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Comprehensive DNA Collection in Criminal Cases

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ABSTRACT

Over the past 20 years, the science of DNA has put thousands of perpetrators behind bars and exonerated the innocent. Without question, the advent of DNA databases has increased law enforcement's ability to solve crimes. Texas' Combined DNA Index System (CODIS) is no exception and while it has experienced much success, Texans would be better served with the inclusion of all arrestees. This expansion would solve more crimes, eliminate ambiguity in the collection and submission process, and utilize the technological tool to its full potential. Other countries and U.S. states that have implemented arrest based guidelines have experienced much success. While most people accept DNA databases as an acceptable form of crime control, many object to sweeping collection laws due to perceived civil rights violations, oppressive cost, and practicability concerns. However, after a critical analysis of these issues, the objective to expand CODIS to include all arrestees should remain the goal for all those concerned about the commission of crime in Texas and across the nation.

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INTRODUCTION

The creative manner in which people consistently break the law, especially in criminal cases, is matched only by the innovative means the law enforcement community has employed in the effort to identify, apprehend and punish the perpetrators. Prior to the nineteenth century, law enforcement relied primarily on essential but nevertheless rudimentary methods of investigation such as eyewitness accounts and witness interviews (Lyman, 2001). However, by the end of the nineteenth century the scientific community introduced the concept of individuality and identification through fingerprint collection and comparison (Gaensslen, 2009). For over one hundred years the science of fingerprints was considered by many as the single greatest development in the fight against crime. With the dawn of the Automated Fingerprint Identification System (AFIS) database, the ability to identify criminals through their fingerprints increased exponentially (Fisher, 2004). Currently, anyone arrested in Texas, is typically fingerprinted during the booking process. Those representative prints are then entered and stored into AFIS. When a crime is committed and latent or unidentified fingerprints are recovered, suitable latents can be submitted to AFIS and compared to all offender prints on file. This process occurs routinely in all fifty states and nationally through the Federal Bureau of Investigation's (FBI) Integrated Automated Fingerprint Identification System (IAFIS) (Gaensslen, 2009). Today, similarities can be drawn between the development and utilization of forensic fingerprint analysis and the implementation of forensic deoxyribonucleic acid (DNA) profiling, commonly referred to as DNA fingerprinting (Tracey & Morgan, 2000).

As with fingerprints, the collection, analysis, and comparison of DNA profiles in criminal cases has progressed in recent years to be a universally applied and legally admissible form of crime control. In fact, many believe DNA analysis to be the greatest form of forensic identification ever developed, surpassing even the reliability of fingerprint identification (Aronson, 2007). In fact, over the past ten years, DNA has become increasingly referred to as the “the new fingerprinting” and a “kind of truth machine” (Genge, 2002, p. 57; Lynch, McNally, & Jordan, 2008, xvii). The formation of legislatively mandated DNA databases such as the FBI’s National Combined DNA Index System (NDIS), in conjunction with Texas’ Combined DNA Index System (CODIS), have protracted the ability of law enforcement personnel in all 50 states to identify perpetrators and even link them to offenses perhaps to which they had not previously been recognized as suspects (“DNA forensics and the law,” 2007; FBI, 2009). While the United States and Texas have experienced much success with CODIS, primarily only the DNA profiles of convicted felons are entered into the offender database in Texas, and forwarded to National CODIS (NDIS) (Texas DPS, 2009; Linacre, 2003). In 2008, Texas CODIS was minimally supplemented with post indictment arrestees of some sexual offenses (National Conference, 2009). Due to the flaws in that design, CODIS is limited in its ability to assist law enforcement agencies with investigating and prosecuting criminal cases in which biological evidence is collected (Fisher, 2004).

The positive effect of Texas CODIS can be enhanced by modifying the requirements for the collection of DNA samples and increasing the number of offender profiles stored in the database. History has shown an increase in identifications as more profiles are processed. In 2007, the Texas Department of Public Safety

celebrated their 1,000th CODIS match (“DNA database cracks 1,000th case,” 2007). Five years later, and after analyzing approximately 660,000 DNA samples, the Texas Department of Public Safety proudly announced that the crime lab had identified suspects in 10,000 open crime investigations through CODIS (Chammah, 2012).

Additionally, with the advances in DNA technology and the advent of touch DNA, more and more questioned profiles are entered into CODIS for non-sex related and non-violent offenses. In fact, many crime scene investigators and laboratory analysts swab items of evidentiary value for DNA found in sloughed skin cells (Department of Justice, 2004). Countries, such as the United Kingdom and Wales, along with the fifteen States in the U.S. that have implemented arrest based guidelines for the collection of known DNA samples have experienced great success in clearing crimes (Neil, 2008). Texas CODIS is not only limited by the lack of offenders in the database but also by the failure of professionals to obtain known samples from offenders who qualify for submission into CODIS (Fisher, 2004). Therefore, Texas statute should mandate the collection of DNA samples from every individual arrested in Texas for any offense, which theoretically, upon conviction, would be punishable with jail time (Class B or higher). The collection of DNA from arrestees as a matter of practice during the booking procedure will increase law enforcement’s ability to fight crime, remove current ambiguities from the process and utilize CODIS to its full potential. Of course, with any pre-conviction or comprehensive collection law, issues arise such as perceived civil rights violations, financial or resource implications and “practicability” (a term coined by Peter Martin) concerns. Ultimately, though, the potential benefits of comprehensive

collection of DNA are immeasurable. Every entry into CODIS increases the probability that a crime will be solved.

POSITION

In 1989, Virginia became the first state to develop a DNA database for retaining the genetic material of convicted felons (Grimm, 2007). The Federal Bureau of Investigation Laboratory followed suit in 1990 with a pilot project serving only fourteen state and local laboratories. The National DNA Identification Act of 1994 authorized the FBI to establish a National DNA Index System (NDIS) for law enforcement purposes (CODIS, 2012). The state of Texas followed for certain convicted felons in 1995 under the authority of House Bill 40 (Texas DPS, *Special Projects*, n.d.). As such, Texas CODIS was born, and became a participating partner of the National program (NDIS) (Texas DPS, 2009). Currently, all fifty states utilize DNA databanks, are linked to one another through NDIS, and therefore permit comparisons between states (FBI, *CODIS*, n.d.; Linacre, 2003). Texas CODIS contains DNA profiles from offenders, crime scenes, missing persons, unidentified human remains, biological relatives of missing persons and suspect elimination samples; however, this paper will deal primarily with the offender portion, which is by far the most populated section of the database (CODIS, 2012).

Texas State Law currently mandates the collection of biological samples, usually in the form of buccal (mouth) swabs, from all convicted felons and a few post indictment arrestees. The list of eligible offenders is posted on line under *DNA Sample Collection* by the Texas Department of Public Safety (Texas DPS, *DNA Sample Collection*, n.d.). By its very design, the process can leave many qualifying profiles falling by the wayside

if the appropriate personnel do not follow through with obtaining a sample upon conviction. Title 37, Chapter 28, Subchapter E of the Texas Administrative Code requires community supervision personnel to collect swabs from felons who are sentenced to probation as opposed to prison time (Texas Administrative Code, *Chapter 28.81*). However, there are no sanctions imposed on those who do not obtain samples from qualifying individuals, or for those who do not do so in a timely manner (Texas Administrative Code, *Chapter 28*). In fact, the Texas Department of Corrections is not required to obtain a sample from a qualifying inmate prior to his release to the public. If a felon is released from prison without providing a sample for CODIS, it is up to the discretion of the Director of TDCJ to attempt to obtain a sample post release (Texas Administrative Code, *Chapter 28.41*).

Another hindrance to the prompt submission of felons' samples into CODIS is the length of time it may take for cases to be adjudicated. In Texas, it can be years before a felony case goes to trial, even after the individual has been arrested and charged by indictment ("Judge delays," 2012; Worchel, 2012; Cowling, 2004). Recently, officials in Brazos County have acknowledged an inability to move cases faster through the judicial process as well (Kiely, 2011). Therefore, obtaining DNA samples from everyone upon arrest, contemporaneous to fingerprinting, will eliminate any ambiguity in the collection process and also ensure a prompt submission of offender samples to CODIS. Currently, there is very little uniformity in how or when samples are collected from those convicted of felonies in Texas (Texas DPS, 2012; Texas Administrative Code, *Chapter 28*).

Law enforcement has utilized DNA data banks to help solve crimes for over twenty years. In Texas, the collection of DNA from all arrestees will enable police to solve more crimes, especially in cases where only DNA evidence is recovered. Additionally, a criminal who is arrested for one crime may be linked to other crimes (Tracey & Morgan, 2001). Considering the fact that CODIS logged their 1,000th hit in 2007, their 8,000th hit in 2011, and their 10,000th hit in 2012, it is clear that as samples are uploaded, more cases are solved (Molina, 2012; Chammah, 2012). Thus, the second argument in favor of expanding CODIS is simple to articulate. The more samples in the database, the greater the chance of a match (Rothstein & Carnahan, 2001). In conjunction with more crimes being solved, more individuals will be exonerated or eliminated as suspects (National Conference, 2009). As law enforcement advocate Linda Spagnoli argues, "DNA testing has become critical in exonerating the innocent. The true power of DNA, like that of fingerprints, is its ability to positively identify an individual. That provides real confidence" (Spagnoli, 2007, p. 2). So, the creation of a stronger, more encompassing DNA database will continue to identify criminals and clear the innocent without them "ever having to step into the courtroom" (Aronson, 2007, p. 209). Many perpetrators plead guilty in the face of such powerful evidence, and according to the Innocence Project, more than 240 people have been exonerated through DNA testing alone (Aronson, 2007; The Innocence Project, 2011).

Additionally, with the emergence of touch DNA, more unidentified samples are being collected from crime scenes and the potential for solving even non-violent crimes has dramatically increased. A perpetrator does not have to physically attack anyone to

leave their DNA behind; therefore, investigators are no longer just searching for blood, hair and semen (United States Department of Justice, 2004). As the manner and ease in which law enforcement obtains unknown samples evolves, so should the database.

Offered as a third point for expansion, is the responsibility of Texas law enforcement to evolve and learn from those who have already expanded their DNA data banks. Several countries, the federal government and other states have experienced much success after do so. Texans should feel secure knowing that such a powerful tool is being utilized to its full potential.

It is no secret that DNA analysis in the United States is patterned after the work of the United Kingdom's Sir Alec Jeffreys (Linacre, 2003). In the UK version of CODIS, known as the National DNA Database (NDNAD), police are instructed to take DNA samples without consent from anyone arrested in connection with any recordable offense. All DNA samples are kept permanently by the companies that analyze them regardless of whether the individual is ever charged, convicted or acquitted of the crime (Wallace, 2006). In the UK, "every week their National DNA database matches over 1,000 DNA profiles taken from crime scenes with names on the database. Around 42 percent of those matches are turned into detections within an average of fourteen days. That is a huge achievement" ("DNA database will top," 2012, p.1). England has been able to analyze DNA samples from arrestees and suspects within five days, even after including all arrestees into the permissible population group ("DNA database will top," 2012, p. 1). In fact, the United States government recently expanded NDIS by collecting "DNA samples from illegal immigrants picked up by federal authorities and from all people arrested for federal offenses" (Samalin, 2008, p. 1).

Several U.S. states including Florida, Maryland and California have expanded their databases to include more arrestees, who submit to a DNA sample at the time of booking. Scott Thorpe, a spokesman for the California District Attorney's Association, cited much success with California CODIS in identifying perpetrators after the passing of Proposition 69 (Simoncelli & Steinhardt, 2005; Thorpe, 2010). In November of 2004, California voters passed The DNA Fingerprint, Unsolved Crime and Innocence Protection Act by a margin of sixty to forty percent. The new law expanded the DNA database in California to include samples from all felons and individuals with past felony convictions, including juveniles. Additionally, in 2009 the bill will expand California CODIS to include all adults arrested for any felonies (Simoncelli & Steinhardt, 2006). In 2008, Texas Legislators passed SB 727, which expanded CODIS, but only encompassing convicted felons (Russell, 2009). Officials have expressed support for California and the feds, often comparing it to the expansion of fingerprinting. "It saves women's lives," said Denver Colorado's district attorney, who has "watched women go from mug book to mug book looking for the man who raped her" (Colgrass, 2009, p. 1).

Subjecting all arrestees to submit DNA samples is the current outer limit of DNA databases. Once Texas mandates this expansion, the State will have done all it can to ensure that CODIS is being utilized to its full potential. Because all statewide databases are linked to one another through NDIS, the mandate will help solve more crimes across the nation.

While most people have come to accept CODIS as an acceptable crime fighting tool, some vehemently protest any proposed expansion that goes beyond convicted felons. The prospect of including any arrestees, much less all arrestees, sparks much

debate, usually on constitutional grounds, cost concerns and practicability issues. In order to successfully argue the expansion of CODIS, these three issues must be carefully examined.

COUNTER POSITION

Most opponents of expanding DNA databases across the country protest the inclusion of arrestees on constitutional grounds, primarily what they consider to be violations of the fourth amendment to the United States Constitution. Conflict exists between law enforcement's aspirations to fully exploit the power of DNA to solve crimes while still protecting individual civil liberties, creating a fragile balance between "two alternative goods: the effective use of DNA for the identification of offenders on one side and the protection of individual rights to privacy on the other" (Williams & Johnson, 2004, p. 208). Many lawyers have argued that while expanding DNA databases will likely solve more crimes, they will erode civil liberties in the process (Rothstein and Carnahan, 2001). The fourth amendment reads in part: "the right of the people to be secure in their persons, houses, papers, and effects, against unreasonable searches shall not be violated, and no warrants shall issue but upon probable cause..." (Amar & Adams, 2002, p. 105-106).

This amendment has been the United States Supreme Court's basis for ruling that involuntary intrusion into the body constitutes a search. Additionally, lower courts have agreed with the United States Supreme Court that the collection of DNA, even in the form of oral swabs, from offenders, is a search (DNA Forensics, 2007). Not only is the search considered warrantless, many feel it is unreasonable as well (Rothstein & Carnahan, 2001).

Besides the obvious objections due to the involuntary nature of its collection, sweeping DNA laws raise other constitutional concerns. For example, many people fear that the law could be abused by the police, who will begin to arrest people just to procure a sample, with or without probable cause (Human Genome Information, 2008).

Additional civil rights issues, including privacy concerns, are raised by the government's retention of the biological material from which the DNA profile was derived. An argument exists that the government may misuse these samples, especially in states that do not destroy them after processing. For example the American Civil Liberties Union (ACLU), affirms that the "criminal justice system recognizes that an individual is innocent until proven guilty" (ACLU, 2009, p. 2). Therefore, any effort to permanently store "DNA samples from people not yet convicted of a crime violates their privacy" (ACLU, 2009, p. 2). Accordingly, the ACLU objects to the "over collection and storage of DNA on constitutional grounds" (ACLU, 2009, p. 1).

James Starrs, a George Washington University professor and Fellow of the Academy of Forensic Sciences warned of the expansion of DNA databases by arguing that the Constitution should not be ignored simply because the DNA analysis serves a government purpose (Tracey & Morgan, 2000). Legal experts opposed on these grounds consider DNA profiles different from fingerprints constitutionally because, while fingerprints are useful only for identification, DNA can provide other information (Human Genome Information, 2008). Many states, including Texas, do not mandate that samples be destroyed after the profile is entered into CODIS. In fact, with very few exceptions, Texas retains the samples permanently, according to Gary Molina (personal communication, February 1, 2012), the Texas Department of Public Safety CODIS

Director. There are those who fear that DNA databanks will expose “who I am, my biological potential, my health situation, my paternity, my race and most profound personal secrets” (Kaye, *Constitutionality*, 2001a). People fear that keeping samples potentially places them under a lifetime of genetic surveillance (O’Neil, 2008).

R.E. Gaensslen, a Professor of Graduate Studies for Forensic Science at the University of Illinois, also worries about specimen retention due to rapidly developing new technologies that will allow the government to discover health or disease related information from samples. So far, labs only extract DNA information for identification purposes. The fear, however, is that labs will turn samples over to another group for examination or begin those studies themselves (Gaensslen, 2006; Axelrad, 2004).

Essentially, those opposed to sweeping collection of DNA on constitutional grounds feel that the collection of buccal swabs from all arrestees is a violation of the search and seizure clause of the fourth amendment; also that the permanent retention of the biological samples threatens their privacy and subjects them to a lifetime of potential genetic scrutiny or surveillance. They also identify violations of the fundamental premise of the presumption of innocence (Lynch et al., 2008). There is also the potential to arrest people with less than probable cause, just to obtain a DNA sample for the databank (Human Genome Information, 2008).

Proponents of the expansion of DNA databanks argue that the sweeping collection of DNA is not in violation of the fourth amendment, nor does it undermine the presumption of innocence, for a variety of reasons. Additionally, many feel that the permanent retention of biological samples protects the civil rights of both the guilty and the innocent. For instance, while the Supreme Court considers involuntary procurement

of a biological sample under the fourth amendment, they consistently “rejected fourth amendment challenges to these searches for law enforcement use on one of two grounds” (“DNA forensics,” 2007, p. 2). First, the Court determined that perpetrators have less of an expectation of privacy, simply because they are offenders. Second, they determined that law enforcement has a special need to efficiently investigate crime and that need is greater than someone’s privacy interest in not being included in the database (“DNA forensics,” 2007). This analysis is often referred to as a “balancing test” whereas the Supreme Court weighs the level of intrusion against the government’s interest (Rothstein & Carnahan, 2001).

Another consideration is that with developing technology, the physical intrusions required in collecting DNA continue to decrease while the governmental interest remains the same. Inevitably, expansion of DNA testing for crime fighters will continue to be upheld (Rothstein & Carnahan, 2001). In *State v. Olivas*, a case which upheld a Washington DNA testing statute, the United States Supreme Court stated that the “purpose of the DNA data bank was to deter and prosecute recidivist acts, and that this purpose was a special need of government beyond law enforcement” (Rothstein & Carnahan, 2001, p. 6). It is clear that while the Supreme Court is leery of permitting DNA collection of everyone, that argument does not apply to people suspected of crimes, such as arrestees (Alfano, 2006). State courts are also following the United States Supreme Court’s lead, such as in *Anderson v. Commonwealth*, a 2007 case in which the Virginia Supreme Court ruled that collection of DNA from an arrestee did not violate the fourth amendment and the statute was constitutional (“DNA arrestee database cases,” 2012).

There are legal experts, including Prosecutor Ted Wilson, formerly of the Harris County District Attorney's Office, who go so far as to claim that the collection of buccal swabs "is not a search under the fourth amendment to the Constitution requiring issuance of a Search Warrant" (Wilson, 2011, p. 2). Other prosecutors indicate that the fourth amendment does not prohibit government searches without a warrant. The amendment forbids searches that are deemed unreasonable (Rothstein & Carnahan, 2001). Collecting buccal swabs is far less invasive than drawing blood, and therefore minimizes legal challenges (Rothstein & Carnahan, 2001). Therefore, to many, objections have little validity in such circumstances (Kaye, *Constitutionality*, 2001a).

A great deal of modern civil rights law is also based on the opinion issued in *Katz v. United States*. The considerations made to determine if the seizure was lawful in that case were one, the extent to which the material was displayed to the public, or the expectation of privacy with the item seized, two, the extent of the bodily invasion caused by the sampling, and three, the nature of the information that could be extracted from the sample (Kaye, *Constitutionality*, 2001a). The extent of the bodily invasion is minimal considering the requirements in obtaining a buccal swab, material that can be obtained off a discarded cup or licked envelope. Judge Alex Kozinski, Chief Judge of the United States Court of Appeals for the Ninth Circuit, indicated, as the "techniques for extracting DNA improve and identifying information can more easily be obtained from urine and saliva, or from hair follicles inadvertently pulled out during a visit to the barber or hairdresser...we have no legitimate expectation of privacy" (Alfano, 2006, p.7). Therefore, "there is no issue then with the government collecting what we leave behind and extracting the DNA profile" (Alfano, 2006, p. 7).

Regarding the final analysis in *Katz*, while the nature of the information that can be extracted from the sample is great, the Texas Administrative Code, Texas Government Code and Texas Penal Code all prohibit the misuse of the information (Texas Administrative Code, 2011; Texas Government Code, 2011; TDCAA Criminal Laws, 2011). For example, the Texas Government Code states that CODIS information can only be used for identification purposes. Biological samples from offenders can only be typed by the Texas Department of Public Safety Lab and the resulting DNA profiles can only be uploaded from the DPS Austin Lab. Chapter 411.143 of the Texas Government Code sets out that the principal purpose of the database is to assist in the investigation of an offense, the exclusion or identification of suspects and the prosecution of a case (Tracey & Morgan, 2000).

The Director of the Texas Department of Public Safety is the liaison for DNA data, records, evidence, and other related matters between the FBI and DNA laboratories or criminal justice/law enforcement agencies. Additionally, a person commits a criminal offense if the person reveals information in a DNA record or information related to a DNA analysis of a sample collected for CODIS. A “DNA record stored in the DNA database is confidential and is not subject to disclosure under the open records law” (Tracey and Morgan, 2000, p. 680). An offense under this section is Official Misconduct, a State Jail Felony (Texas DPS, *Frequently asked questions*, n.d.). Former Texas Attorney General John Cornyn addressed these concerns in an official opinion issued in 2001, in which he quoted Chapter 411.153 of the Government Code, subchapter G, confirming that a DNA record in CODIS is not open to the public (Office

of the Texas Attorney General, 2001). Therefore, not only is the offender or arrestee's name protected, but so is their genetic privacy.

While local regulations are a strong deterrent to the abuse of the samples, there are also federal laws prohibiting the unauthorized disclosure of DNA information, with fines as high as 100 thousand dollars for each offense (Tracey & Morgan, 2000; Leahy, 2004). In Title IV of The Innocence Protection Act of 2004, criminal provisions already in existence were modified to augment the threat of prosecution for illegal distribution of protected DNA information (Leahy, 2004). So, the threat that the government will use the DNA sample for something other than obtaining the STR profile for criminal case investigation is unfounded.

Something often neglected by civil libertarians is the fact that in Texas CODIS, sample retention protects those profiled in the case of a hit. Many researchers suggest that while the public may have a fear of potential abuse, there is no legitimate threat to citizens' privacy (Kaye, *Fallacies*, 2001b). According to CODIS Director Gary Molina (personal communication, February 1, 2012), when someone is identified in CODIS, a portion of their original biological sample is tested again to confirm the hit. Then the law enforcement agency is notified of the tentative identification so that they can obtain another sample from the offender, via a search warrant. Failure to retain biological samples would not allow the labs to pull an original sample and ensure that the profile was entered into CODIS. As an example, in 2007, in Boston, Massachusetts, an administrator at the State Police Crime Laboratory mishandled DNA test results in twenty seven sexual assault cases. The ability to pull what remained of the original samples was crucial to correcting the problem (Saltzman, 2007). There may come a

time when Texas follows Wisconsin, a state that requires DNA samples collected in state databanks be destroyed following profiling (Kimmelman, 2000). Currently, though, Texas law mandates the retention of samples to protect its donors, best illustrated in Massachusetts at their state lab (“DNA database,” 2007).

Regarding sample retention complaints, Texas, along with Louisiana, Virginia and New York, require that arrestee’s and suspects’ DNA information be purged upon acquittal, exoneration or dismissal of the charges. This includes destruction of the biological sample and data entered into the bank (Axelrad, 2004). The federal DNA Identification Act also governs the federal CODIS system regarding the submission and retention of samples from participating states. It too requires expungement of information if a conviction was overturned, or in the case of an arrestee, if there was no conviction, the charges were dismissed or the person was acquitted (Axelrad, 2004). The destruction of samples in those circumstances satisfies many civil libertarians on the issue of constitutional protection (Harlan, 2004).

A similar option was proposed by law professors from Cornell University, who stated, “If the DNA is obtained in a non-invasive manner and if information related to identification and nothing else could be obtained from it, the analogy to fingerprinting would be complete.” For example, if in the future, the police are equipped with a DNA kit that analyzes certain loci (markers), and the sample is destroyed once the data is recorded, then to many, this would not be considered a search (Kaye, *Constitutionality*, 2001a, p. 10).

There is a solution that would please both those opposed to sample retention and those arguing the need for it. This measure involves the establishment of a “gene

trustee” between the offenders or person submitting a DNA sample and the government authority maintaining the database. If the police “analyze a sample in the DNA database and have a valid and legal reason to know the identity of the donor, the gene trustee provides this information to them.” If the gene trustee does not deem the release of the name or information legal or probative, based upon a series of requirements, they can make the database useless in that circumstance (Burnet, 2003, p. 1). A similar alternative that will protect the rights of those with samples maintained in databases was proposed by Francisco Corte-Real in 2004. In order to prevent the unacceptable use of the samples, the profile can be codified and established in a separate register. Then, in only certain occasions (by court order for instance), would a search be made (Corte-Real, 2004). While they may be ingenious and interesting, these alternatives are not necessary in Texas, considering the laws already in place to protect the rights of people who find their profiles entered into CODIS.

Another point, often neglected by civil libertarians opposed to expanding CODIS is the potential to clear the innocent of wrongdoing. The federal government has become so concerned with using CODIS to exonerate the innocent that they passed the Innocence Protection Act of 2004, which establishes rules and procedures governing applications for DNA testing by inmates in the federal system. Under this law, the government authorizes over five million dollars a year in grants to help states cover the cost of post conviction DNA testing (Leahy, 2004).

Finally, in opposition of expanding DNA databases to include arrestees, civil libertarians claim that there is a potential for officers to arrest individuals with less than probable cause, just to procure a DNA sample. In Texas, as previously addressed,

samples from suspects who are acquitted or exonerated are expunged from the database (Axelrad, 2004). Additionally, investigators are prohibited from using any evidence wrongfully obtained as “fruit of the poisonous tree,” thereby eliminating the possibility of introducing any physical evidence in court that was illegally obtained. Any arrest that is deemed unconstitutional or made without sufficient probable cause will result in the suppression of the suspect’s DNA sample which was collected pursuant to that arrest (TDCAA Criminal Laws, 2011). The proposal of this paper is not to include the entire population in CODIS, but all those individuals who are arrested, based upon probable cause, as required by law. Considering the ease with which DNA samples can be obtained surreptitiously, there is no need for law enforcement personnel to arrest anyone with less than probable cause.

In the final analysis, potential civil rights violations are no longer an issue for forensic scientists like Rick Staub (personal communication, February 10, 2012), Laboratory Director of Orchid Cellmark, a private DNA testing lab based in Dallas, Texas. According to Staub, because there is no longer a potential of a fortuitous match, no one should be opposed to having their DNA profile entered into the database upon arrest. Current quality control measures, peer review, FBI audits and confirmed population statistics ensure that there will be no false matches in CODIS. In a nutshell, “if you have done nothing wrong, you have nothing to fear” (Colgrass, 2009, p. 2).

While civil rights activists occupy much of the debate on the topic of sweeping DNA collection, other factors such as cost and practicability are hotly contested as well. Despite its proven value, expanding DNA analysis to property crimes or misdemeanors is costly (United States Department of Justice, 2004). The National Commission on the

Future of DNA Evidence has predicted that it would cost New York City alone an estimated 18.5 million dollars a year to process samples from all those arrested. If this were expanded nationally, it could result in about 15 million additional tests per year. When multiplied by “the cost of each test, this additional expense would come to some 765 million dollars annually” (Tracey & Morgan, 2000, p. 665).

CODIS director Gary Molina (personal communication, October 29, 2011) indicated that expanding the DNA database to cover all arrestees would be cost prohibitive if DNA is collected and analyzed in the current manner. By his accounts, DPS would have to hire one hundred additional DNA analysts and build another large building just to process the samples for entry. During the past legislative session in Texas, House Bill 1536, authored by Representative Craig Eiland, proposed the expansion of CODIS to include anyone arrested for any offense punishable as a Class B misdemeanor or higher. The Act was set to take effect on September 1, 2011 (Eiland, 2011). The bill did not pass because, according to Molina (personal communication, October 29, 2011), the cost to DPS was too great. The DPS crime lab, like those in many other states, lacks sufficient numbers of trained forensic scientists and the funds to hire more staff (Zedlewski & Murphy, 2006).

While CODIS Director Gary Molina (personal communication, October 29, 2011) is leery of expanding the database, there is a difference of opinion at DPS. One DNA crime lab technician who was interviewed would like to see all arrests included (Tracey & Morgan, 2000). According to Peter Martin, the future will brighten as technology advances in the field of DNA science. The cost will be defrayed as it becomes quicker and easier to obtain a profile from an individual (Martin, 2004).

There are several possibilities that could defray the cost for the Texas Department of Public Safety. For instance, state or local governments could add the fee of processing a sample to arrestee fines and penalties that are associated with probation, or court costs in minor offenses. Additionally, the law could be changed such that other licensed and certified labs across the state assist DPS with housing and processing offender samples. If private labs or other government labs processed offender samples by region of arrest, costs would be cut dramatically for DPS and the number of necessary hirings would be reduced. Outside, private labs, could submit offender profiles to CODIS, just as the other DPS crime labs do currently. With the support from the National Institute of Justice, some U.S. crime labs were able to overcome issues by sending DNA samples to private labs for analysis (Zedlewski & Murphy, 2006). The Texas Department of Public Safety could also petition the Texas Legislature for additional funding once CODIS is expanded.

A recent development in forensic DNA may revolutionize the science and have the greatest effect on reducing the cost of collecting, storing and analyzing samples for CODIS. Today, DNA profiling, which entails the identification of thirteen genetic markers or loci (STR) in an individual's genetic code, or nuclear DNA, is an extensive lab procedure and unavoidably costly. The FBI is preparing to release a portable kit, known as Rapid DNA, which will be capable of analyzing human DNA in about forty five minutes (Messmer, 2010). As one can imagine, Rapid DNA kits, which authorized personnel could carry in the field or use at booking stations, will drastically cut the cost for DPS. Dr. James Landers, a chemist and Chief Scientific Officer at MicroLab, claims

that Rapid DNA or RDNA is feasible and within the grasp of the scientific community (Messmer, 2010).

While cost cutting technology is not quite within reach, currently there are multiple federal grants available to assist in defraying the cost of operating CODIS. Assuming that CODIS is expanded to include all arrestees, this funding will continue and can be petitioned to increase (President's DNA Initiative, 2007a). Many of these grants will remain available, even in light of the current economic crisis facing the federal government (Nelson, 2011). Former US Attorney General Janet Reno was so impressed with the results of the grants used to defray costs under the National Institute of Justice that she directed the NIJ to establish a national commission of the future of DNA evidence (Tracey & Morgan, 2000). Some of the federal funding to cut costs of CODIS labs in Texas and across the nation is provided by the Justice For All Act of 2004, which authorized 255 million dollars to promote the use of DNA technology on a variety of levels (Leahy, 2004). The Texas Department of Public Safety has been receiving federal funds to enhance DNA examination and CODIS since 1996. Also, the latest advances in forensic DNA analyses are employed to provide the greatest statistical probability of a match at reasonable costs. DNA profile information is already being sent from DPS field laboratories to the CODIS laboratory in Austin for database searches, reducing the cost of entering samples into the database (Texas DPS, 2008). Considerations should be made to allow other labs to do the same. Most recently, other states have used federal funds to purchase automated work stations, hire personnel, outsource testing and validate more efficient procedures (Nelson, 2011).

Even without the development of RDNA, the cost of DNA analysis must be weighed against the financial and emotional losses incurred by the public. Researchers with the National Institute of Justice suggest, "It is much more expeditious to employ DNA testing than to pay investigators" (United States Department of Justice, 2004). Opponents of expansion should also consider the cost of continuing to investigate offenses, the generation of paperwork, and overtime, when it is possible that the crime could have been solved if the perpetrator was in CODIS. As an example:

In March of 2004, Langimaa Faulalo was arrested for the murder of Danny Johnson in Sacramento, California. The arrest occurred before the passing of Proposition 69, which included all those arrested on felony charges. Faulalo's case did not go to trial until March of 2007. Faulalo was convicted and his profile was submitted to California CODIS. During that three year period, investigators in Sacramento continued to work the unsolved murder of a victim named Eddie Heyderagha. Soon after Faulalo's profile was entered into CODIS there was a hit against blood evidence collected at the Heyderagha scene. Faulalo was thereby identified in that murder case as well. Had Faulalo's profile been entered into CODIS at the time of his arrest, the county of Sacramento would have saved countless man hours of investigation and other costly resources (Thorpe, 2010). Additionally, Heyderagha's family and friends would not have spent three years bemoaning an arrest in the case.

When examining the cost, one should also consider the likelihood that someone may plead guilty once they are confronted with incontrovertible DNA evidence rather than take the case to trial. It is much more cost effective to process a sample from an arrestee, than it is to fund the investigation to identify him, and a trial which may or may

not result in a conviction. In the final analysis, it is also hard to put a price on enhancing the public safety. Regardless, the advent of Rapid DNA kits would alleviate cost obstacles in the future, according to the FBI (Messmer, 2010).

The final issue typically raised when proposing an expansion of the DNA data banks is practicability, a term coined by Peter Martin. Many opponents claim that including all arrestees in CODIS is practically impossible. Assuming funds are available for the expansion of DPS to build another CODIS building and hire additional analysts, there may be an insufficient number of qualified forensic scientists to hire to handle the increase in submission samples (Zedlewski & Murphy, 2006). In addition to not having enough trained analysts, Gary Molina (personal communication, October 29, 2011) indicated that the current backlog of profiles to be entered from felons and indicted offenders could prevent the inclusion of all arrestees in a timely manner. Molina also expressed fears in how and where the samples would be collected for submission to the laboratory.

Recent years have “witnessed a backlog of DNA data from known offenders waiting to be input into searchable databases.” In fact many samples have not even been collected from eligible offenders, much less analyzed (Zedlewski & Murphy, 2006, p. 2). The backlog of samples awaiting testing throughout the criminal justice system increased dramatically over the past five years (Human Genome Information, 2009). In fact, in 2008 the US Justice Department found that while backlogs are rising, many states continue to pass legislation that expands the databases. According to the American Civil Liberties Union, it is comparable to “tossing more hay onto a pile while still searching for the needle” (ACLU, 2009, p. 1). The backlog issue became a huge

concern after Former Attorney General Janet Reno requested an analysis of the constitutionality of obtaining DNA samples from arrestees. The final ruling on this issue was placed on hold due to the significant backlog of current samples for eligible offenders (Rothstein & Carnahan, 2001).

Regarding the lack of qualified analysts to hire, assuming the expansion of CODIS occurs; one must look at the possibility again of going outside The Texas Department of Public Safety for the analysis of suspect samples. If a lab is ASCLD (American Society of Crime Laboratory Directors) certified and their analysts go through the routine rigors of peer review and quality assurance, then they are amply qualified to submit offender profiles to CODIS. Chapter 411 of the Government Code would need to be amended, allowing private labs to analyze arrestee samples and submit those profiles to DPS.

As with the cost issue, the farming out of DNA processing to private labs, by region of the arrestees residence or county, will help to alleviate the backlog problem as well. CODIS acceptable profiles are those that meet the standards established by the NDIS. If a lab is ASCLD certified, then they are able to follow the technical requirements of such processing (Zedlewski & Murphy, 2006).

It should also be noted that substantial federal funding is available to help eliminate backlogs and encourage aggressive programs to collect owed samples from convicted offenders (Zedlewski & Murphy, 2006). Many states have availed themselves of this subsidy. As examples, several funding options will be detailed.

In 2003, Congress enacted the DNA Analysis Backlog Elimination Act. This Act apportioned millions of dollars to the U.S. Department of Justice for DNA activities.

Among other things, it authorized the Attorney General to make grants to increase the capacity of laboratories to analyze samples taken from convicted offenders and crime scenes (Human Genome Information, 2009).

The Justice for All Act of 2004 authorized \$755 million dollars to address the DNA backlog crisis in the nation's crime labs (Leahy, 2004). From 2005 to 2008, the Texas Department of Public Safety received almost six million dollars in additional funding to assist with backlog reduction from the President's DNA Initiative (President's DNA Initiative, 2007b). In 2012, DPS is scheduled to receive well over three million for the same purpose. They will also receive nearly half a million dollars from the Coverdell Forensic Services Grant (Texas Comptroller, 2008 and 2010).

Beginning in 2011, the National Institute of Justice combined the DNA Backlog Reduction Program with the Convicted Offender and/or Arrestee DNA Backlog Reduction Program into a single program called the DNA Backlog Reduction Program, which provides funding to the crime labs across the nation (President's DNA Initiative, 2011). A critical point to remember when analyzing the practicability problem, namely the backlog of samples is this: the problem is transitory and solved through increased funding. Also, as technology advances, analysts will be able to obtain a profile faster and more efficiently (Rothstein & Carnahan, 2001). Moreover, the advent of Rapid DNA (RDNA) kits that enable a qualified individual to obtain a profile from a suspect or arrestee in less than an hour will resolve the backlog issue entirely, once DPS enters the profiles from those who submitted samples prior to the development of RDNA technology.

Gary Molina (personal communication, October 29, 2011) also expressed

practicability concerns regarding the manner in which samples are collected. Assuming all arrestees are eventually included in CODIS, the solution is quite simple. After a suspect is arrested and brought to the jail, he or she is fingerprinted. Buccal swabs will be collected at that time for submission to CODIS. Currently, Texas DPS provides DNA Collection Kits free of charge (DPS, *DNA Sample Collection*, 2012). Inked Fingerprints are collected from arrestees automatically. Once booking officers begin obtaining buccal swabs at the same time, the process will become routine as well. Once the RDNA kits are available, it will be even easier to acquire a profile and submit it to CODIS at the same time the prints are submitted to AFIS. Collecting buccal swabs at booking, during every arrest is much simpler to implement than evaluating the admissibility of each arrest against the offender qualifications listed in Title 37, Subsection 28 of the Texas Administrative Code.

Of all the solutions for cost and practicability impediments, RDNA kits may be the best answer to reducing costs and the backlog of samples. Orchid Cellmark Lab Director Rick Staub (personal communication, February 10, 2012) believes that RDNA portable testing kits could alleviate the cost and practicability issues associated with sweeping DNA collection. He indicated that the RDNA profiles will be generated as a thirteen loci profile, which is consistent with testing performed for entry into CODIS. There will be no compatibility issues in using RDNA kits at jails or in the field. Staub also agreed that obtaining profiles upon arrest will bring much more uniformity to the collection of samples from offenders as opposed to assuming that someone will obtain buccals post conviction and submit them in a timely manner. The potential of obtaining a profile in less than an hour from an offender and then submitting the digital profile to

CODIS is rapidly approaching. The turnaround time for entering profiles into CODIS could result in a preliminary identification before a suspect has the opportunity to bond out of jail (Staub, personal communication, February 10, 2012).

CONCLUSION

After much debate and circumspection, it is clear that Texas should mandate the collection of DNA samples from every individual arrested in Texas for any offense, which theoretically, upon conviction, would be punishable with jail time (Class B or higher). As stated earlier, the primary argument in favor of expanding the scope of CODIS is “compelling and easy to characterize. The more samples in the data bank, the greater the likelihood of a match or cold hit” (Rothstein & Carnahan, 2001, p.10). In fact, the Texas Department of Public Safety indicated in December of 2012 that they had reached 10,000 “cold hits” or “unexpected” matches, when DNA profiles in the database were linked to submitted crime scene evidence (Chammah, 2012). A majority of individuals identified as suspects were not in jail at the time the match was made (Chammah, 2012). In conjunction with more crimes being solved, more individuals will be cleared of suspicion or exonerated completely (National Conference of State Legislators, 2009). In opposition of expansion, people have cited civil rights concerns, cost considerations and practicability issues.

Civil rights violations are no longer a legitimate concern in this matter, considering the manner in which DNA is collected and stored. The minimally intrusive nature of its collection and the expressed need by the government to protect its citizens essentially neutralizes the potential for fourth amendment abuse. Furthermore, with no possibility of a false match, there is no risk for innocent people who find their profiles

entered in the database (Rick Staub, personal communication, February 10, 2012). In Texas, after a hit, the original sample is re-tested, followed by the issuance of a search warrant by the investigating officer, before any identification is made. So, no one is convicted of a crime from a CODIS submission exclusively. Finally, and unfortunately for those opposed on civil grounds, courts have consistently ruled that DNA collection from arrestees is most analogous to fingerprinting and not unreasonable under the fourth amendment (Thorpe, 2010). Beyond that, because CODIS is legally bound to use the biological samples only for the purpose intended, there is no real possibility of the abuse of the genetic data, whether the samples are permanently retained or not.

Regarding cost and practicability issues, it has been shown that there are multiple methods for alleviating these concerns, including federal funding and perhaps amending portions of the Administrative Code to allow labs other than the Texas Department of Public Safety to analyze and submit offender samples to CODIS. If private or government labs not affiliated with DPS are ASCLD certified, participate in the National DNA network and can be trusted to submit suspect or crime scene samples to CODIS, then they should be permitted to handle the legislatively mandated offender samples as well.

Perhaps the most compelling and exciting development that may alleviate all cost and practicability concerns is the FBI's development of Rapid DNA Kits (RDNA) which will allow investigators and jail staff to obtain a sample and generate a profile that is compatible with CODIS in less than an hour. The potential benefit of this device for law enforcement and society as a whole is immeasurable. Assuming RDNA kits are not provided to law enforcement immediately, then CODIS will continue to chip away at the

profile backlog through the assistance of federal funds. Even when RDNA kits become available, they may not become widespread immediately. In that case, perhaps Texas could follow the state of Maryland's lead in expanding the database as backlogs are reduced. For example in 2008, Maryland's DNA backlog of over twenty four thousand cases was eliminated. At that point, Governor O'Malley enacted SB 211, expanding their DNA database to include samples from persons arrested for crimes of violence, all burglaries and any attempt at those offenses. It is clear then that Maryland is striving to include more and more arrestees into the database as backlogs are reduced (Maryland Governor's Office, 2010).

It would serve those who are opposed to expansion on cost and practical grounds to remember that cost is relative. According to Assistant Attorney General Ralph Guerrero (personal communication, February 11, 2012), a prosecutor with the Texas Attorney General, the cost of analyzing DNA and entering the profiles into CODIS is miniscule when compared to the cost of continuing an investigation, appropriating sufficient resources, paying overtime, and absorbing the overall cost of failing to bring criminals to justice and giving a measure of peace to victims and their families. Tracey and Morgan stated that it would cost the nation about 765 million dollars to house profiles of all arrestees in DNA databases. Some would suggest that the cost of investigating crimes and the emotional toll unsolved cases take on victims and their families far outweighs that consideration. The cost of DNA testing "must be weighed against the losses from crime incurred by the public" (United States Department of Justice, 2004, p. 2). In *A Business Case for Using Forensic DNA Technology to Solve and Prevent Crime*, Ray Wickenheiser formulated a powerful argument for the

expansion of DNA databases. The author calculated the estimated cost of processing additional samples, for example from all arrestees, against annual and cumulative government spending to investigate and apprehend offenders, especially in serial sexual assault cases. The estimated savings was 35.2 times the investment (Wickenheiser 2004). Apprehending someone early in his/her criminal career not only saves money, it prevents others from becoming victimized by the same individual.

It is much easier to calculate the financial loss by crime in Texas; the emotional tolls are not so easily quantified. Perhaps the point of this paper is best argued by members of the California District Attorney's Association; "DNA evidence is one of the greatest tools ever developed in the search for truth, the protection of society, conviction of the guilty, and exoneration of the innocent" (Thorpe, 2010, p. 16). Victims of crime, living and dead, deserve law enforcement's best effort in the pursuit of justice.

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