 107 HARV. L. REV. 820, 855 (1994).

⁵⁷ *Maryland v. King*, 133 S. Ct. 1958, 1983 (Scalia, J., dissenting).

reducing the backlog in developing *crime scene* samples.⁵⁸ And while DNA could—by way of quickly linking arrestees to unrelated, unsolved crimes—provide more criminal history information than fingerprinting at the time of booking and bail decisions, Maryland’s law is neither written nor operationalized to deploy DNA in this way. Perhaps a future statute would be, though. Similarly, while the crime-solving benefits of DNA databases are profound and would be central to any honest discussion of their legality, the incremental benefit of adding arrestees to a database that already includes convicts is not well studied.⁵⁹ Finally, the *King* majority’s reliance on DNA’s power to incidentally exonerate the wrongfully accused is questionable given how unwilling courts have been to allow defendants access to these databases when their cases involve biological evidence of which they are not the source.⁶⁰ In any event, these state interests do not end with arrestees; the crime-solving power of a database that includes arrestees is dwarfed by the crime-solving power of a database that includes the entire population.⁶¹

On the privacy side, the Court would have to consider, as discussed above, the potential to be falsely accused through a coincidental or erroneous match, the loss of anonymity in having one’s DNA profile listed in a government-controlled registry, and the possibility of unauthorized use of full genomes. If these additional privacy interests have weight, then they have weight for everyone, including arrestees, and potentially outweigh the modest incremental benefit of adding arrestees to the databases. If they have little weight, then they have little weight for everyone, and a universal database would surely pass muster under a balancing test.

The specter of rogue officials using arrestees’ DNA in extralegal ways would also be a part of any meaningful privacy analysis. Cases like *Whalen v. Roe*,⁶² on which the Court relied, were written before—or at the cusp of—the age of “big data.” Perhaps we have now reached a point where our “technology is

⁵⁸ See, e.g., Brief of 14 Scholars of Forensic Evidence as Amici Curiae Supporting Respondent at 18–20, *Maryland v. King*, 133 S. Ct. 1 (2012) (No. 12-207) (discussing this zero-sum game).

⁵⁹ See JULIE SAMUELS ET AL., URBAN INSTITUTE, COLLECTING DNA AT ARREST: POLICIES, PRACTICES, AND IMPLICATIONS 78–80 (May 2013), available at <http://www.urban.org/publications/412831.html> (noting that arrestee laws do increase number of hits, but law enforcement value is difficult to ascertain).

⁶⁰ See, e.g., Andrea L. Roth & Edward J. Ungvarsky, *Data Sharing in Forensic Science: Consequences for the Legal System*, 2009 Proceedings of the Joint Statistical Meeting, AM. STAT. ASSOC., available at <http://www.wisspd.org/htm/ATPracGuides/Training/ProgMaterials/Conf2011/CDNAE/02.pdf>.

⁶¹ Even the identification-enhancing benefits of DNA do not stop with arrestees. California’s 22 million drivers must submit to fingerprinting to get their licenses, a requirement upheld by California courts as an effective means of combating fraud. See *Perkey v. Dep’t. of Motor Vehicles*, 721 P.2d 50 (Cal. 1986).

⁶² 429 U.S. 589 (1977) (allowing state to keep computerized records of the names and addresses of everyone prescribed a certain class of drugs).

totalitarian,” and where “the gleanings of the surveillance state” can more easily “be used by the mischievous, the malicious and the ignorant in ways the creators of the system did not intend.”⁶³ Even beyond deliberate violations of law, one could imagine overzealous government scientists interpreting a law like that in *King*, which authorizes use of DNA for “research” purposes, to allow viewing of vast numbers of anonymized genomes to research various ethnic groups’ propensity for certain behaviors or pathologies. Just ask those involved in the Tuskegee Syphilis Trials, or the Havasupai Indians, who allowed Arizona State University to collect their DNA for clues in solving their diabetes epidemic, only to learn that the school had also conducted, and published, research showing their rate of inbreeding and propensity for mental illness.⁶⁴ To assess the significance of disclosing sensitive personal and group information to state officials without considering the likelihood and impact of abuse or mission creep seems unrealistic in the modern age.

An additional privacy interest at stake with respect to several states’ arrestee laws is the potential for an arrestee’s family and familial relationships to be inspected by police, even if the arrestee himself is innocent. Various states, including California and Virginia, allow police to search DNA databases for partial as well as full profile matches; in the event of a partial match, police scrutinize the matching person’s relatives to determine if one of them might be a full match.⁶⁵ Maryland’s law expressly forbids familial searching,⁶⁶ but the lack of such a prohibition in another state should be part of any determination of the legality of that state’s DNA sampling regime, even after *King*.

Of course, if one’s legal ability to keep one’s DNA private continues to rest on whether one has a legitimate expectation of privacy in DNA, rather than on whether one desires to keep one’s DNA private,⁶⁷ then these privacy interests may become increasingly moot. Given the rate at which we all shed DNA everywhere we go, and the fact that several police departments even now are collecting abandoned DNA and placing it in forensic databases, a reasonable person’s assessment of whether his DNA is accessible to government officials seems already quite grim.⁶⁸ As a DNA analyst quips on the Simpsons, “If you’ve ever

⁶³ Peggy Noonan, *Privacy Isn’t All We’re Losing: The Surveillance State Threatens Americans’ Love of Country*, WALL ST. J., June 13, 2013, available at <http://online.wsj.com/article/SB10001424127887324188604578543721259199626.html>.

⁶⁴ See Amy Harmon, *Indian Tribe Wins Fight to Limit Research of Its DNA*, N.Y. TIMES, Apr. 21, 2010, at A1, available at http://www.nytimes.com/2010/04/22/us/22dna.html?pagewanted=all&_r=1&.

⁶⁵ See generally Erin Murphy, *Relative Doubt: Familial Searches of DNA Databases*, 109 MICH. L. REV. 291 (2010).

⁶⁶ See MD. PUB. SAF. CODE § 2-506(d) (West 2013).

⁶⁷ See, e.g., Erin Murphy, *Back to the Future: The Curious Case of United States v. Jones*, 10 OHIO ST. J. CRIM. L. 325–36 (2012) (noting Justice Sotomayor’s suggestion in *Jones* that constitutional privacy in data in the modern era should not be equated simply with the secrecy of that data).

⁶⁸ See generally Elizabeth E. Joh, *Reclaiming “Abandoned” DNA: The Fourth Amendment and Genetic Privacy*, 100 NW. U. L. REV. 857 (2006).

handled a penny, the government's got your DNA. Why do you think they keep them in circulation?"⁶⁹

Given these complex privacy and law enforcement interests, the Court would have faced a difficult decision with respect to the Maryland law's ultimate reasonableness. But one thing is clear: If the Court had upheld the law as reasonable, its logic could surely be used, for the reasons outlined above, to justify later expansions of the DNA dragnet to arrestees for minor offenses, and eventually to the general population.

III. THE VIRTUES OF A UNIVERSAL DATABASE AS AN ALTERNATIVE TO ARRESTEE LAWS

Even if Maryland's regime is legal under the Fourth Amendment, the question remains whether it is a sound policy choice. The same question will arise with respect to future proposed expansions of DNA databases to all arrestees or to the general public. In my view, states should either narrow their databases to include only those convicted of a crime, or expand their databases to include everyone. Drawing the line at arrestees is the worst choice of all.

The most compelling reason not to draw the line at arrestees who are never convicted, given the meager incremental benefits in doing so, is the profound racial inequity it creates in the makeup of the databases. The databases are already highly skewed along racial lines: by 2011, African-Americans made up 40% of the CODIS database⁷⁰ and, according to a Duke University study, CODIS could be used to identify "up to 17% of the country's entire African-American population."⁷¹ Adding arrestees makes matters worse. In California alone, approximately 30% of people arrested for a felony are never convicted.⁷² And while African-Americans make up only 6.6% of California's population, they comprise over 22% of those arrested for felonies.⁷³ These disparities result in part from implicit bias and explicit racism that create inequity in every stage of the criminal justice process.⁷⁴ The disparity is surely worse in jurisdictions that allow familial searching and unofficial, "offline" databases full of suspects who are stopped by police and who "volunteer" DNA in return for not being arrested.

A universal citizen database would solve the racial inequity and familial

⁶⁹ See *id.* at 857 (quoting *The Simpsons: Who Shot Mr. Burns? (Part 2)* (Fox television broadcast Sept. 17, 1995)).

⁷⁰ Jason Silverstein, *The Dark Side of DNA Evidence*, THE NATION, Mar. 27, 2013, <http://www.thenation.com/article/173554/dark-side-dna-evidence>.

⁷¹ *Id.*

⁷² See Michael T. Risher, *Racial Disparities in Databanking of DNA Profiles*, in RACE AND THE GENETIC REVOLUTION: SCIENCE, MYTH, AND CULTURE 50 (2011).

⁷³ *Id.*

⁷⁴ See generally *id.* at 52–54.

searching issues,⁷⁵ remove the incentive for individual departments to develop unregulated offline databases or go after abandoned DNA, and would promise impressive clearance rates for unsolved rapes and homicides involving DNA. It would arguably make the crime-solving enterprise more objective, a positive development for those used to being made a “usual suspect” because of the color of their skin. As one scholar put it in defending use of drug-sniffing dogs, “[t]he costs of error from suspicion-driven probable cause will always fall on the subpopulation that seems suspicious. The costs from the false alerts of narcotics dogs, in contrast, are refreshingly democratic.”⁷⁶ So it is with false DNA matches. A universal database also would ensure a richer privacy debate, a more meaningful penalty for misuse, a better public understanding of the chance of a false match, and a narrowing of the definition of “identity” to exclude sensitive information such as mental disorders. Given that *King* has now squarely placed us on the road to racially skewed arrestee databases sweeping in thousands of innocent people, the best response to *King*—even from privacy advocates—seems to be to argue for inclusion of everyone.

IV. CONCLUSION

The *King* majority could have written a coherent opinion upholding Maryland’s arrestee law, but it did not. If the Court had been more straightforward, it would have either struck down the statute as a suspicionless investigative search or upheld it as a profound crime-solving tool that is worth the blow to anonymity and possibility of abuse. If it had done the latter, it would have inevitably opened the door to future expansions of DNA databases to include all of us. While the universal database option merits public debate over its potentially profound consequences, it is surely a better alternative to the minimally valuable and racially skewed databases that might otherwise be *King*’s legacy.

⁷⁵ See Murphy, *supra* note 65, at 329.

⁷⁶ Jane Bambauer, *Defending the Dog*, 92 OR. L. REV. (forthcoming 2013).

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