"Justice for All," Or:

How I Learned To Stop Worrying and Love the DNA Database

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I. INTRODUCTION

"We want to make certain that every American can bank on the infallibility of the system, and to ensure that what keeps us safe will also keep us free."[1] This was how the fictional government in the film *Minority Report* justified surveillance technology used to capture criminals even before they committed their crimes. While courts do not "base decisions on dramatic Hollywood fantasies,"[2] this statement nonetheless underscores the anxiety many Americans feel about trading personal freedoms for greater police protection. All fiction aside, this liberty-for-security compromise is particularly salient when it comes to DNA identification. In 2000, Congress enacted legislation to encourage the nationwide development and implementation of advanced DNA analysis and database technology, spurred on by the considerable crime-solving promise that such tools hold. Since then, several recent cases have expressed enthusiastic judicial support, declaring that the compulsory collection of DNA from all probationers and felons is constitutional.[3]

Yet is it true in this case that what keeps us safe also keeps us free? Can we actually ensure that this technology is infallible? The tide of judicial and legislative enthusiasm presses forward relentlessly, over the lack of empirical evidence to show that DNA databases are actually effective and over the protests of judges and academics warning that unrestrained DNA database laws threaten privacy and freedom in unprecedented ways. What can be done now?

The most serious problems for individual liberties arise in the database's susceptibility to subsequent abuse, neglect, or error. This note examines the legal discussion on compulsory DNA extraction from criminals and how judicial tests direct attention away from the potentially harmful consequences of unregulated DNA profile use. In order to avoid the bleak Orwellian predictions of database critics, policymakers should recalibrate the scales of the "totality of circumstances" balance, examine why database limits are needed, and explore what limits are feasible under the standing legal scheme.

II. LEGAL BACKGROUND

[1] MINORITY REPORT (Twentieth-Century Fox & DreamWorks SKG 2002).

[2] United States v. Kincade, 379 F.3d 813, 838 (9th Cir. 2004) (plurality opinion).

[3] *See e.g.* United States v. Kriesel, 508 F.3d 941, 947 (9th Cir. 2007); United States v. Weikert, 504 F.3d 1 (1st Cir. 2007); United States v. Conley, 453 F.3d 674 (6th Cir. 2006).

A. Statutory Scheme

The DNA Analysis Backlog Elimination Act ("DNA Act") of 2000 authorized the federal collection of DNA samples from individuals convicted of "qualifying Federal offenses" who are in custody or on probation, parole, or supervised release.[4] If such individuals do not cooperate, they are guilty of a class A misdemeanor, and DNA collection is a condition of probation, parole, or supervised release.[5] Originally, "qualifying Federal offenses" were limited to certain violent crimes and attempts or conspiracies to commit them.[6] The Justice for All Act of 2004 ("Justice for All") ushered in a sweeping expansion of the DNA Act by defining "qualifying Federal offenses" as *any* felony—including nonviolent and violent crimes alike.[7]

Once collected, DNA samples are sent to the FBI for analysis and inclusion in the Combined DNA Index System ("CODIS"), a central database of profiles from federal, state, and territorial DNA collections; crime scenes; unidentified remains; and samples voluntarily provided by relatives of missing persons.[8] To protect privacy, the DNA Act imposed a criminal penalty for anybody who knowingly disclosed a sample to unauthorized persons or obtained samples or results without authorization.[9] Justice for All amended the penalty by also prohibiting the unauthorized *use* of the sample or result, increasing the fine limit, and allowing for imprisonment for up to one year.[10] Notably, neither statute provided for the removal of DNA records from CODIS or destruction of biological samples.

B. United States v. Kriesel *and the Fourth Amendment*

Like other cases addressing the constitutionality of DNA database statutes, *United States v. Kriesel*'s analysis of Justice for All[11] devotes little attention to the potential costs of DNA databases. Kriesel, convicted of a nonviolent crime, was sentenced to three years of supervised release. He refused to submit to DNA testing because he was "opposed in principle to the government's collection and

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[4] DNA Analysis Backlog Elimination Act, 42 U.S.C. §14135a (2000) [hereinafter *DNA Act*].

[5] *Id.* at §14135c.

[6] *Id.* at §14135a (listing homicide, rape or sexual abuse, slavery, kidnapping, arson, robbery, or burglary, among others).

[7] *Justice for All Act of 2004*, 42 U.S.C. §14135a (2004).

[8] United States v. Kincade, 379 F.3d 813, 819 (9th Cir. 2004).

[9] *DNA Act*, 42 U.S.C. §14135a (2000).

[10] *Justice for All Act of 2004*, 42 U.S.C. §14135e (2004).

[11] United States v. Kriesel, 508 F.3d 941 (9th Cir. 2007).

permanent storage of his DNA."[12] He argued it was an unreasonable search and seizure, challenging Justice for All under the Fourth Amendment.[13]

The appeals court upheld Justice for All as constitutional and valid under a totality of the circumstances test. Under this test, courts determine whether a search is reasonable by balancing "the degree to which it intrudes upon an individual's privacy" against "the degree to which it is needed for the promotion of legitimate governmental interests."[14]

Unfortunately, *Kriesel*'s "totality of circumstances" test hardly looks at the totality at all. The court determines that Kriesel's privacy interest is minimal, since he has a diminished privacy expectation as a conditional releasee and because blood tests (used to extract the DNA sample) are an insignificant intrusion of one's bodily integrity.[15] Surprisingly, the court omits to consider Kriesel's *informational* privacy interest in his DNA *after* his period of supervised release has ended. Justice for All does not require that DNA samples or profiles be destroyed or returned when the supervised release period ends.[16] Rather, the statute permits warrantless and repeated searches of a probationer's DNA "whenever the government has some minimal investigative interest."[17] The majority sidesteps the issue, reasoning that any concerns that DNA samples might be misused in the future "are mitigated" by the Act's criminal penalty for abuse.[18] There is no analysis of whether the statute reasonably guards Kriesel's privacy interests, which should be included under any analysis of the statute's intrusion upon such interests. The bare fact that there *are* some protections does not necessarily mean they are adequate.

Furthermore, the "diminished privacy expectations" reasoning used to explain away probable cause in this context is potentially dangerous and unpersuasive, if merely for its vagueness. How diminished is the ex-felon's privacy, and for how long? Is it merely because felons have experienced "more severe intrusions of their corporeal privacy" while in prison,[19] or is it because they have broken their

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[12] *Id.* at 944.

[13] *Id.* at 945.

[14] Samson v. California, 126 S. Ct. 2193, 2197 (2006) (quoting United States v. Knights, 534 U.S. 112, 118-119 (2001)) (using the totality of circumstances test to determine whether a warrantless search of parolee's person by law enforcement officer was reasonable under the Fourth Amendment).

[15] *Kriesel*, 508 F.3d at 947-48.

[16] *Id.* at 952 (Fletcher, J., dissenting) (noting that burden of initiating removal is on the profiled individual).

[17] *Id.* at 956 (Fletcher, J., dissenting).

[18] *Id.* at 948 (majority opinion).

[19] United States v. Kincade, 379 F.3d 813, 837 (9th Cir. 2004).

contract with society[20] and thus do not deserve the same level of constitutional protection as law-abiding citizens? Many individuals could also be said to have diminished expectations of privacy,[21] but we may not want them in CODIS. Perhaps the court should have instead relied upon the "broken social contract" argument to better prevent the database from eventually expanding to the entire population.

On the other side of the balance, the majority cites three legitimate government interests to justify the compulsory extraction of DNA samples. First, extraction would establish "a means of identification . . . to link conditional releasees to crimes committed while they are at large." Second, DNA profiling's deterrent effect will reduce recidivism. Finally, DNA sampling "contributes to the solution of past crimes."[22]

The problem with *Kriesel*'s application of this prong of the test is that the court focuses exclusively on whether there *are* "legitimate governmental interests," neglecting to establish "the degree to which [compulsory DNA sampling] is needed for the promotion of"[23] these interests. The court admits that "fingerprint evidence might often be sufficient to identify a past offender,"[24] without explaining why DNA sampling is necessary or justified if less intrusive alternatives exist. As for the deterrence interest, the opinion only demonstrates that there *is* a recidivism problem,[25] not that DNA databases will solve or even ameliorate such problems. Lastly, there is no proffered evidence to support the court's conclusion that DNA actually aids the victims of past crimes.[26] There is no explicit rationale for why the solution of past crimes that may or may not have been committed by the given criminal outweighs the *future* continuous and permanent privacy burden placed upon that individual, even in the absence of suspicion, under the current statutory scheme.[27] Indeed, the dissent scoffs, "the argument that a 'significant' government objective is sufficient even if the statute under consideration does not actually promote that objective is sophistry–and is shockingly wrong."[28]

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[20] *Id.* at 835.

[21] *Id.* at 864 (Reinhardt, J., dissenting) (listing public school students, drivers and passengers of vehicles, and arrestees as "but a few examples").

[22] United States v. Kriesel, 508 F.3d 941, 949 (9th Cir. 2007) (quoting *Kincade*, 379 F.3d at 839).

[23] Samson v. California, 126 S. Ct. 2193, 2197 (2006).

[24] *Kriesel*, 508 F.3d at 949.

[25] *Id.*

[26] *Id.* at 958 (Fletcher, J., dissenting).

[27] *Id.* at 952 (Fletcher, J., dissenting) (noting that burden of initiating removal is on the profiled individual).

[28] *Id.* at 955 (Fletcher, J., dissenting).

To be fair, *Kriesel* is merely the latest in a string of opinions relying on similarly myopic logic to justify suspicionless searches of probationers and felons.[29] The overarching problem with most courts' analysis of DNA databases and the Fourth Amendment is not that such databases should be deemed unconstitutional. The problem is that courts may complicate the issue and beat around the bush. The DNA Act was "not enacted to meet the supervisory needs of the probation system," nor "to help rehabilitate convicted offenders," nor to "deter future criminal activity."[30] Justice for All does not purport to accomplish any of these goals, either. Rather, its mission is to protect the rights of crime victims, to "ensure the optimal use of DNA evidence to solve crimes and assist victims," and to "exonerate the innocent."[31] As such, the court's role in *Kriesel* was not to come up with legitimate government interests that Justice for All *could* serve, but rather to examine whether DNA databases would indeed serve the Act's explicit interests. Unfortunately, *Kriesel* wholly fails to acknowledge that the unbridled use of DNA samples may mutate into the very sort of arbitrary[32] search that the Fourth Amendment protects against.

III. WHAT TO WORRY ABOUT: ISSUES *KRIESEL* DID NOT CONSIDER

A. Accuracy and the Need for Caution

According to the court in *United States v. Conley*, DNA databases promote "increased accuracy in the investigation and prosecution of criminal cases" and "will aid in solving crimes when they occur in the future."[33] The court also believed that Justice for All was valid because DNA samples would exculpate the wrongly imprisoned and protect innocent individuals from inclusion in suspect lists.[34]

Despite this glorious litany, DNA is not necessarily crime-solving magic, and it is difficult to see precisely how Justice for All can reasonably be said to advance such goals when "there is virtually no scientific, comprehensive, independent, peer-reviewed analysis quantifying the overall effectiveness of

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[29] *See Samson*, 126 S. Ct. at 2200; United States v. Kincade, 379 F.3d 813, 839 (9th Cir. 2004). *See also* United States v. Knights, 122 S. Ct. 587, 593 (2001).

[30] United States v. Kincade, 379 F.3d 813, 870 (9th Cir. 2004).

[31] H.R. REP. NO. 108-711, at 4-5 (2004).

[32] "Arbitrary" is defined as "not restrained or limited in the exercise of power: ruling by absolute authority." MERRIAM-WEBSTER'S COLLEGIATE DICTIONARY 59 (2002).

[33] United States v. Conley, 453 F.3d 674, 680 (6th Cir. 2006) (quoting United States v. Sczubelek, 402 F.3d 175, 185 (3d Cir. 2005).

[34] *Id.*

DNA databases in solving or preventing crimes."[35] In fact, the only existing measure of DNA database effectiveness are "cold hits" or "investigations aided" figures.[36] Yet these are weak measures, as these terms are not clearly defined and it is unclear how many of these actually result in convictions or how DNA identification compares to alternative forensic identification techniques.[37] Moreover, crime clearance rates have changed "very little" over the past decade, though the crime rate has dropped, and "clearance rates for crimes typically associated with the availability of perpetrator DNA, homicide and forcible rape, were actually lower in 2004 than in 1995."[38] This suggests that law enforcement has actually solved *fewer* reported crimes than when they began using DNA databases.[39]

In light of this scientific uncertainty, it is extremely important that courts and legislatures acknowledge that the risk of error still exists. For one thing, the mere fact that crime scene DNA matches an individual's profile does not mean that person is unquestionably guilty. False positives could occur if a profiled individual should innocently loiter in an area that later turns out to be the scene of a crime that she or he did not commit. Planting DNA could be as easy as taking hair off one's comb, retrieving a discarded bandage, or picking up a cigarette butt carelessly flicked aside (with tweezers, of course), then placing such biological red herrings near the crime scene to lead police off the true criminal's DNA trail.[40]

DNA accuracy can also be jeopardized by bias and human error. Exculpatory DNA testing may fail to free an innocent individual if "the prosecution and courts . . . still believe that the innocent party committed the offense with an unidentified accomplice who left the DNA sample."[41] Moreover, there has been "a series of scandals throughout the country in which DNA evidence has been negligently (and even worse, intentionally) misidentified" by forensic teams charged with the task.[42] DNA contamination, from improper sample collection or storage, that results in inaccurate profiles or makes it impossible to

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[35] Mark A. Rothstein & Meghan K. Talbott, *The Expanding Use of DNA in Law Enforcement: What Role for Privacy?*, 34 J.L. MED. & ETHICS 154 (2006). *See* Paul M. Monteleoni, *DNA Databases, Universality, and the Fourth Amendment,* 82 N.Y.U. L. REV. 247, 253 n.28 (2007) (noting that it is hard to know what benefits DNA databases provide to society because empirical evidence on their usefulness is lacking).

[36] Rothstein & Talbott, *supra* note 35, at 154.

[37] *Id.*

[38] *Id.* at 154-55.

[39] *Id.* at 155.

[40] Planting fingerprints would be much more difficult (and gruesome).

[41] Monteleoni, *supra* note 35, at 253.

[42] Rothstein & Talbott, *supra* note 35, at 155.

generate a complete profile also poses a threat to justice.[43] If the sample's integrity is compromised, the resulting digital profile "may exculpate the guilty, fail to link unknown serial offenders, and implicate the innocent."[44] Thus, DNA evidence could still wrongly incriminate the innocent if viewed through a skewed lens and used without due regard to its shortcomings.

B. Fairness Implications

DNA databases might give law enforcement an evidentiary advantage, but they may also give defendants an unfair *disadvantage* in court. DNA technology and its processes are not readily understood and scrutinized by the average citizen, and will likely be less so as science evolves to gleam greater amounts of genetic information from fewer cells. How is a typical defendant to cast doubt on such a scientific process if DNA analysis is viewed as infallible? How can one begin to protect against bias or abuse of power in such situations? While it is generally not hard to link objects or individuals to a crime scene, as they can be photographed where they were found or described by witnesses, it is infinitely more difficult to verify that particular genetic *cells* were found where officers or witnesses say they were found. Innocent defendants may find it impossible to debunk this sort of evidence, and juries composed of laypeople will be particularly vulnerable to expert statements on the accuracy of DNA sampling. The effect on the criminal judicial process will be felt all the more strongly among those with less education, exacerbating disparities in the criminal justice system.[45] Unless courts and legislatures adopt strong evidentiary standards to allow individuals to better scrutinize the methods of collection and analysis used in their conviction, DNA evidence should be wielded with a careful eye to such risks.

C. Pragmatic Concerns

A final reason to approach Justice for All with skepticism is that scarce resources could negatively affect the criminal justice system without protections against sample neglect. "[V]irtually every state reports a substantial backlog in the analysis of extant samples collected under current laws, including crime scene evidence."[46] States also have trouble entering profiles into databases.[47] So, while Justice for All allocates $151 million annually for DNA analysis and backlog elimination for the next five years,[48] it

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[43] Michelle Hibbert, *DNA Databanks: Law Enforcement's Greatest Surveillance Tool?*, 34 WAKE FOREST L. REV. 767, 798 (1999).

[44] *Id.*

[45] *See* United States v. Kincade, 379 F.3d 813, 848 (9th Cir. 2004).

[46] Rothstein & Talbott, *supra* note 35, at 154.

[47] Hibbert, *supra* note 43, at 794.

[48] H.R. REP. NO. 108-711, at 2 (2004).

also substantially increases the body of samples to be collected and analyzed by broadening the definition of "qualifying Federal offenses." Arguably, this takes one step forward and two steps back.

Essentially, DNA successes are not just going to fall like manna from the heavens. For DNA databases to be of value to the criminal justice system, they must be implemented and utilized with an eye to real-world constraints. Much of the allocated funds will largely be spent on the technology itself and the training required to operate it. Preserving biological samples to guarantee result accuracy is costly, too. While we do not yet have the confidence in the effectiveness of DNA identification or the resources to eliminate this monumental backlog, further unlimited expansion would be premature.

IV. LEARNING TO LOVE THE DATABASE . . . AGAIN: RECOMMENDATIONS

Nevertheless, DNA databases need not threaten constitutional rights to achieve their legitimate goals. Feasible safeguards can optimize database potential while minimizing constitutional costs. To guarantee database accuracy, more empirical studies must be conducted in order to balance judicial and legislative faith in the technique with a healthy measure of scientific skepticism. Regulations that increase scrutiny of the methods used in DNA sample collection, storage, and analysis could decrease the risk that profiles will be incorrect or incomplete. Stringent sanctions for grossly negligent handling by responsible agencies or individuals, in addition to existing punitive measures for unauthorized use or distribution of DNA, would give law enforcement units every incentive to enforce the utmost standards of accuracy among their own agents.

To protect evidentiary fairness, courts and legislatures should address what admissibility standards should apply to DNA evidence. Law enforcement should be required to keep detailed records of what sort of DNA evidence was found and where so that they can provide proof that the given sample was swabbed from a given area. Finally, courts may develop standard jury instructions on the ways DNA evidence may be inaccurate, in order to dispel lay notions of its scientific infallibility. In light of cost concerns related to DNA databases, Congress should resist the temptation to expand Justice for All, instead allowing labs ample time and resources to catch up on the existing backlog.

To better protect against the risk of abuse *and* decrease costs, biological samples should be destroyed after they have been analyzed and converted to a CODIS entry. Though the DNA markers that are "used for identification purposes do not carry . . . important medical data that [would] be subject to repeated searches,"[49] it is likely that new scientific developments may allow law enforcement to reveal more private information from DNA samples.[50] "[A]s long as the samples are stored . . . they could be

[49] United States v. Conley, 453 F.3d 674, 679 (6th Cir. 2006).

[50] *Kincade*, 379 F.3d at 850.

used by unauthorized third parties in ways that might lead to disclosure of confidential information."[51] DNA samples are permanently retained in most states unless the individual's conviction is overturned, the case is dismissed, or the individual is an arrestee and is never convicted.[52]

Thus, law enforcement officials could ameliorate many salient privacy concerns by conducting two CODIS analyses at the outset, storing them separately, and then destroying the sample.[53] Conducting multiple analyses could help account for possible errors due to the machine or to the sample. The remaining information in the CODIS entry "would consist merely of thirteen sets of numbers with no diagnostic, prognostic, or research significance,"[54] reducing one's DNA to little more than a complex fingerprint. The disclosure of one's genetic pattern of allele repetition is not likely to cause significant embarrassment or harassment. On the whole, immediate sample destruction "would go a long way in assuring the public that their DNA will not be used for purposes unrelated to law enforcement."[55] The cost of recollecting DNA samples as the need arises would also surely be less than the cost of storing samples indefinitely.[56]

Sample destruction would not seriously threaten any exculpatory use of the database, so long as crime scene evidence is not destroyed. The innocent suspect "can ask for a new test of her own DNA against the evidentiary sample, bypassing whatever erroneous information is stored in the database."[57] Crime scene evidence should be preserved, even if crime scene samples include the biological matter of convicted criminals, in order to allow officials to retest it later[58] to serve CODIS' exculpatory functions. Because crime scene matter is delicate and particular to the time and environment of the crime, it cannot be easily recollected, while offender DNA can.

If sample destruction is not adopted, legislatures should nevertheless provide for the removal of DNA samples and/or entries from the system. One alternative might be to tie one's time in CODIS to one's sentence served for their crime. Making inclusion in CODIS just another point on the punitive

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[51] Rothstein & Talbott, *supra* note 35, at 158.

[52] *Id.*

[53] Monteleoni, *supra* note 35, at 258 n.61.

[54] Rothstein & Talbott, *supra* note 35, at 159.

[55] *Id.*

[56] Monteleoni, *supra* note 35, at 258 n.61.

[57] *Id.* at 255 n.43.

[58] Rothstein & Talbott, *supra* note 35, at 159.

continuum[59] could reassert proportionality considerations into the DNA discussion. Integrating DNA sampling into the criminal justice sentencing system would also provide an additional safeguard against any expansions to include the entire population. The stigmatization of genetic supervision will still be there, but the reasonableness of DNA searches would be linked to the individual's own crime. This sustains the "well-established principle that . . . conditional releasees are not entitled to the full panoply of rights and protections possessed by the general public,"[60] without going so far as saying that all felons deserve to be deprived of this specific right (the right to be free from suspicion and to be presumed innocent) forever.

V. CONCLUDING APOLOGIA

Though DNA databases are not a forensic panacea, adequate legislative protections can ensure that they never become a forensic plague, either. "DNA databases have helped to solve numerous crimes, including heinous crimes that were unlikely to have been solved without them," and often help ease the emotional and psychological burdens experienced by crime victims.[61] DNA identification may identify suspects in situations where current modes of forensic identification, such as fingerprinting, may be impractical. As criminals evolve to become more sophisticated, escaping identification by other forensic methods, law enforcement technology must evolve to keep up. The increased ease of interstate movement also makes a national DNA database highly desirable; a federal scheme unifies local law enforcement units and makes the perpetrator's criminal record practically accessible from one's "bread-crumb trail of identifying DNA matter."[62] DNA identification may be the next necessary step in the fight against crime.

Moreover, CODIS can be used to *generate* evidence establishing probable cause and perhaps this is its most readily justifiable use. "[O]ne of the underlying concepts behind CODIS is to create a database of convicted offender profiles and use it to solve crimes for which there are *no suspects*."[63] CODIS can be used to create suspect lists or to link unsolved crimes through a common perpetrator.[64] In such cases, it would be impracticable for law enforcement to produce evidence of probable cause before

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[59] *See* United States v. Knights, 534 U.S. 112, 119 (2001).

[60] United States v. Kriesel, 508 F.3d 941, 947 (9th Cir. 2007) (quoting United States v. Kincade, 379 F.3d 813, 833 (9th Cir. 2004) (plurality opinion)).

[61] Rothstein & Talbott, *supra* note 35, at 161.

[62] United States v. Kincade, 379 F.3d 813, 873 (9th Cir. 2004) (Kozinski, J., dissenting).

[63] *Id.* at 856 (Reinhardt, J., dissenting) (quoting DNA Act House Report) (emphasis added).

[64] *Id.* at 819 (plurality opinion).

they could search the system because they would have no individual to search for in the first place–only unidentified biological material. The more samples in the system, the greater the likelihood that a match will result and help solve the case.[65] If DNA collection from criminals is not compulsory, this purpose is undermined because CODIS would not include a population of entries sizeable enough to perform this task sufficiently. In this way, Justice for All *is* necessary to serve a special need.

Yet such benefits do not necessarily justify the unbridled use of DNA databases,[66] and the current protections against misuse are largely inadequate. DNA databases can certainly supplement other forensic tools to bolster accuracy and efficiency, but any suggestion that they can *supplant* such tools at the moment is not supported by empirical evidence or adequate statutory privacy limits. To best guarantee that DNA identification systems can protect all citizens without unreasonably threatening their freedoms, courts and policymakers still have much more work to do.

[65] *Id.*

[66] Rothstein & Talbott, *supra* note 35, at 161.