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**COMPULSORY DNA SAMPLING OF SERVICE MEMBERS
FOR INCLUSION IN THE DOD DNA REGISTRY:
REMAINS IDENTIFICATION WITH A RISK**

A Thesis

Presented to

The Judge Advocate General's School,

United States Army

The opinions and conclusion expressed herein are those of the author and do not necessarily represent the views of either The Judge Advocate General's School, The United States Army, or any other governmental agency.

Gregory L. Simmons
Captain, U.S. Marine Corps

44TH JUDGE ADVOCATE OFFICER GRADUATE COURSE

April 1996

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ABSTRACT: During the summer of 1992, the military began a DNA collection program that requires a DNA specimen be collected from every active duty, reserve, and national guard service member. A central DNA specimen repository was established to facilitate remains identification using DNA analysis for the more difficult identification cases. Based upon a Fourth Amendment analysis, this thesis balances service members' privacy interests in their genetic information against the military necessity of remains identification using DNA. This thesis concludes that the DNA collection program sweeps too broadly into legitimate privacy interests, and is unconstitutional in its present form. The thesis recommends changes to the program that will adequately protect service members' privacy interests in their DNA while not interfering with the military's interests in developing and employing DNA analysis for remains identification.

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**COMPULSORY DNA SAMPLING OF SERVICE MEMBERS
FOR INCLUSION IN THE DOD DNA REGISTRY:
REMAINS IDENTIFICATION WITH A RISK**

CAPTAIN GREGORY L. SIMMONS^{*}

I. Introduction.

Experience should teach us to be most on our guard to protect liberty when the government's purposes are beneficent. Men born to freedom are naturally alert to repel invasion of their liberty by evil-minded rulers. The greatest dangers to liberty lurk in insidious encroachment by men of zeal, well-meaning but without understanding.

--Hon. Louis D. Brandeis¹

In the summer of 1992,² the Department of Defense (DoD) began collecting deoxyribonucleic acid (DNA) from all active duty, national guard and reserve service members for inclusion into the DoD DNA Registry and Specimen Repository (DNA

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¹ Olmstead v. United States, 277 U.S. 438, 479 (1927) (Brandeis, J., dissenting).

² Office of the Assistant Secretary of Defense, Health Affairs, ASD(HA), Press Inquiry into Privacy Aspects of DNA Collection (undated press release provided by Colonel Salvatore M. Cirone, Director of Scientific Activities, ASD(HA)) (on file with author) [hereinafter Press Release].

registry).³ The DNA registry, composed of a specimen repository and a laboratory capable of DNA analysis, is intended to provide DNA reference specimens for genetic comparison to service member remains that cannot be identified using more conventional techniques.

Specimen collection began without notice to service members. The following scenario is illustrative of the problems with the DNA collection program. Early one morning, a Marine Corps captain is notified by his administrative section to report to the unit medical facility for his annual physical. Upon his arrival at the medical facility, a corpsman informs him that he is due an influenza vaccine and needs to have two blood samples drawn; one for HIV⁴ testing, the other for inclusion into the DoD DNA registry. The captain, familiar with the military HIV testing program, asks why his blood is being sent to a DNA registry. The corpsman explains that the purpose for the DNA registry is to store samples of all service members' DNA for use as reference specimens in the process of remains identification if the need were ever to arise.

³ The DoD DNA registry is housed and funded by the Armed Forces Institute of Pathology (AFIP). Inquiries into the specimen collection effort or for access to specimens should be directed to Armed Forces Institute of Pathology, ATTN: Ms. Anette Anderson, Building No. 54, Walter Reed Army Medical Center, 6825 16th Street, NW, Washington DC 20306-6000. The DoD DNA registry is physically located at 16050 Industrial Drive, Gaithersburg, MD 20877. (301) 295-5540.

⁴ Human Immunodeficiency Virus

Now concerned about this DNA collection program, the captain asks the corpsman for more details before his blood sample is drawn for the DNA registry. The corpsman knows nothing more about the program and refers the captain the Commanding Officer (CO) of the medical facility. In response to the captain's concerns, the CO of the medical facility looks for information on the DNA registry. The CO can find only the message directing military activities to begin collecting specimens and providing the procedures to accomplish collection. The CO gives the captain the phone number to the Armed Forces Institute of Pathology (AFIP) but can provide no further information. The captain leaves the medical facility without providing a DNA sample.

That afternoon, the captain phones AFIP to find out about the DNA collection program. He asks whether his DNA specimen could be used for anything other than remains identification. The response is, "probably not." There are no other uses currently planned for the specimens, but the details of the program are still under development. Other uses for the DNA cannot be categorically excluded. Next, the captain asks who has access to the specimens. The response is that while there is a procedure by which outside organizations can request access to samples, no such access has yet been granted. Third, the captain asks how long the specimens will be held in the registry. The response is, "seventy-five years." Finally, he asks whether he can get his DNA specimen back from the government upon discharge from the armed service. The

response is that there is no procedure to return samples to former service members because of resource constraints.

Several days later, the captain is recalled to the medical facility to provide the DNA specimen. He refuses to provide the specimen. His commanding officer is notified, and subsequently personally orders the captain to provide the DNA specimen. Again the captain refuses. The captain is charged with violating his commander's order to provide a DNA specimen. The charge is referred to a special court-martial.

This scenario is closely based on fact.⁵ It demonstrates the DoD DNA collection program's inability to safeguard service members' privacy interests in their genetic information. It also demonstrates the severe consequences that can result from refusal to provide DNA specimens.⁶

This thesis examines the constitutionality of the DoD DNA collection program. Section II examines the historical background of the DoD DNA registry and describes the properties of DNA. Section III identifies the concerns that are raised by the military's DNA collection program. Section IV examines the constitutionality of the DNA collection program by analyzing and balancing the competing governmental

⁵ Two Marine corporals from Marine Corps Base, Hawaii are currently pending trial by special court-martial for their refusal to provide DNA specimens under circumstances very similar to these. *United States v. Vlacovsky*, (Marine Corps Base, Hawaii, pending trial).

⁶ The Marine Corps is the only service known to be pursuing such a prosecution.

and individual interests using a Fourth Amendment reasonableness analysis. It concludes that the program, as presently configured, is an unreasonable intrusion into service members' legitimate privacy interests.

Section V distinguishes the DNA collection program from other DoD programs, to include the remains identification effort using conventional remains identification techniques, the urinalysis program, and the HIV testing program. Section VI then recommends changes to the DNA collection program that will adequately protect service members' interests in their genetic material while still protecting the interests of the military in developing new techniques in remains identification.

II. Background/History.

A. *The DoD DNA Registry.*

With a half page memo dated 16 December 1991, the Deputy Secretary of Defense authorized a repository of specimen samples to aid in remains identification using DNA analysis.⁷ The Assistant Secretary of Defense for Health Affairs

⁷ Memorandum # 47803, Deputy Secretary of Defense, to Secretaries of the Military Departments, subject: Establishment of a Repository of Specimen Samples to Aid in Remains Identification Using Genetic Deoxyribonucleic Acid (DNA) Analysis (16 Dec. 1991).

(ASD(HA)) was directed to establish policies and requirements, and to issue instructions, to implement the DNA registry.

Since the summer of 1992, the military services have been sending DNA specimens from service members to the DoD DNA registry. The DNA registry includes a DNA identification laboratory and a specimen repository. As of the end of 1995, over 1.2 million specimens had been collected⁸ from active duty personnel, reservists, and national guard personnel.

The ASD(HA) was additionally authorized to direct the termination of the Department of Defense (DoD) dental panograph repository in a phased plan that would not compromise the DoD remains identification capability. Remains identification through the use of dental radiographs, to include full mouth panographs, is one of the more conventional methods of remains identification. This phase out has been scheduled to occur no earlier than the year 2002, with completion of the DNA specimen collection currently projected for 2001.

In January 1993, the ASD(HA) issued a second memorandum providing additional interim guidance for the DNA registry.⁹ In this memorandum, the ASD(HA) more specifically set out the

⁸ Press Release, *supra* note 2, at 1.

⁹ Memorandum, Assistant Secretary of Defense, to Secretaries of the Military Departments, subject: Establishment of a Repository of Specimen Samples to Aid in Remains Identification Using Genetic Deoxyribonucleic Acid (DNA) Analysis (5 Jan. 1993).

justifications for a central DNA specimen repository for service members. This memorandum explained that, as demonstrated in the Persian Gulf war, the advancement of modern weaponry and its destructiveness on the human body had created a proportional need to advance the science of remains identification. Scientific advancement in remains identification included the new capabilities developed in DNA analysis.

This second ASD(HA) memo additionally noted that the Congressional interest in the use of DNA as an improved method of remains identification further prompted the new DNA registry. The fiscal year 1992 Senate Armed Services Committee Report¹⁰ stated:

The committee inquired into the desirability of blood storage and deoxyribonucleic acid (DNA) testing as an improved method for the identification of remains. At a hearing conducted by the Subcommittee on Manpower and Personnel, Defense Department officials generally endorsed moving toward this newer, more efficient technology. The committee expects the Assistant Secretary of Defense for Health Affairs to give the Subcommittee a status report on plans in this area at medical hearings next year.

At the service level, implementation of the DNA registry and specimen repository has been via "how-to" type memoranda¹¹

¹⁰ S. REP. NO. 113, 102nd Cong., 1st Sess. 231 (1991).

¹¹ Memorandum, Director, Medical Programs and Resources, Office of the Surgeon General, Department of the Air Force, HQ USAF/SG, to Distribution List, subject: Procedures for the Department of Defense (DoD) Registry and Specimen Collection Program for Genetic Deoxyribonucleic Acid (DNA) Analysis-

specifying procedures and timetables for the collection of specimens and supply type instructions for use of the DNA kits. DoD has not promulgated a directive providing definitive guidance on the policy and implementation of the DNA registry, as development of the DNA registry is on-going.

B. DNA Characteristics.

DNA analysis is a useful method of remains identification because of its ability to provide positive identification of remains when conventional methods fail. DNA analysis can be used where only small fragments of a service member's remains can be found. Conventional methods such as fingerprint comparison, serological comparison, medical radiograph or dental panograph comparisons often cannot be used in such situations.

The science of DNA analysis is constantly being improved.¹² The analysis relies on complex methods of isolating the human genetic material from an individual's

ACTION MEMORANDUM (16 Feb. 1994); Message, Chief of Naval Operations, Department of the Navy, subject: Collection of DNA Reference Specimens to Aid in Remains Identification (101355Z Dec 93); Message, Commandant, U. S. Marine Corps, subject: Program Implementation Guidance for the Collection of DNA Reference Specimens (280900Z Sep 94); Memorandum, Director of Human Resources, Office of the Deputy Chief of Staff for Personnel, Department of the Army, DAPE-HR-PR, to Distribution List, subject: Establishment of a Specimen Collection Program for DNA Analysis (11 Feb. 1993).

¹² Beverly Berz, *Promising new technique may accelerate genome mapping; sequence tagged sites*, 262 JAMA 2353 (1989).

blood, saliva, bones, semen, or hair root cells, for example, and comparing that DNA with a DNA reference specimen. The reference specimen may be a pre-existing specimen from the deceased, or may be a specimen from one of the deceased's blood relatives.

There are a number of different DNA typing techniques, including amplified fragment length polymorphism, multi-locus restriction fragment length polymorphism, single locus restriction fragment length polymorphism, polymerase chain reaction (PCR),¹³ and mitochondrial DNA typing.¹⁴ The DoD DNA registry depends primarily on the PCR based techniques of DNA analysis and the mitochondrial DNA typing techniques.

DNA is a dual molecular strand that looks like a microscopic spiral ladder.¹⁵ The DNA is made up of 23 pairs of distinct chromosomes. Of these 46 total chromosomes, one half are contributed from the individual's mother and the other half from the individual's father. There are roughly three billion "base pairs" held within these 46 chromosomes, or

¹³ For an excellent discussion of these typing techniques from a legal perspective, see 2 PAUL C. GIANNELLI & EDWARD J. IMWINKELRIED, *SCIENTIFIC EVIDENCE* § 18 (2d ed. 1993).

¹⁴ For an excellent discussion of Mitochondrial DNA analysis techniques, see Mitchell M. Holland et al., *Mitochondrial DNA Sequence Analysis of Human Remains*, 46 *CRIME LAB. DIG.* 109 (1995).

¹⁵ Kamrin T. MacKnight, *The Polymerase Chain Reaction (PCR): The Second Generation of DNA Analysis Methods Takes the Stand*, 9 *COMPUTER & HIGH TECH. L.J.* 287, 291 n.18 (1993).

about 100 million base pairs per chromosome. A base pair is a combination of two organic bases, also called nucleotides. There are four different types of nucleotides, each with a common pairing system. Adenine (A) naturally pairs with thymine (T), and guanine (G) naturally pairs with cytosine (C).¹⁶ Once paired, these nucleotides are called genes. Genes will occur in different sequences at particular locations on the chromosome and are what determine our physiological characteristics. While the vast majority of human DNA is identical from one person to the next, there are many areas on the chromosomes containing genes with sufficient variation in their base pairings to be individually unique.¹⁷

DNA is present in almost every cell of the body, but in quantities ordinarily too small for analysis. For this reason, the DNA must be amplified in a process that can replicate it more than a million-fold. This process of DNA replication is called Polymerase Chain Reaction (PCR). An appropriate analogy for PCR is a genetic photocopy machine.¹⁸ PCR is not the analytical method, but rather facilitates the DNA analysis by producing sufficient amounts of DNA to be compared.

¹⁶ *Id.*

¹⁷ *Id.* at 292.

¹⁸ *Id.* at 304.

Once replicated, the DNA is heated and the dual strands separate. These DNA single-strand templates are then combined with one of any number of available primers. Primers are genetically engineered segments of DNA with known gene sequences, designed to bind to target sites on the template DNA strands that contain the gene sequences of interest.¹⁹ Scientists have identified locations on DNA that have large numbers of genetic variation. These locations, or polymorphisms, are the areas of the DNA that provide enough differentiation between individuals to provide an identification. Once these polymorphisms are isolated and charted, the gene sequences from two different sources can then be compared to make an identification.

DNA analysis is not a perfected science. Laboratory techniques for analyzing DNA can fail because the technology underlying the analysis is not fully developed or because of human error. Human error leads to the highest number of inconclusive or incorrect conclusions in the complex and multi-step techniques of DNA typing. In lab tests conducted by three civilian laboratories in 1988, 148 of 150 samples were correctly typed. Of the 2 remaining samples, human error contributed to at least one incorrect match.²⁰ The same blind

¹⁹ *Id.* at 305 n.79.

²⁰ 2 PAUL C. GIANNELLI & EDWARD J. IMWINKELRIED, *SCIENTIFIC EVIDENCE* § 18 (2d ed. 1993) citing Thompson, *The Myth of DNA Fingerprints*, 9 CAL. LAW. 34 (Apr. 1989).

tests were conducted with the same three laboratories in 1990. This time, 140 of 150 samples were correctly typed. The remaining 10 samples were either inconclusive or incorrectly typed.²¹ While no explanation was provided for the better results achieved in the first round of tests, laboratory error was suggested as the problem. The multiple steps in the DNA typing procedure provide many opportunities for human error.

The danger of contamination of DNA samples with bacterial, viral, or other human DNA also exists. The battlefield is not a sterile place, and is not well suited for isolating DNA samples from other contaminants. The violent circumstances that render remains identification by DNA analysis necessary are also the circumstances most likely to intermingle DNA materials with surrounding contaminants.

Additionally, a phenomenon called "band shifting" occurs when bands of DNA do not align correctly with one another during the DNA typing process.²² When this occurs, bands from the same person will not look the same under comparison and the result will appear to be either a non-match or inconclusive.

When done correctly, DNA analysis is effective in telling much more about the individual than any other method of

²¹ 2 GIANNELLI & IMWINKELRIED, *SCIENTIFIC EVIDENCE* § 18 (citing Starrs, *The Fallibility of Forensic DNA Testing: Of Proficiency in Public and Private Laboratories--Part One*, 15 SCI. SLEUTHING REV. 10 (1990)).

²² 2 GIANNELLI & IMWINKELRIED, *supra* note 20, § 18-4.

remains identification. This single characteristic is both the value of the identification technique and the danger to individual privacy.

In the U.S., the National Institutes of Health and the Department of Energy are funding the Human Genome Project²³ at a cost of \$180 million per year.²⁴ The Human Genome Project, now in its sixth year, is working to chart the exact sequence of the 3 billion base pairs that make up the human genome. During this research, genes are examined for complex traits such as height, weight, intelligence, aggression, shyness, athletic or artistic ability and sexual orientation.²⁵ Genes are also examined to identify diseases. There are gene screening programs specifically for Tay-Sachs disease, cystic fibrosis, Huntingtons disease, Duchenne muscular dystrophy, alcoholism, and susceptibility to certain types of cancer.²⁶

Scientific knowledge of the human genome is still in its infancy. Yet the advances made to date are phenomenal. Scientists have found a tumor suppresser gene that works to

²³ For background on the history and purpose of the Human Genome Project, see Joseph D. McInerney, *The Human Genome Project and biology education*, 45 *BIOSCIENCE* 786 (1995).

²⁴ Victor Chase, *Genome Project Faces Scientific, Business Hurdles*, 37 *R & D* 24 (1995).

²⁵ McInerney, *supra* note 23, at 787.

²⁶ Sharon Begley, *Holes in those genes: not even DNA can live up to all the hyped claims*, *NEWSWEEK*, Jan. 15, 1996, at 57.

prevent tumor growth on bones,²⁷ and have identified the FHIT gene that is believed to block tumor growth in the colon, lungs and esophagus.²⁸

While this type of technology can serve the interests of individuals, groups, or agencies, sometimes these interests compete.²⁹ To the individual, a cancer risk screening can identify areas of necessary medical treatment. However, an insurance company can use this same information to deny coverage for certain types of illnesses or to deny insurance coverage altogether. The insurance industry has been ominously quiet during the debate on how new genetic technologies will affect our personal, professional, and business relationships. This silence should not be mistaken for a lack of interest, though.

We have not yet mastered the science of DNA analysis to the point where a drop of blood, semen or saliva, or a bone or tooth chip, can yield the genetic codes of the donor to such a degree of accuracy that a physiological image could be produced showing the donor's physical characteristics and behavioral profile. However, that time is not far away, considering the level of scientific expertise and financial

²⁷ Charles Henderson, *Scientists one step closer to understanding cancer*, *CANCER BIOTECH. WKLY.*, Dec. 25, 1995, at 7.

²⁸ *Headline News* (CNN television broadcast, Feb. 24, 1996).

²⁹ McInerney, *supra* note 23, at 790.

resources this country is dedicating to the development of DNA technology.

In 1981, an American forensic serologist stated that "absolute individualization of blood, while theoretically possible, is not a practical goal for any laboratory."³⁰ This technology was not available in the 1980s. The technology has exploded in the last decade, and today, commercial and government laboratories are capable of "absolute individualization" of blood samples, and use these techniques to identify individuals. This technological explosion can reasonably be expected to continue to an extent that is difficult to imagine today.

The Human Genome Project holds the prospect of making genetics the science of the future and the central feature in the health-care future.³¹ The danger of plunging into a massive undertaking like the DNA specimen collection of over two and a half million active duty and reserve service members is that, without adequate statutory and regulatory controls on the dissemination of the specimens, personal confidentiality may be lost. The potential for allowing an individual's genetic information to be marshaled by the U.S. government and

³⁰ Randolph N. Jonakait, *Will Blood Tell? Genetic Markers in Criminal Cases*, 31 EMORY L.J. 833, at 834 (1982) (citing GRUNBAUM, POTENTIAL AND LIMITATIONS OF FORENSIC BLOOD ANALYSIS, HANDBOOK FOR FORENSIC INDIVIDUALIZATION OF HUMAN BLOOD AND BLOODSTAINS 1, at 2 (B. Grunbaum ed. 1981)).

³¹ McInerney, *supra* note 23, at 790.

other governmental and civilian organizations has never been greater. The military's DNA specimen collection program should not be approached in a cavalier manner. The implications of such a massive program upon the greater U.S. population must be considered.

III. Concerns Identified.

The DoD DNA collection program does not appear to have received the same degree of consideration as did the military's urinalysis and HIV testing programs discussed below. In particular, the following concerns are raised about how the DoD DNA registry has been implemented and its potential impact on service member privacy interests.

A. *DNA Sampling Involves a Large Population.*

The Secretary of the Army was designated the Executive Agent for the DNA registry, and was directed to coordinate work and conduct periodic review of the program with ASD(HA), Assistant Secretary of Defense (Force Management and Personnel) (ASD(FM&P)) and Assistant Secretary of Defense (Reserve Affairs) (ASD(RA)). The ASD(FM&P) was included to ensure that all active duty, reserve and national guard component personnel will be required to provide a sample for inclusion into the DNA registry. This implementation is

intended to ensure that testing will be orderly and all-inclusive.

Combined services active duty personnel strengths authorized for fiscal year 1992 were 1,886,400.³² For the reserves the number was 1,151,046.³³ By 1995, authorized active duty and reserves end strengths were 1,525,692³⁴ and 989,247,³⁵ respectively. While the initial collection program is scheduled through 2001, DNA collections will never be complete. To maintain a DNA specimen on every active duty and reserve service member, collection will need to continue as long as the U.S. military accessions new personnel. Even after the initial specimen collection program has been completed, the DoD DNA registry can be expected to grow at a rate of between 200,000 to 300,000 specimens per year indefinitely. A broader sampling of DNA for inclusion into a single specimen repository is difficult to imagine.

B. Conventional Methods of Identification Still Necessary.

³² National Defense Authorization Act for Fiscal Years 1992 and 1993, Pub. L. No. 102-190, § 401, 105 Stat. 1349 (1991).

³³ National Defense Authorization Act for Fiscal Years 1992 and 1993, Pub. L. No. 102-190, § 411, 105 Stat. 1351 (1991).

³⁴ National Defense Authorization Act for Fiscal Year 1995, Pub. L. No. 103-337, § 401, 108 Stat. 2743 (1994).

³⁵ National Defense Authorization Act for Fiscal Year 1995, Pub. L. No. 103-337, § 411, 108 Stat. 2746 (1994).

Implementation of the DNA registry does not preclude the need for other procedures for remains identification such as fingerprint comparison, serological analysis, medical radiograph and dental radiograph comparisons. These conventional techniques of remains identification are still being used to the greatest extent possible to ensure accurate identification of remains and the expeditious return of remains to the next-of-kin. These conventional methods of remains identification are also far less expensive than remains identification using DNA analysis. For these reasons, the phase-out plan for the dental panograph program, initially set for 1998, has been postponed until 2002.

American fatalities as a result of Operations Desert Shield and Desert Storm totaled 376;³⁶ 12 additional deaths occurred after the 11 April 1991 cease-fire. Of this total number of 388 deaths, two cases required DNA analysis in the identification process. Of these two cases, DNA analysis provided a positive identification in one and ruled out a tentative identification in the second.³⁷ Conventional methods of remains identification are the most expedient and least expensive avenues to positive remains identification. Remains

³⁶ Desert Shield/Desert Storm casualty statistics were provided by Mr. James Canik, Deputy Program Manager, DoD DNA Registry (on file with author).

³⁷ Identification statistics were provided by Mr. James Canik, Deputy Program Manager, DoD DNA Registry (on file with author).

identification efforts can be supported by DNA analysis, but will never consist solely of DNA analysis.

C. *Financial Costs of DNA Registry.*

The DNA registry is expensive. It is administered by the Armed Forces Institute of Pathology (AFIP) and funded from the budget of the Armed Forces Medical Examiner System. The DNA registry's budget for fiscal year 1995 was \$6.5 million.³⁸ For fiscal year 1996, the figure is \$7.2 million. Projected budgets for fiscal years 1997 through 2001 are \$7.4 million, \$7.0 million, \$6.4 million, \$6.6 million, and \$6.0 million, respectively.³⁹

Specimen collection kits cost roughly \$3 apiece. Total specimen collection kit expenses for fiscal year 1995 were \$2.8 million. For fiscal year 1996, the figure is \$3.3 million. Projected specimen collection kit costs for fiscal years 1997 to 2001 range from \$3.3 million in 1997 to \$1.4 million in 2001.⁴⁰

The actual DNA analysis procedure has its costs as well. Depending on the method of analysis performed, costs can range

³⁸ DoD DNA Registry fiscal statistics were provided by Mr. James Canik, Deputy Program Manager, DoD DNA Registry (on file with author).

³⁹ *Id.*

⁴⁰ *Id.*

from \$150 using one of the least complex methods, to between \$10,000 and \$20,000 using the more complex analysis methods.⁴¹ The different types of DNA analysis are discussed above.

The total cost of this program for fiscal years 1995 through 2001 is projected to be \$47,198,500. This figure does not include the cost of employing distinguished pathologists and scientists on staff at the AFIP.⁴²

D. *DNA Specimen Accessibility.*

Access to the DNA specimens is not sufficiently limited. Security measures have been implemented for the DNA registry that attempt to preclude access to the registry for any purpose other than remains identification. However, the ASD(HA) memoranda do not foreclose the possibility of outside access into the registry in extraordinary cases for purposes other than remains identification or where no reasonable alternative means of obtaining a specimen for DNA profile analysis is available.⁴³ Unfortunately, this provision does not

⁴¹ Telephone Interview with James Canik, Deputy Program Manager, DoD DNA Registry (Mar. 19, 1996).

⁴² 10 U.S.C.A. § 176(c) (West Supp. 1996). The AFIP is authorized to enter into agreements with the American Registry of Pathology for the services of a waivable limit of six distinguished pathologists or scientists of demonstrated ability and experience.

⁴³ Memorandum, *supra* note 9, para. B.2.

define what an extraordinary case would be. But it is reasonable to conclude that many organizations will have increasing interest in accessing the DNA specimens within the DNA registry, particularly as the technology continues to develop, and more information is available from the DNA samples. Health care professionals, insurance companies and federal and state law enforcement agencies potentially all have interest in the DNA specimens within the registry. The employers of the hundreds of thousands of reservists and national guard personal may additionally have an interest in DNA specimens of their employees.

While the stated intention of ASD(HA) is to limit access to the DNA registry for any purpose other than remains identification, the lack of statutory or regulatory guidance on how the specimens are to be protected is a major flaw in the system. The guidance to those who control access could theoretically change from day to day unless specific mandates, statutory or regulatory, are in place to limit access to DNA specimens and proscribe uses of the specimens for all but remains identification.

E. Seventy-five Year DNA Specimen Retention.

The DNA registry does not have an adequate policy for DNA specimen disposal when they are no longer needed for remains identification. The AFIP, in operating the DNA registry, was tasked to establish criteria and procedures for the disposal

of specimens. Current policy provides for 75 year specimen retention. This specimen retention policy bears little relation to the number of years DNA specimens would need to be available for remains identification, and does not appear to be justifiable. Many service members serve no longer than an initial active duty commitment of four years. Others stay on active duty or in the reserves for twenty years to thirty years.⁴⁴ Retention of the DNA specimens for a length of time that far exceeds that which would be needed to accomplish the mission of the DNA registry is improper. The concern over this long storage period is compounded by the lack of procedures built into the system that would provide a means for service members to retrieve their DNA specimens from the DNA repository upon leaving active duty or the reserves.

F. Compliance With the Privacy Act.

The second ASD(HA) memorandum mandated that the DNA registry will comply with the Privacy Act.⁴⁵ However, no specific procedures to implement compliance were provided. The DNA registry is subject to the Privacy Act because it involved the creation of a system of records to facilitate retrieval of the specimens. A system of records is defined as

⁴⁴ The maximum service limits for the Army are found at 10 U.S.C. §§ 3911-3924 (1959 & West Supp. 1996).

⁴⁵ 5 U.S.C. § 552a (1988).

"a group of any records under the control of any agency from which information is retrieved by the name of the individual or by some identifying number, symbol, or other identifying particular assigned to the individual."⁴⁶ The creation of a system of records requires publication of a systems notice in the Federal Register. The systems notice creates constructive notice to all who join the military that submission of a DNA specimen will be required. The proposal for a new systems notice for the DoD DNA registry was published in the Federal Register in June, 1995,⁴⁷ thus beginning the period open for public comment upon the proposed new system. This publication occurred three years after DNA specimen collection began. The early collection of DNA specimens for inclusion in the DoD DNA repository appears to have violated the civil and criminal liability provisions of the Privacy Act⁴⁸ and the DoD Directive implementing the act.⁴⁹ Specimens collected before the system notice publication date in the Federal Register were improperly collected without adequate notice to the service members involved.

⁴⁶ *Id.* § (a)(5).

⁴⁷ DOD DNA Registry, 60 Fed. Reg. 31287 (1995).

⁴⁸ 5 U.S.C. § 552a(g), (i).

⁴⁹ DEP'T OF DEFENSE, DIR. 5400.11-R, PRIVACY PROGRAM, ch. 10 (31 Aug. 1983).

Additionally, the Privacy Act requires the agency to establish appropriate administrative, technical, and physical safeguards to ensure the security and confidentiality of records and to protect against any anticipated threat or hazards to their security or integrity which could result in substantial harm, embarrassment, inconvenience, or unfairness to any individual on whom information is maintained.⁵⁰

Technical and physical safeguards have been created by the AFIP to protect the confidentiality and security of DNA specimens. However, as mentioned above, these safeguards are inadequate to preclude access to DNA specimens for reasons other than remains identification.

IV. Constitutionality of DNA Collection Program.

A. *Applicable Constitutional Standard.*

The Fourth Amendment to the United States Constitution provides that the Federal Government shall not violate "[t]he right of the people to be secure in their persons, houses, papers, and effects, against unreasonable searches and seizures, ... and no Warrants shall issue, but upon probable cause, supported by Oath or affirmation, and particularly describing the place to be searched, and the persons or things

⁵⁰ 5 U.S.C.A. § 552a(e)(10) (West Supp. 1996).

to be seized." These Fourth Amendment guarantees apply to searches and seizures conducted by officers of the United States military.⁵¹ Compelled blood collection from service members constitutes a seizure and any subsequent testing constitutes a search, both actions being subject to the prohibitions of the Fourth Amendment.⁵²

The Fourth Amendment does not, of course, proscribe every governmental search of an area in which an individual has a legitimate expectation of privacy. The constitutionality of a governmental search or seizure is measured by a reasonableness standard. Reasonableness depends on all of the circumstances surrounding the search or seizure and the nature of the search or seizure itself.⁵³ Whether a particular search or seizure meets the reasonableness standard is judged by balancing its intrusion on the individual's Fourth Amendment interests against its promotion of legitimate governmental interest.⁵⁴ In the military, this involves balancing military necessity against service members' privacy interests.

⁵¹ See *Committee For GI Rights v. Callaway*, 518 F.2d 466, 476 (1975).

⁵² See discussion *infra* p. 31.

⁵³ *United States v. Montoya de Hernandez*, 473 U.S. 531, 537 (1985).

⁵⁴ *Skinner v. Railway Labor Executives' Association*, 489 U.S. 602, 619 (1989) (quoting *Delaware v. Prouse*, 440 U.S. 648, 654 (1979)).

1. *Military Necessity*--The extent to which the DNA registry promotes a legitimate military necessity is open to debate. Arguably, the necessity for the program is low because more conventional methods of remains identification are successful in the overwhelming majority of cases.

a. *Definition of Military Necessity*--There is, of course, no precise formula courts apply in determining what constitutes legitimate military necessity. When evaluating whether military needs justify a particular restriction on a constitutionally protected interests of service members, courts give great deference to the professional judgment of military authorities concerning the relative importance of a particular military interest.⁵⁵ However, this deference cannot be the basis for sustaining that which reason and analysis indicate is untenable.⁵⁶

The interaction between military necessity and fourth amendment protections is often tenuous. Courts are frequently split on whether military necessity outweighs privacy interests in any particular case. The balance can be difficult to strike.⁵⁷ The Fourth Amendment must take into

⁵⁵ *Goldman v. Weinberger*, 475 U.S. 503 (1986).

⁵⁶ *United States v. Grunden*, 2 M.J. 116, 121 (C.M.A. 1977).

⁵⁷ See, e.g., *United States v. Hessler*, 7 M.J. 9, 11 (C.M.A. 1979) (Perry, J., dissenting) ("While I do not suggest that a military necessity exception to the warrant requirement would

account the exigencies of military necessity in a myriad of situations, such as inspections⁵⁸ and gate searches.⁵⁹ The military necessity in controlling the prevalence of illegal drugs in the military has been widely documented and has justified warrantless searches⁶⁰ and compulsory urinalysis without individualized suspicion of illegal drug use.⁶¹

However, in other situations the courts have analyzed service members' Fourth Amendment protections much like civilians' Fourth Amendment protections. Especially in areas where the effect on the military is minimal, a traditional fourth amendment analysis should be used. For instance, in *United States v. Hay*,⁶² an intrusion into service members' pockets and wallets for unauthorized ration control cards, meal cards and identification cards was held to be unjustified

be inappropriate, I do suggest that no exigency recognized in current Fourth Amendment jurisprudence is present in this case").

⁵⁸ *United States v. Middleton*, 10 M.J. 123 (C.M.A. 1981); *United States v. Brown*, 12 M.J. 420 (C.M.A. 1982).

⁵⁹ *United States v. Harris*, 5 M.J. 44 (C.M.A. 1978) (gate searches at military installation); *United States v. Unrue*, 47 C.M.R. 556 (C.M.A. 1973) (dual roadblock checkpoint system within military installation).

⁶⁰ *United States v. Acosta*, 11 M.J. 307 (C.M.A. 1981); *United States v. Hessler*, 7 M.J. 9 (C.M.A. 1979); *United States v. Davis*, 8 M.J. 79 (C.M.A. 1979).

⁶¹ *Murray v. Haldeman*, 16 M.J. 74 (C.M.A. 1983).

⁶² *United States v. Hay*, 3 M.J. 654 (A.C.M.R. 1977).

without a showing that a problem with these items was plaguing the unit or was adversely affecting military discipline, security, or privileges.⁶³ The court found that less intrusive measures available for solving the problem should have been considered.

"Military necessity" means that any action which infringes on a Fourth Amendment interest must be as carefully limited in time, place and scope as possible⁶⁴ to minimize the intrusion while still ensuring effectiveness of the action. The greater the Fourth Amendment interest, the greater a showing of military necessity will be required. The malleability of military necessity has its limits. Chief Judge Everett once indicated that, while the military community is unique, the power of an armed service over its members is not unlimited. Even in the interests of military necessity, military authorities are not free to create a police state within the military society.⁶⁵

b. *Application to DNA Collection Program--Remains* identification is the military necessity proffered for the DoD

⁶³ *Id.* at 656.

⁶⁴ *United States v. Biswell*, 406 U.S. 311, 315 (1972); *United States v. Unrue*, 47 C.M.R. 556, 560 (C.M.A. 1973).

⁶⁵ *United States v. Reed*, 24 M.J. 80, 85 (C.M.A. 1987) (Everett, C.J., concurring).

DNA registry.⁶⁶ Nearly every cell of a person's body contains a unique genetic marker. For this reason DNA identification has gained favor as the most reliable technique of identification. Because of the destructive capacity of modern weapons on the human body, there is some level of risk that classical techniques of remains identification, fingerprint comparison, serological analysis, and dental or medical radiographic analysis, will not be useful. As discussed above, each of the classical techniques of remains identification will continue to be used to the greatest extent possible to ensure the accurate identification of remains.⁶⁷

The United States Navy-Marine Corps Court of Criminal Appeals, in the unpublished decision *United States v. Vlacovsky*,⁶⁸ found that the military need for identifying data

⁶⁶ Memorandum #47803, Deputy Secretary of Defense, to Secretaries of the Military Departments, subject: Establishment of a Repository of Specimen samples to Aid in Remains Identification Using Genetic Deoxyribonucleic Acid (DNA) Analysis (16 Dec. 1991); Memorandum and Policy Statement, Assistant Secretary of Defense (Health Affairs), ASD(HA), to Secretaries of the Military Departments, subject: Establishment of a Repository of Specimen Samples to Aid in Remains Identification Using Genetic Deoxyribonucleic Acid (DNA) Analysis (5 Jan. 1993); Memorandum, Assistant Secretary of Defense (Health Affairs), ASD(HA), to Service Secretaries, subject: Memorandum of Instruction of Procedures for the Collection and Shipment of Specimens for Submission to the Deoxyribonucleic Acid (DNA) Specimen Repository (9 Mar. 1994).

⁶⁷ See *supra* note 9. While the Deputy Secretary of Defense authorized the Assistant Secretary for Health Affairs to direct the termination of the dental panograph repository in a phased plan coincident with the establishment of the DNA repository, the repository has not been terminated.

on service members justified the DoD DNA collection program. Citing *United States v. Fagan*,⁶⁹ the court described the military need to identify remains as an overriding obligation of the armed forces to maintain complete and accurate identifying data regarding their service members. The court found the need to identify combat casualties and aircraft-disaster victims for the purpose of notifying next of kin and assisting dependents to be self-evident.

However, the logic of the *Vlacovsky* case is flawed. The *Fagan* case, upon which the *Vlacovsky* court relied, involved compulsory fingerprinting. The *Fagan* decision relied on a list of precedents holding that persons have no enforceable expectations of privacy in their physical characteristics, such as facial appearance, voice and handwriting exemplars, and fingerprints.⁷⁰ In *Fagan*, a fourth amendment balancing of the military interest, identifying criminal suspects, would weigh more heavily than the privacy interest in a fingerprint, in which no enforceable expectation of privacy existed.

Such a lop-sided balance, however, did not exist in the *Vlacovsky* case. The military interest in *Vlacovsky* is to

⁶⁸ No. 9500919 (N.M.Ct.Crim.App. Oct. 25, 1995), *pet. denied*, No. 96-6003 (15 Feb 1996). The court heard the case in the context of a government appeal of a preliminary issue brought under UCMJ art. 62(b) (1988). The court was not conducting a fourth amendment analysis on the merits of the case.

⁶⁹ *United States v. Fagan*, 28 M.J. 64, 69 (C.M.A.), *cert. denied*, 493 U.S. 823 (1989).

⁷⁰ *Id.* at 68.

create a DNA specimen registry that includes all service members' DNA. The effort would enhance the ability to identify only a very small percentage of remains that cannot be identified using conventional remains identification methods. This military interest must be balanced against the service member's heightened privacy interests in DNA. On the other hand, the fingerprint involved in *Fagan* was a physical characteristic in which the service member had no legitimate expectation of privacy. These distinctions in military necessity and privacy interests are completely disregarded by the *Vlacovsky* court.

The United States District Court for the District of Hawaii has also ruled on this issue in the related civil case, *Mayfield v. Dalton*.⁷¹ In this case service members sued to prevent being court-martialed after refusing an order by their battalion commander to provide a sample of their DNA for inclusion in the DoD DNA repository. The District Court, denying the service members' motions for summary judgment and to certify a class of those service members similarly situated, discussed how the military has used DNA analysis to help with remains identification since Operation Desert Storm in 1991. While recognizing that the taking of blood and other body fluids constitutes a "seizure" subject to the Fourth Amendment, the court found that the military demonstrated a

⁷¹ *Mayfield v. Dalton*, Civil No. 95-00344 (D. Haw. Sept. 8, 1995).

compelling interest in both its need to account internally for the fate of its service members and in ensuring the peace of mind of service members' next of kin and dependents in time of war. The court further found that this compelling interest measured against the minimal intrusion presented by the taking of blood samples and oral swabs from service members is reasonable and not prohibited by the Constitution.

Interestingly, the court found the greatest benefit of DNA collection to be the peace of mind of the next of kin. The court wrote, "[a]lthough the military itself undoubtedly has a significant interest in being able to confirm which of its members have fallen in battle, and which ones may have been taken prisoner or are otherwise unaccounted for, it is the next of kin of service members who will derive the greatest benefit, and solace, from the speedy and definite identification of their loved ones."⁷² Instead of a resounding endorsement of the military's need to account internally for the fate of its service members, the court focused on the interests of the next of kin.

The District Court went on the find that remains identification was a benign purpose and that any further intrusion into a service member's DNA sample was speculative and therefore a non-justiciable controversy.⁷³ The court

⁷² *Id.* at 7.

⁷³ *Id.*

evaluated the intrusion more like it would a Fifth Amendment due process issue and found that the means of collecting the sample was reasonable. No consideration was given to the heightened privacy interest warranted by DNA collection.

The use of the term "military necessity" or "government interest" is not a talisman in whose presence the protections of the Constitution vanish.⁷⁴ Absent from these opinions is the type of analysis of the military necessity of the DoD DNA registry that will be required to uphold the program against a Fourth Amendment challenge. For the DNA collection process to be reasonable, the need for the program must justify the broad scope of DNA collection. As discussed above, the use of DNA analysis to identify two out of 388 fatalities during operations Desert Shield and Desert Storm do not provide that justification.

The need for DNA identification should not be confused with the need for remains identification. Other reliable means of remains identification have not been abandoned in lieu of the creation of the DoD DNA registry. The implementation guidance for the DNA registry does not clarify the relative preference of identification methods, but does provide that fingerprint comparison, serological analysis, or medical and dental radiograph comparisons should be used to

⁷⁴ United States v. Grunden, 2 M.J. 116 (C.M.A. 1977).

the greatest extent possible in ensuring the accurate identification of remains.⁷⁵

For example, from operations Desert Shield and Desert Storm, 13% of the 388 service member remains were capable of positive identification using only fingerprint analysis. A positive identification was possible on another 18% of the remains using only dental records. A positive identification was possible on another 63% of remains using both fingerprint analysis and dental records. The last 6% of the remains were identified using "other" methods, including visual inspection and medical records. Included in this 6% are the two cases in which DNA analysis was used.

To date, only the talisman has been presented. While there is some utility in remains identification using DNA analysis, evidence supporting the military necessity of a full-blown DNA specimen collection has not been established.

2. *Privacy Interests in DNA*--An expectation of privacy in one's own body is one that should be recognized and honored against all but the most legitimate governmental intrusions. Wholesale intrusions that can be expected to provide only limited usefulness should not be undertaken.

⁷⁵ Memorandum and Policy Statement, Assistant Secretary of Defense (Health Affairs), ASD(HA), to Secretaries of the Military Departments, subject: Establishment of a Repository of Specimen Samples to Aid in Remains Identification Using Genetic Deoxyribonucleic Acid (DNA) Analysis, attachment, at 1 (5 Jan. 1993).

a. *Service Members' Privacy Interest in DNA*--The Fourth Amendment requires that the military necessity of DNA specimen collection in the military be balanced against service members' privacy interests in their DNA. The Supreme Court has recognized that "[N]othing is more clear than that the Fourth Amendment was meant to prevent wholesale intrusions upon the personal security of our citizenry...."⁷⁶ Since the intent of the DoD DNA collection program is to collect well over 2.5 million specimens by the year 2001,⁷⁷ the program will infringe on a large cross-section of our society. Whether this specimen collection effort is reasonable depends, in part, upon whether a service member has a reasonable expectation of privacy in his or her DNA, and whether that expectation of privacy is one that society is willing to recognize.⁷⁸

As discussed above, no science has ever more broadly impacted upon individual privacy than DNA analysis. The

⁷⁶ *Davis v. Mississippi*, 394 U.S. 721, 726 (1969).

⁷⁷ See *supra* notes 12-15. With roughly 2.5 million service members in the military in any particular year, and assuming a 200,000 to 300,000 person turn-over in the military per year, the number of samples stored in the DNA registry could be expected to increase at a number equal to all new accessions for any year, quickly exceeding the 2.5 million specimen figure.

⁷⁸ *Katz v. United States*, 389 U.S. 347 (1967) (Harlan, J., concurring).

relevant privacy interest is the vast amount of physiological information which the DNA specimens in the registry contain. The DNA registry consists of specimens of dried whole blood and oral swabs containing buccol cells,⁷⁹ which contain large amounts of DNA. The full range of information available from DNA is impossible to predict because of the character of the specimens and the length of time for specimen storage. This privacy interest is unrelated to the interest one has in his or her fingerprints or dental records, because it is impossible to obtain the extraordinary amount of personal details from fingerprints or dental records that DNA can yield.

Arguably, the concerns over the DNA registry's invasion of privacy are irrelevant, since the DNA analyzed during the remains identification process is said to be "non-coding" DNA.⁸⁰ Non-coding DNA is a product of DNA analysis that is capable of individual identification but that is not sufficiently specific to allow health inferences to be drawn

⁷⁹ The DoD DNA specimen collection kit consists of a blood stain on a special fiber composition card, an buccol cell oral swab in a vial with preservatives, a right index fingerprint and the donor's signature. Additional information kept on each service member in the registry includes social security number, branch of service, sex, race and ethnic origin, address, place and date of birth, and relevant past and present kindred information.

⁸⁰ Press Release, *supra* note 2, at 3.

therefrom.⁸¹ However, using this method of measuring a service member's privacy interest in his or her DNA is unwarranted.

First, such measurement assumes that the DoD DNA registry only uses non-coding DNA analysis and will hereafter exclusively use the analysis methods. This assumption may well prove unfounded since DNA analysis is rapidly developing and testing methods and protocols must change accordingly. The remains identification effort must include the best science and techniques available. Current protections must be sufficient to ensure the privacy and confidentiality of the DNA specimens. Second, it assumes that all blood and buccal cell specimens are analyzed and coded upon receipt, and then are destroyed, with only the non-coding DNA being stored. This is not the current protocol of the DNA registry.⁸²

The Fourth Amendment protects the right of the people to be secure "in their persons". This guarantees the privacy, dignity, and security of persons against arbitrary and invasive acts by officers of the government or those acting at their direction.⁸³ The Supreme Court has held that the non-consensual extraction of blood implicates Fourth Amendment privacy rights.⁸⁴ This privacy interest can be divided into

⁸¹ *Id.*

⁸² *Id.*

⁸³ *Skinner v. Railway Labor Executives' Association*, 489 U.S. 602, 613-14 (1989).

two separate parts.⁸⁵ The first is the interest in bodily integrity implicated by the physical intrusion necessary to obtain the blood sample. The second is the privacy interest implicated by the collection and storage of DNA.

The invasion of bodily integrity involved in the DNA collection program is not so serious as to cause the program to be unreasonable. Blood collection for inclusion into the DNA specimen kit can be done either by the fingerstick method or the venipuncture method.⁸⁶ The fingerstick method involves the use of a fingerstick device that pricks the finger, producing a small amount of blood. The blood is then dropped on a specimen card. The fingerstick device is intended to be used only once, thereby reducing the risk of infection from the procedure.

The venipuncture method involves the use of standard needle-to-arm procedures with blood collected in a vacutainer tube. The blood is then removed from the vacutainer tube with a disposable pipette and is dropped onto the specimen card.

⁸⁴ *Id.* at 616 (physical intrusion, penetrating beneath the skin, infringes a reasonable expectation of privacy); *Schmerber v. California*, 384 U.S. 757, 767 (1966) (compulsory blood test "plainly involves the broadly conceived reach of a search and seizure under the Fourth Amendment").

⁸⁵ *Rise v. Oregon*, 59 F.3d 1556 (1995).

⁸⁶ Memorandum, Assistant Secretary of Defense (Health Affairs), to Service Secretaries, subject: Memorandum of Instruction of Procedures for the Collection and Shipment of Specimens for Submission to the Deoxyribonucleic Acid (DNA) Specimen Repository, attachment 1, para. 4.B. (9 Mar. 94).

While not specifically provided for in the implementation memos from ASD(HA), the various services require that only persons with the requisite medical procedures training will collect DNA specimens.

The Supreme Court held in *Schmerber v. California*,⁸⁷ and repeated in *Skinner v. Railway Labor Executives' Association*,⁸⁸ that a blood sample taken by a physician in a hospital environment according to accepted medical practices was reasonable and was commonplace in these days of periodic physical examinations. The quantity of blood extracted is minimal, and for most people the procedure involves virtually no risk, trauma, or pain.⁸⁹

The procedures used in the DoD DNA collection program for drawing blood involve very little danger to the service member's health through risk of infection and pose only a minimal intrusion upon Fourth Amendment interests in bodily integrity. The relative intrusiveness of the DNA collection procedure on this interest in bodily integrity is put into context with a consideration of the facts in *Winston v. Lee*.⁹⁰

Rudolph Lee was shot in the left side of his chest while attempting to rob a shopkeeper. Police sought to gain the

⁸⁷ 384 U.S. 757 (1966).

⁸⁸ 489 U.S. 602 (1989).

⁸⁹ *Id.* at 625.

⁹⁰ 470 U.S. 753 (1985).

bullet from Lee's chest and to use it as evidence against Lee. A doctor testified that general anesthesia would be required for the surgery because of the bullet depth. The Court ruled that the reasonableness of surgical intrusions beneath the skin depends on a case-by-case approach, in which the individual's interests in privacy and security are weighed against society's interest in conducting the procedure to obtain evidence. The Court enjoined this surgery after finding that such a procedure performed without the patient's consent and under general anesthesia requiring a large incision and an increased risk of infection and injury to muscle, nerves, and blood vessels was sufficiently compelling to outweigh the state's interest in obtaining evidence of his guilt or innocence.⁹¹ Clearly, the DoD DNA collection program does not involve this level of invasion.

The more significant privacy interest is that implicated by the collection and storage of DNA from the service member. In December 1995, Joseph D. McInerney⁹² published an article

⁹¹ The Court additionally found that the compelling state interest to gather evidence in this case was diminished by the fact that substantial additional evidence of the respondent's guilt was available to the state.

⁹² Joseph D. McInerney is director of the Biological Sciences Curriculum Study (BSCS), Pikes Peak Research Park, Colorado Springs, Colorado. He joined the BSCS staff in 1977 and has been director since 1985. He has directed the development of three BSCS instructional modules on the Human Genome Project as well as BSCS programs on immunology, evolution, and genetic technology.

for the American Institute of Biological Sciences in which he wrote:

Technologies often have unintended consequences. Almost all technologies are developed for specific purposes, yet many have side effects that are unintended, and worse, undesired. DNA analysis has raised questions of privacy to levels heretofore thought unimaginable. Furthermore, the impact of unintended consequences multiplies rapidly with the introduction of public-health initiatives such as voluntary or mandatory genetic screening and testing.⁹³

McInerney goes on to say that the unintended consequences of technology are more likely to occur in the absence of thorough planning.

The Supreme Court also held in *Schmerber* that a compelled intrusion into the body for blood to be analyzed for alcohol content must be deemed a Fourth Amendment search, finding that one has an expectation of privacy in his or her blood that society is prepared to recognize as reasonable.⁹⁴ In 1989, the Supreme Court reaffirmed this position in *Skinner*. In relation to blood tests for railroad employees involved in safety violations and railway accidents, the Court found that, "[i]n light of our society's concern for the security of one's person [citations omitted], it is obvious that this physical intrusion, penetrating beneath the skin, infringes an expectation of privacy that society is prepared to recognize

⁹³ Joseph D. McInerney, *The Human Genome Project and biology education*, 45 *BIOSCIENCE* 786 (1995).

⁹⁴ *Schmerber*, 384 U.S. at 767-768.

as reasonable. The ensuing chemical analysis of the sample to obtain physiological data is a further invasion of the tested employee's privacy interests."⁹⁵

The Court here recognized that the physiological data in one's blood was in fact a legitimate privacy interest. This demonstrates the difference between the privacy interests in blood and the comparatively negligible interests in fingerprints. The Court, unable to consider the explosion of scientific capabilities to be experienced in the field of DNA analysis in the 1990s and beyond, nonetheless insightfully found that chemical analysis of urine, like that of blood, could reveal a host of private medical facts about a person, including whether he or she is epileptic, pregnant, or diabetic.⁹⁶

The privacy interest in blood is greater because of the additional amount of information potentially available. Based on the amount of information that can be gleaned from presently available DNA analysis techniques and the techniques that are likely to be developed over the length of time DNA specimens are to be stored in the DoD DNA registry, the privacy interests in DNA are more compelling than any the Supreme Court has considered to date.

⁹⁵ *Skinner*, 489 U.S. at 617.

⁹⁶ *Id.*

The recognition of an increased privacy interest in the information contained in bodily fluids is not solely a creation of the Supreme Court. The Federal District Court for the district of New Jersey, for example, found such a privacy interest as early as 1986. In *Capua v. City of Plainfield*,⁹⁷ that court ruled that, "[b]oth blood and urine can be analyzed in a medical laboratory to discover numerous physiological facts about the person from whom it came, including, but not limited to recent ingestion of alcohol or drugs. As with blood, each individual has a reasonable expectation of privacy in the personal 'information' bodily fluids contain".⁹⁸ The Federal District Court for the district of Iowa reached a similar conclusion one year earlier in *McDonnell v. Hunter*.⁹⁹ The court was considering a Fourth Amendment challenge to a mandatory urinalysis program for the officers in a civilian correctional facility. In finding the correctional officers' reasonable privacy interest in their own urine, the court wrote:

One does not reasonably expect to discharge urine under circumstances making it available to others to collect and analyze in order to discover the personal physiological secrets it holds, except as part of a medical examination. It is significant that both blood and urine can be analyzed in a medical laboratory to discover numerous

⁹⁷ 643 F. Supp. 1507 (D.N.J. 1986).

⁹⁸ *Id.* at 1513.

⁹⁹ 612 F. Supp. 1122, 1127 (D.Iowa 1985), *modified*, 809 F.2d 1302 (8th Cir. 1987).

physiological facts about the person from whom it came, including but hardly limited to recent ingestion of alcohol or drugs. One clearly has a reasonable and legitimate expectation of privacy in such personal information contained in his body fluids.¹⁰⁰

In contrast, individuals do not have a privacy interest in physical features that are regularly exposed to the public, like voice patterns,¹⁰¹ handwriting,¹⁰² and fingerprints.¹⁰³ The Supreme Court ruled in *United States v. Dionisio*,¹⁰⁴ citing its earlier decision in *Katz v. United States*,¹⁰⁵ that the Fourth Amendment provides no protection for what a person knowingly exposes to the public. The Court found that the physical characteristics of a person's voice, its tone and manner, as opposed to the content of a specific conversation, are constantly exposed to the public, and that no person can have a reasonable expectation that others will not know the sound of his voice, any more than he can reasonably expect that his face will be a mystery to the world.¹⁰⁶

¹⁰⁰ *Id.*

¹⁰¹ *United States v. Dionisio*, 410 U.S. 1 (1973).

¹⁰² *United States v. Mara*, 410 U.S. 19 (1973).

¹⁰³ *Cupp v. Murphy*, 412 U.S. 291 (1973).

¹⁰⁴ 410 U.S. 1 (1973).

¹⁰⁵ 389 U.S. 347 (1967).

¹⁰⁶ *Dionisio*, 410 U.S. at 14.

With respect to handwriting, the Supreme Court ruled in *United States v. Mara*¹⁰⁷ that like speech, handwriting is repeatedly shown to the public, and there is no more expectation of privacy in the physical characteristics of a person's script than there is in the tone of his voice.¹⁰⁸ To most people, handwriting is a means of communication and is by its very nature intended to be shared with others.

And in relation to fingerprints, the Court ruled in *Cupp v. Murphy*¹⁰⁹ that they, like voice exemplars and handwriting, do not go beyond mere physical characteristics constantly exposed to the public, and the act of fingerprinting an individual does not constitute the type of severe intrusion upon cherished personal security that is subject to constitutional scrutiny.¹¹⁰ These rulings are not so broad as to extend to, and thereby reduce, the privacy interests in DNA.

Additionally, an individual's status as a service member does not justify a reduced expectation of privacy in his or her DNA. The COMA has ruled that, "[s]ince the military is,

¹⁰⁷ 410 U.S. 19 (1973).

¹⁰⁸ *Mara*, 410 U.S. at 21.

¹⁰⁹ 412 U.S. 291 (1973).

¹¹⁰ *Id.* at 295 (distinguishing *Davis v. Mississippi*, 394 U.S. 721 (1969) where the respondent's detention by police was illegal, thereby tainting the fingerprints obtained therefrom).

by necessity, a specialized society separate from civilian society, [citations omitted] it is foreseeable that reasonable expectations of privacy within the military society will differ from those in the civilian society.¹¹¹ This line of reasoning can be taken to an illogical extreme; yet very few people would subscribe to the notion that service members waive their constitutional right to be free from unreasonable governmental intrusions by virtue of their military status.

The Supreme Court likewise has ruled that the legitimacy of any certain privacy expectation of the individual may depend upon the individual's legal relationship with the government.¹¹² An individual having voluntarily placed himself or herself into a regulated position has been found to be justification for a reduced expectation of privacy. For instance, in *National Treasury Employees Union v. Von Raab*,¹¹³ persons who elected to apply for positions within the Customs Service which required them to carry firearms or be involved in drug interdiction found themselves with a reduced expectation of privacy with regard to the Service's drug screening program.¹¹⁴ Likewise, in *Skinner*, railroad employees' expectations of privacy with regards to breath,

¹¹¹ *United States v. Morris*, 28 M.J. 8, 10 (C.M.A. 1989).

¹¹² *Vernonia School District v. Acton*, 115 S. Ct. 2386 (1995).

¹¹³ 489 U.S. 656 (1989).

¹¹⁴ *Id.* at 667.

blood and urine drug and alcohol testing were diminished by their participation in an industry that was regulated pervasively to ensure safety.¹¹⁵ Similarly, in *Vernonia School District v. Acton*,¹¹⁶ the Supreme Court found a diminished expectation of privacy for students¹¹⁷ with regards to

¹¹⁵ 489 U.S. 602, 627 (1989).

¹¹⁶ 115 S. Ct. 2386 (1995).

¹¹⁷ The unhappy marriage of logic between a "voluntarily weakened" privacy interest and a non-traditional governmental intrusion is demonstrated by the Court's finding in *Acton*. The school district's mandatory urinalysis program was aimed at student athletes. The Court, in finding a diminished expectation of privacy for the students who chose to be participants in athletics, wrote:

Legitimate privacy expectations are even less with regard to student athletes. School sports are not for the bashful. They require 'suiting up' before each practice or event, and showering and changing afterwards. Public school locker rooms, the usual sites for these activities, are not notable for the privacy they afford. The locker rooms in [this district] are typical: no individual dressing rooms are provided; shower heads are lined up along a wall, unseparated by any sort of partition or curtain; not even all the toilet stalls have doors. As the United States Court of Appeals for the Seventh Circuit has noted, there is 'an element of communal undress inherent in athletic participation'.

Many of these students were probably surprised to discover that they had voluntarily relinquished their rights of bodily integrity and to be free from intrusive drug testing merely by showering and dressing in the same area with other athletes. The voluntariness of this type "consent" is subject to dispute.

In addition, a custodial and tutelary responsibility for children does not justify the result in *Acton*. The Court

urinalysis drug testing because of their voluntary participation in the district's athletic program.¹¹⁸

The problem with finding a reduced expectation of privacy in such situations is that it condones mandatory waivers of constitutional protections before the respective benefit is granted to the individual. Before being hired for a job, or as a condition of continued employment, or before a high school student can participate in sports, the individual must consent to the particular governmental intrusion. The result is an unjustifiable reduction of otherwise legitimate expectations of privacy. There is no sport in balancing these "voluntarily weakened" privacy interests against a governmental intrusion. Once otherwise legitimate privacy interests are weakened in this manner, a finding that the governmental intrusion is reasonable cannot be long in coming.

As long as the consent is knowing and voluntary, however, the reduced expectation of privacy is understandable. Far different is the situation in which an individual has voluntarily become a member of an organization subject to some form of non-traditional governmental intrusion without notice or the opportunity to consent to the intrusion. This is the

opined that by reason of the prevalence of student vaccinations and physical exams, public schoolchildren in general, and student athletes in particular, have a diminished expectation of privacy. However, the correlation between drug testing and medical examinations, to include vaccinations, is tenuous at best.

¹¹⁸ Vernonia School District v. Acton, 115 S. Ct. 2386, 2393 (1995).

situation many in the military find themselves in with regard to the DoD DNA collection program. In this situation, it is meaningless to argue a compromised expectation of privacy when the area of intrusion is outside the more traditional areas of governmental intrusion. Having one's DNA collected for inclusion into a central repository has heretofore been a governmental intrusion only experienced by convicted felons and sexual offenders.¹¹⁹

Relying on the service member's military status as the justification for a generalized diminished expectation of privacy unjustifiably denies significant and reasonable Fourth Amendment protections. The better analysis recognizes the full import of the service member's privacy interest in his or her DNA and then balances this against the governmental interest in remains identification.

b. *Felons' and Sexual Offenders' Privacy Interests in DNA*--In our society today, the only group of individuals who have been subjected to compulsory DNA sampling for inclusion into a central government DNA registry are convicted felons and sexual offenders.¹²⁰ Several state and federal district courts have upheld state statutes authorizing prison

¹¹⁹ See *Rise v. Oregon*, 59 F.3d 1556 (9th Cir. 1995) (finding the creation of a DNA identification data bank reasonable after felons and sexual offenders convicted).

¹²⁰ *Id.*

officials to obtain blood samples from different classes of convicted persons for purposes of creating DNA data banks.¹²¹ The sampling schemes vary. Some states sample all felons, while others only sample persons convicted of murder or a sexual offense. The courts have generally found that a conviction for a violent felony or a sexual assault deprives the person of any and all legitimate expectations of privacy in the identifying information derived from blood sampling.¹²²

The comparative privacy interests in one's DNA with regards to service members and felons have never been before the Supreme Court. The case law that supports the proposition that persons with felony convictions give up their privacy interests in their genetic information would extend to an illogical conclusion with the further proposition that service members completely give up their privacy interests upon joining the military.¹²³

The Supreme Court has, however, had the opportunity to compare school children's Fourth Amendment right to be free from unreasonable searches to that of felons. In *New Jersey v. T.L.O.*,¹²⁴ a girl was suspected of smoking cigarettes in a school lavatory. Based on these suspicions, school officials

¹²¹ *Id.* at 1561 n.3.

¹²² *Id.* at 1560.

¹²³ *Id.*

¹²⁴ 469 U.S. 325, 338-39 (1985).

opened her purse and found cigarettes, confirming their suspicions. Instead of then concluding the search, school officials proceeded to thoroughly search every part of the purse, and evidence of drug distribution was additionally found. New Jersey argued that there was a fundamental incompatibility of expectations of privacy with the maintenance of a sound educational environment, such that a child can have virtually no legitimate expectation of privacy in articles of personal property brought to school.

T.L.O. argued that students did not lose their Fourth Amendment protections upon entering the school yard and that the portion of the search extending beyond the discovery of the cigarettes violated legitimate expectations of privacy. The Court rejected this argument. It took note of the difficulty of maintaining discipline in the public schools, but found that "...the situation is not so dire that students in the schools may claim no legitimate expectations of privacy."¹²⁵

The Court went on to articulate a distinction between the Fourth Amendment protections afforded school children and those afforded to prisoners. The court wrote:

We have recently recognized that the need to maintain order in a prison is such that prisoners retain no legitimate expectations of privacy in their cells, but it goes almost without saying that '[t]he prisoner and the schoolchild stand in wholly different circumstances, separated by the harsh facts of criminal conviction and incarceration.'

¹²⁵ *Id.* at 338.

[citation omitted]. We are not yet ready to hold that the schools and the prisons need be equated for purposes of the Fourth Amendment.¹²⁶

This logic applies with equal force to answer those who claim that by joining the armed forces, one gives up legitimate expectations of privacy and any Fourth Amendment protections that a U.S. citizen enjoys. To paraphrase the language in *T.L.O.*, felons and service members stand in wholly different circumstances, separated by the harsh facts of criminal conviction and incarceration. Service members are entitled to a greater privacy interest in their genetic information than are convicted felons and sexual offenders. To equate the two is unjustifiable and can only undermine the trust that exists between the military and its personnel.

B. *Fourth Amendment Balancing Test.*

In most criminal cases, the Supreme Court balances governmental necessity against privacy interests using the procedures described in the Warrant Clause of the Fourth Amendment. The Framers deemed that a warrant based on probable cause and supported by oath or affirmation was the procedure that best balanced governmental interests with the individual's privacy interest in bodily integrity and to be free from unreasonable governmental intrusion. Where a search is undertaken by law enforcement officials to discover

¹²⁶ *Id.* at 338-39.

evidence of criminal acts, the Supreme Court has found that reasonableness generally requires a judicial warrant based on probable cause.¹²⁷

However, probable cause is not an irreducible requirement of a valid search or seizure. The fundamental command of the Fourth Amendment is that searches and seizures be reasonable, and although "both the concept of probable cause and the requirement of a warrant bear on the reasonableness of a search, ... in certain limited circumstances neither is required."¹²⁸ In his concurring opinion in *New Jersey v. T.L.O.*, Justice Blackmun wrote that "[o]nly in those exceptional circumstances in which special needs, beyond the normal need for law enforcement, make the warrant and probable-cause requirement impracticable, is a court entitled to substitute its balancing of interests for that of the Framers."¹²⁹ That principle was again expressed by the Supreme Court in *Von Raab* four years later, where the Court said:

While we have often emphasized, and reiterate today, that a search must be supported, as a general matter, by a warrant issued upon probable cause [citations omitted], our decision in [*Skinner v. Railway Labor Executives*] reaffirms the long-standing principle that neither a warrant nor probable cause, nor, indeed, any measure of individualized

¹²⁷ *Id.* (citing *Payton v. New York*, 445 U.S. 573, 586 (1980)).

¹²⁸ *Id.* at 341 (quoting *Almeida-Sanchez v. United States*, 413 U.S. 266, 277 (1973) (Powell, J., concurring)).

¹²⁹ *Id.* at 352 (Blackmun, J., concurring).

suspicion, is an indispensable component of reasonableness in every circumstance.¹³⁰

The Court has found that in some circumstances, requiring a warrant based upon probable cause, or requiring any degree of individual suspicion for that matter, adds little to the protections afforded the individual and would completely frustrate the governmental purpose behind the search or seizure. Examples of this usually occur when the governmental intrusion is not in a law enforcement context.

This area of governmental "special needs" beyond normal law enforcement has presented itself in several contexts. Government has shown an interest in regulating many aspects of today's society, including the conduct of railway employees to ensure safety,¹³¹ probationers,¹³² closely regulated industries,¹³³ applicants for sensitive positions within the U.S. Customs service,¹³⁴ maintaining automobile checkpoints looking for illegal immigrants,¹³⁵ school children,¹³⁶ working

¹³⁰ 489 U.S. 656, 665 (1989).

¹³¹ *Skinner v. Railway Labor Executives' Association*, 489 U.S. 602 (1989).

¹³² *Griffin v. Wisconsin*, 483 U.S. 868 (1987).

¹³³ *United States v. Burger*, 482 U.S. 691 (1987).

¹³⁴ *Von Raab*, 489 U.S. at 656.

¹³⁵ *United States v. Martinez-Fuerte*, 428 U.S. 543, 560-61 (1976).

spaces of government employees,¹³⁷ and prison inmates.¹³⁸ In each of these instances, the balancing test employed by the Court involved neither a warrant based upon probable cause, nor in most cases, any level of individualized suspicion. Additionally, in each of these cases where the Court employed a balancing test, the government intrusion was found to be reasonable.¹³⁹

The governmental intrusion into the veins of service members for a DNA specimen best fits within this category of "special needs" beyond normal law enforcement. The proposed systems notice published in the Federal Register¹⁴⁰ provides that the DoD DNA registry was created for the purpose of remains identification. Requiring probable cause or even any degree of individualized suspicion before the government could collect DNA specimens would completely frustrate the government need for this non-law enforcement program. DNA

¹³⁶ *T.L.O.*, 469 U.S. at 325.

¹³⁷ *O'Connor v. Ortega*, 480 U.S. 709 (1987).

¹³⁸ *Bell v. Wolfish*, 441 U.S. 520 (1979).

¹³⁹ The conclusion that the Supreme Court never saw a non-law enforcement governmental intrusion it didn't like is probably unwarranted. But of the cited cases, the Supreme Court found only one portion of one case where, upon remand, it asked the lower court to further develop the record. In *Von Raab*, the Court found the record inadequate for a determination of the reasonableness of drug testing for those employees who applied for promotion to positions where they would handle "classified" information.

¹⁴⁰ DoD DNA Registry, 60 Fed. Reg. 31287 (1995).

specimens are collected based solely on the status as member of the armed forces and not based on probable cause to believe a crime has been committed or based on any degree of individualized suspicion.

The DNA collection program, as seizure of blood from the service member, must meet the Fourth Amendment standard of reasonableness. The appropriate gauge of reasonableness is provided by the Supreme Court in *National Treasury Employees Union v. Von Raab*,¹⁴¹ *Skinner v. Railway Labor Executives' Association*,¹⁴² and *Vernonia School District v. Acton*.¹⁴³

A balance of the relative interests involved in the non-consensual extraction of blood from service members will demonstrate that the program in its present form sweeps too broadly into reasonable expectations of individual privacy. As discussed above, the military's interest in using the DNA registry for remains identification has not been demonstrated to be compelling. On the other hand, the individual service member's privacy interest in his or her own DNA sample and the genetic information contained therein is great.

The Supreme Court has frequently at the outset handicapped the legitimacy of certain individual privacy expectations by finding a special legal relationship between

¹⁴¹ 489 U.S. 656 (1989).

¹⁴² 489 U.S. 602 (1989).

¹⁴³ 115 S. Ct. 2386 (1995).

the individual and the government.¹⁴⁴ However, there should be some rational basis for such special treatment. The purpose for the governmental intrusion should be of sufficient gravity to justify the drastic measure of reducing the individual's privacy interest.

The better approach is not to artificially diminish the expectation of privacy. This would allow for a purer balancing of the individual privacy expectations and governmental necessity. Artificially diminishing the individual privacy interests only ensures that the balance produces a result in favor of governmental intrusion.

In striking the balance between government necessity and privacy interests, it is important to consider whether the governmental intrusion is tailored so as not to unnecessarily invade a legitimate privacy interest. To this end, the Supreme Court has considered to whom results of drug screening tests are disclosed, whether such results are turned over to outside agencies, such as law enforcement, or whether the results of drug screening tests are used for internal disciplinary action.¹⁴⁵

In the DoD DNA registry, none of these questions can be answered by regulation or statute. Additionally, the implementing memoranda for the program do not make clear the

¹⁴⁴ See *supra* text accompanying notes 111-18.

¹⁴⁵ *Acton*, 115 S. Ct. at 2393.

authority by which DNA specimens may be released and upon what criteria such a decision would be based. Presumably, individual discretion in personnel at AFIP and/or ASD(HA) could legally and without threat of penalty release DNA specimens. Without adequate regulatory controls over areas such as the use of DNA specimens, disposition of the specimens after the donor leaves military service, and confidentiality of the specimens, it is apparent that the DoD DNA registry has not implemented adequate safeguards for DNA specimens.

Finally, it is also important to consider the efficacy of the governmental means towards meeting the particular governmental interest. Specifically, it is important to examine how effective the DoD DNA registry is at the task of remains identification. The DoD DNA registry is a new program dependent on developing technology and an incomplete data base. It is not yet an efficient means of remains identification, as other methods of remains identification provide the vast majority of identifications. Similarly, the program is expensive, spending an extraordinary amount of funding for every set of remains identified by DNA analysis.

But these factors alone do not negate the value of the effort behind the DoD DNA registry. The program is an investment in the future. We cannot know what identification challenges exist in the future, but there is an obligation to research and develop new technologies to ensure that the military employs all available means of remains identification techniques.

Another factor to consider when balancing the efficacy of the program is the numbers of personnel that are included in the DNA registry. There can be no doubt that the DNA specimen collection roster could be more narrowly tailored to better represent those service members with the greatest likelihood of being put into harms way. Sample collection incident to pre-deployment physicals could be a useful collection technique.

The broad sweep of the program dwarfs its purpose. The DNA registry is not aimed at curbing debilitating drug use in the military or in school yards. The safety of the U. S. railway system is not at stake. The integrity of our national borders is not involved. Yet the DoD DNA program sweeps more broadly than any one of these other regulatory schemes the Supreme Court has heretofore upheld.

The overly broad scope of the DoD DNA registry and the lack of effective controls over confidentiality, access, and return of samples logically leads to the conclusion that the DoD DNA registry as it is presently configured impermissibly infringes on service members' legitimate expectations of privacy in their genetic information. Such an infringement is not reasonable under the Fourth Amendment.

Once we stray from the warrant requirement and a probable cause standard for measuring the reasonableness of a governmental intrusion, a conceptual free-for-all results from

the unguided balancing tests conducted by the courts.¹⁴⁶ Once in this realm, the Fourth Amendment's protections are easily overcome by a balancing process that overwhelms the individual's protection against unwarranted official intrusion by providing even an unintentional preference to the governmental interest said to justify the search or seizure. Those faced with interpreting what is permitted under this "reasonableness" standard are hopelessly adrift. We should seek to avoid having these Fourth Amendment balancing tests amount to what one former Supreme Court Justice called "brief nods by the Court in the direction of a neutral utilitarian calculus while the Court in fact engages in an unanalyzed exercise of judicial will."¹⁴⁷

DoD collection of service members' DNA for the purpose of remains identification is a sufficiently important governmental interest to warrant a limited intrusion into legitimate service member privacy expectations. The program as it is presently composed overemphasizes the military necessity of the DNA collection program and fails to adequately protect specimen security and confidentiality.

C. DNA Program and the Military Rules of Evidence.

¹⁴⁶ *New Jersey v. T.L.O.*, 469 U.S. 325, 360 (1985) (Brennan, J. dissenting).

¹⁴⁷ *Id.* at 369 (Brennan, J., dissenting).

No Military Rule of Evidence (MRE) purports to allow seizure of blood from service members for remains identification. This point is not, however, dispositive on the issue of whether or not the DNA collection program is constitutional. The MREs seek to codify constitutional rights. To the degree that they fall short, basic constitutional protections remain in effect. If the MREs codify protections for service members greater than those provided by the Constitution, the applicable standard will be that most advantageous to the service member.¹⁴⁸

The seizure of blood for remains identification must meet the Fourth Amendment standard of reasonableness, not because the seizure does not fit neatly within the provisions of one of the MREs applicable to the collection of body fluids, but because a seizure that violates the Fourth Amendment cannot be validated by compliance with an MRE.

The MREs that support the military's urinalysis program, MRE 313(b), and the HIV program, MRE 312(f), do not support the DoD DNA collection program. Similarly, other areas of the MREs that provide for intrusions for body fluids under some circumstances provide no support for DNA collection for remains identification. These MREs are 312(d) and (e), 313(c) and 314(k).

¹⁴⁸ MANUAL FOR COURTS-MARTIAL, United States, MIL. R. EVID. 103(a) analysis, app. 22, at A22-2 (1984) [hereinafter MCM].

MRE 312(d) provides for the nonconsensual extraction of body fluids in two circumstances: (1) pursuant a search warrant or search authorization, or (2) under exigent circumstances "when there is a clear indication that evidence of crime will be found and that there is reason to believe that the delay that would result if a warrant or authorization were sought could result in the destruction of the evidence."¹⁴⁹ Neither of these two situations apply in the DNA collection program where blood is extracted for purposes unrelated to law enforcement and where probable cause and exigent circumstances are of no consequence.

MRE 312(e) likewise broadly contemplates situations in the law enforcement context where a nonconsensual intrusive search of the body is made in a manner other than the visual examination of the body or an intrusion into a body cavity. The intrusive searches governed by MRE 312(e) will normally involve significant medical procedures including surgery and or x-rays.¹⁵⁰ Within this rule also, a search warrant or search authorization is required. Applications of this rule contemplate the enterprise of evidence gathering and do not appear to reach into the non-law enforcement context.

¹⁴⁹ MANUAL FOR COURTS-MARTIAL, United States, MIL. R. EVID. 312(d) (1984) [hereinafter MCM].

¹⁵⁰ MCM, *supra* note 149, MIL. R. EVID. 312(e) analysis, app. 22, at A22-20 (1984).

MRE 312(f) involves intrusions for valid medical purposes. This rule has no application to the collection of DNA specimens for remains identification. By definition, the specimen collection has no intended beneficial medical effect for the service member's health. The DNA specimen becomes relevant only at a time when medical procedures will be of no utility; death is not a treatable medical condition.

The effort to store DNA from every active duty and reserve service member is arguably not an inspection within the purview of MRE 313(b). A press release from the ASD(HA) provides that DNA specimens stored in the DoD DNA registry are not analyzed unless a need arises for DNA identification or for quality assurance testing. For the vast majority of the specimens, no information is generated.¹⁵¹ MRE 313(b) provides that "[a]n inspection is an examination...".¹⁵² Without such an examination, the DNA collection does not meet the first requirement of a military inspection.

Further, an MRE 313(b) inspection must have as its primary purpose the task of ensuring the security, military fitness, or good order and discipline of the unit or organization. The DNA collection program assists to a small degree in the task of accounting for war dead and allowing notification to next of kin concerning the demise of their

¹⁵¹ Press Release, *supra* note 2, at 3.

¹⁵² MCM, *supra* note 149, MIL. R. EVID. 313(b).

loved one. These are certainly important tasks. But they do not readily fit within the definition of an inspection.¹⁵³ The differences between DNA collection as opposed to a barracks inspection or the military's urinalysis program best illustrate this point.

Neither can DNA specimen collection for the DoD DNA registry be justified by MRE 313(c) as an inventory. The drafters intentionally left open the issue of the lawful scope of an inventory,¹⁵⁴ that question often being governed by regulation. While DNA collection may facially resemble an inventory, the rule does not provide a definition of inventory. However, the terms of MRE 313(c) do not distinguish an inventory from an inspection under MRE 313(b). MRE 313(c) provides that "[u]nlawful weapons, contraband, or other evidence of crime discovered in the process of an inventory, the primary purpose of which is administrative in nature, may be seized." Just as in MRE 313(b), contraband discovered in the process of an administrative inspection is admissible at court-martial. This rule provides little new as justification of a compulsory DNA collection program for a non-law enforcement purpose.

MRE 314 provides for a number of searches not requiring probable cause. Of the list, only the last, subparagraph (k),

¹⁵³ See *supra* text accompanying notes 214-18.

¹⁵⁴ MCM, *supra* note 149, MIL. R. EVID. 313(c) analysis, app. 22, at A22-26.

could apply to the nonconsensual extraction of DNA in a non-law enforcement context. MRE 314(k) provides that "[a] search of a type not otherwise included in this rule and not requiring probable cause under Mil. R. Evid. 315 may be conducted when permissible under the Constitution of the United States as applied to members of the armed forces."¹⁵⁵ This rule mandates a balancing of interests approach such as is conducted by the Supreme Court in *Skinner* and *Von Raab*, and adds nothing new of its own.

This issue of whether the military rules of evidence permit the governmental intrusion caused by DNA specimen collection is merely one part of the constitutional analysis of the DNA collection program. This issue alone is not dispositive. The MREs are rules of evidentiary admissibility. Their application, or non-application, as the case may be, to a certain governmental intrusion for non-law enforcement purposes is not the key to the constitutionality of the intrusion. But intrusions that would not provide admissible evidence if the search were for law enforcement purposes are subject to suspicion and should be more critically scrutinized. The constitutional standard the DNA collection program must meet remains the Fourth Amendment reasonableness standard.

¹⁵⁵ MCM, *supra* note 149, MIL. R. EVID. 314(k).

V. Comparison to Other DOD Programs.

Other DoD programs impact upon service member privacy rights. These programs include the military's efforts at remains identification using conventional remains identification methods, the urinalysis program and the HIV testing program. The military necessity of, and privacy interests impacted by, these programs may be considered indistinguishable from the DNA collection program. However, a careful analysis of the military necessity and privacy interests involved in these other DoD programs demonstrates that they are clearly distinguishable from the military necessity and privacy interests entailed in the DNA collection program.

A. *Conventional Methods of Remains Identification.*

The different treatment that should be accorded an individual's DNA and his or her fingerprints or dental radiographs is significant, yet easily overlooked. While many practitioners equate all three as merely different physical characteristics that provide a means of identifying an individual, such an analysis is shortsighted.

1. *Fingerprints*--Fingerprints consist of a series of ridges on the fingertip. Each fingerprint possesses a unique and unchanging pattern. Fingerprint analysis usually depends

on the comparison of a latent print, one recovered from any number of surfaces, against an inked impression placed on clean white paper and stored in a data bank. In a remains identification context, an inked impression is made from the remains and compared to an inked impression stored in a data bank using a scientifically supported comparison technique.¹⁵⁶ Fingerprint analysis is a dependable and currently used method of remains identification. The ability to identify remains using fingerprint technology is of course, dependent on the skin condition of the deceased's fingers and the availability of an inked impression.

Fingerprint analysis can also provide details useful in a criminal investigation. A fingerprint can be evidence of an individual's presence at a certain location, such as the scene of a trespass or a violent crime. A fingerprint can show that a suspect handled an item, such as stolen property. The positioning of a fingerprint may also be relevant, such as the positioning of a writer's palm print on a forged check showing that a suspect signed it. Additionally, techniques are being developed that attempt to determine how long a fingerprint has been present on any certain medium.

Beyond these uses however, a fingerprint tells little else about its donor. An analysis of a fingerprint could not provide information on the race or sex of the donor, or the

¹⁵⁶ For a good description of the various classification and comparison techniques, see 1 PAUL C. GIANNELLI & EDWARD J. IMWINKELRIED, SCIENTIFIC EVIDENCE § 16 (2nd ed. 1993).

donor's eye color or hair color. Likewise, fingerprints are not helpful in determining whether an individual is predisposed to certain diseases. Therefore, collection of fingerprints does not raise the same privacy concerns as collection of DNA.

2. *Dental Radiographs*--Dental radiographs are another useful method of remains identification. Like fingerprints, a person's teeth can provide identifying characteristics useful in making a positive identification of an individual beyond any reasonable doubt.¹⁵⁷ Dental radiographs, and full mouth panographs, are an integral part of the provision of dental care in the military. They are useful in the diagnosis and treatment of conditions ranging from trauma to tooth and surrounding bone structures, to the treatment of wisdom teeth. These radiographs are a pre-existing resource present in the majority of service members' dental records.

Dental radiographs are particularly valuable in the pursuit of remains identification for several reasons. First, teeth are not subject to the same degree of decomposition as flesh, and will therefore remain a useful method of identification long after flesh has decomposed. The teeth can likewise endure the type of trauma that will render the use of skin for fingerprinting impossible. Second, teeth will

¹⁵⁷ *Id.* § 13-2 (citing Rawson et al., *Statistical Evidence for the Individuality of the Human Dentition*, 29 J. Forensic Sci. 245, 252 (1984)).

ordinarily contain sufficient uniqueness to provide a positive identification even if the entire dental anatomy is not recovered. Restorations to teeth, bone structure, and natural anatomy of tooth structures and roots provide the type of detail sufficient for the positive identification of remains. Third, unlike fingerprints, dental examination can provide details helpful in estimating the age of the individual whose remains are recovered.¹⁵⁸ These characteristics make identification from dental radiographs a potentially more useful method of remains identification than by fingerprint comparison.

Dental records, like fingerprint analysis, additionally have an application in the criminal context with the technology of bite mark analysis.¹⁵⁹ Beyond this, however, dental identification techniques, like those for fingerprints, can tell very little about the donor of the dental panograph or partial mouth radiograph. In addition, like fingerprints, remains identification by dental panograph relies on the pre-existence of dental records for comparison to recovered

¹⁵⁸ *Id.* (citing Xiaohu et al., *Age Estimation From the Structure of Adult Human Teeth: Review of the Literature*, 54 FORENSIC SCI. INT'L 23 (1992)).

¹⁵⁹ See R. D. Rawson, *Radiographic interpretation of contrast-media-enhanced bite marks*, 24 J. FORENSIC SCI. 898 (1979); D. B. Nuckles, *Forensic odontology in solving crimes: dental techniques and bite-mark evidence*, 42 GEN. DENT. 210 (1994); *Bite mark evidence: Recognition, preservation, analysis and courtroom presentation*, 55 N. Y. STATE DENT. J. 38 (1989).

remains. Therefore, collection of dental records does not raise the same privacy concerns as collection of DNA.

3. *Serological Analysis*--As a method of remains identification, serological analysis is not as reliable as other methods. Serological analysis consists of a number of blood testing methods applied to the red and white blood cells.¹⁶⁰ These cells carry certain non-DNA markers that can assist in remains identification. Serological analysis can, with varying degrees of certainty, provide information such as whether the source of the blood is human, the race and sex of the blood source, and the blood type or category of the source, including the Rh factor.¹⁶¹ Serological analysis is the predecessor of current DNA analysis procedures. The information available from serological analysis is most useful when there is no reference sample against which to compare recovered remains. In this situation, telltale antigens present on the blood products can be compared with known blood group characteristics in an effort to identify the race and ethnic origin of the donor.

The privacy concern with serological analysis do not equal those with DNA testing, because the information available from serological analysis is not as great.

¹⁶⁰ See 1 GIANNELLI & IMWINKELRIED, § 17.

¹⁶¹ *Id.*

Serological testing is not capable of yielding positive individual identifications and cannot discover genetic anomalies or predispositions to medical conditions that can be determined from DNA analysis. The privacy interest impacted by serological testing lies somewhere between fingerprints and DNA testing.

B. *Urinalysis.*

1. *Background*--American service members stationed within the United States have been subject to compulsory urine tests for illegal drugs since late December 1981 when the Carlucci Memorandum¹⁶² cleared the "final administrative hurdle" to such testing.¹⁶³ The guidelines justifying this compulsory testing¹⁶⁴ stated that:

- a. Mandatory urinalysis testing for controlled substances may be conducted during--
 - (1) An inspection under Military Rule of Evidence 313;
 - (2) A search or seizure under Military Rules of Evidence 311-317;
 - (3) An examination for a valid medical purpose under Military Rule of Evidence 312(f) to determine a member's

¹⁶² See Memorandum, Secretary of Defense, Dep't of Defense (28 Dec. 1981) cited in *Murray v. Haldeman*, 16 M.J. 74 (C.M.A. 1983), as "Carlucci Memorandum".

¹⁶³ For a detailed explanation of the genesis of the U.S. Military's compulsory urine drug testing program in Europe in the early 1970's, see *Committee For GI_Rights v. Callaway*, 518 F.2d. 466, 468 (D.C.Cir. 1975).

¹⁶⁴ *Murray v. Haldeman*, 16 M.J. 74, 77 n.3 (C.M.A. 1983).

fitness for duty; to ascertain whether a member requires counseling, treatment, or rehabilitation for drug abuse; or in conjunction with a member's participation in a DoD drug treatment and rehabilitation program; or (4) Any other examination for a valid medical purpose under Military Rule of Evidence 312(f).

This guidance also precluded use in courts-martial of results obtained under paragraph a.(3) above, except as impeachment or rebuttal.

2. *Urinalysis Program Legality*--Cases that facilitated the move toward compulsory urine drug testing within the American military are *Committee For GI Rights v. Callaway*,¹⁶⁵ *United States v. Trottier*,¹⁶⁶ and *United States v. Armstrong*.¹⁶⁷ In *Callaway*, the Court of Appeals for the DC Circuit, citing Congressional concern over a military drug problem,¹⁶⁸

¹⁶⁵ 518 F.2d. 466 (D.C.Cir. 1975).

¹⁶⁶ 9 M.J. 337 (C.M.A. 1980).

¹⁶⁷ 9 M.J. 374 (C.M.A. 1980).

¹⁶⁸ SENATE CONF. COMM., JOINT EXPLANATORY STATEMENT TO ACCOMPANY AMENDMENTS TO THE MILITARY SELECTIVE SERVICE ACT OF 1967, S. REP. NO. 433, 92d Cong., 1st Sess. (1971), reprinted in 1971 U.S.C.C.A.N. 1495, 1505. Congressional concerns over drug abuse in the military continued into the 1980s. See, e.g., *United States v. Valenzuela*, 24 M.J. 934, 937 (A.C.M.R. 1987) (citing statement by Assistant Secretary of Defense to Congress that "drug use has fostered fragmentation within units promoting divisiveness between drug users and non-drug users").

justified the Army's drug control program in Europe as being a proper response to a "profoundly serious national problem that is having a grave effect on the Armed Forces".¹⁶⁹ That court found warrantless barracks inspections to discover drugs to be reasonable and constitutionally permissible under the Fourth Amendment. The courts conclusion that such inspections were reasonable was based on a balancing of five factors. First, the increased incidence of drug abuse in the Armed Forces poses a substantial threat to the readiness and efficiency of our military forces. Second, it found that the expectation of privacy set out in *Katz v. United States*¹⁷⁰ is different in the military than it is in civilian life. Third, the court determined that the primary purpose of the drug inspections is to protect the health of the unit and assure its fitness to accomplish its mission. Any punitive actions that might follow are incidental. Fourth, the court determined that, given the nature of drugs and drug paraphernalia, unannounced drug inspections appear to be the most effective means of identifying drug users and eliminating illegal drugs from a unit. Fifth, the court found that, in authorizing drug inspections, the Army has attempted to guard the dignity and privacy of the soldier insofar as practical. In the final analysis, the Court found that, "[W]hen these factors are balanced against the GI's interest in his own personal privacy

¹⁶⁹ *Callaway*, 518 F.2d. at 468.

and security, the balance weighs heavily in favor of the drug inspections."¹⁷¹

It is not clear from the opinion that compulsory urinalysis was part of the European Command's drug control program. The issue addressed at the District Court and at the D.C. Circuit Court was whether "warrantless drug inspections" without a showing of probable cause were justified by military necessity, thus satisfying the Fourth Amendment.¹⁷² The case though, did not involve the specific application of the Fourth Amendment to a compulsory urinalysis program.¹⁷³

¹⁷⁰ 389 U.S. 347, 361 (1967) (Harlan, J. concurring).

¹⁷¹ *Callaway*, 518 F.2d. at 477.

¹⁷² *Id.* at 470.

¹⁷³ Military courts infrequently miss an opportunity to emphasize the importance of the commander's authority to inspect the personnel and equipment under his charge. See *Callaway*, *supra*, *United States v. Middleton*, 10 M.J. 123 (C.M.A. 1981), and *Murray*, *supra*, n.3. Warrantless inspections in the civilian sector of society are also permitted, if the activity being inspected falls within the "closely regulated industry" exception to the warrant requirement under the Fourth Amendment. See, e.g., *New York v. Burger*, 482 U.S. 691 (1987) (three step analysis used to determine whether a warrantless inspection of a junkyard conducted pursuant to a state inspection statute was reasonable under the Fourth Amendment); *Marshall v. Barlow's, Inc.*, 436 U.S. 307, 312-313 (1978) (the expectation of privacy in commercial premises is particularly attenuated in "closely regulated" industries. Certain industries have such a history of government oversight that no reasonable expectation of privacy could exist for a proprietor over the stock of such an enterprise); *United States v. Biswell*, 406 U.S. 311 (1972) (warrantless inspection of the premises of a pawnshop operator pursuant to the Gun Control Act of 1968); *Donovan v. Dewey*, 452 U.S. 594, 605-606 (1981) (warrantless inspection of a stone quarry made pursuant to the Federal Mine Safety and

In *Trottier*, the Court of Military Appeals (COMA)¹⁷⁴ reexamined the *ad hoc* approach to jurisdiction established by the Supreme Court in *Relford v. Commandant*.¹⁷⁵ Focusing on subject matter jurisdiction over off-base drug offenses, the court determined that the Supreme Court did not mandate a slavish application of the twelve jurisdictional service-connection factors and that consideration of changing conditions in the military society was permissible. After reemphasizing that drug abuse in the military poses a serious threat to national security, the court held "that almost every involvement of service personnel with the commerce in drugs is 'service-connected'."¹⁷⁶ The court found no meaningful distinction between a service member's on-post and off-post

Health Act of 1977). Similarly, liquor dealers are in "closely regulated industry". See *Colonnade Corp. v. United States*, 397 U.S. 72 (1970).

¹⁷⁴ On 5 October 1994, the National Defense Authorization Act for Fiscal Year 1995, Pub. L. No. 103-337, 108 Stat. 2633 (1994), changed the name of the United States Court of Military Appeals (COMA) to the United States Court of Appeals for the Armed Forces (CAAF). The same act also changed the name of the various Courts of Military Review to the Courts of Criminal Appeals. In this article, the title of the court that was in place at the time the decision was published will be used.

¹⁷⁵ 401 U.S. 355 (1971).

¹⁷⁶ *Trottier*, 9 M.J. 337, 350 n.28 (1980). In only two unusual circumstances would the court find that drug abuse by a service member would not have a major and direct negative impact on the military. While this language appears to have stopped short of adopting a *per se* rule that all drug offenses meet the service-connection standard, its application was indicative of a *per se* approach.

activities, and his or her on-duty or off-duty activities, in relation to the need for the military to be drug-free. With this, the prerequisite for court-martial jurisdiction required by *O'Callahan v. Parker*¹⁷⁷ was satisfied for most off-base drug offenses.

In *Armstrong*, COMA ruled that Article 31, Uniform Code of Military Justice,¹⁷⁸ did not protect service members from compulsory extraction of a blood sample. The COMA found that "the clearly manifested intent of Congress in enacting Article 31(a) was merely to afford to service persons a privilege against self-incrimination which paralleled the constitutional privilege [provided by the Fifth Amendment]".¹⁷⁹ Use of an accused's blood specimen against him in court as evidence of a crime was accordingly treated no different than voice exemplars¹⁸⁰ or handwriting exemplars.¹⁸¹

This holding was in line with the 1966 Supreme Court decision in *Schmerber v. California*,¹⁸² which held that the privilege against self-incrimination did not extend to an

¹⁷⁷ 395 U.S. 258 (1969).

¹⁷⁸ UCMJ art. 31 (1988).

¹⁷⁹ *United States v. Armstrong*, 9 M.J. 374, 382-83 (1980).

¹⁸⁰ *United States v. Wade*, 388 U.S. 218 (1967).

¹⁸¹ *Gilbert v. California*, 388 U.S. 263 (1967).

¹⁸² 384 U.S. 757 (1966).

accused's blood sample because such a sample lacks evidence of a testimonial or communicative nature. While both *Armstrong* and *Schmerber* dealt with blood samples to be tested for alcohol content, the correlation between blood and urine for purposes of Article 31 analysis is easily made.¹⁸³

Shortly after the *Armstrong* decision, a method of detecting the metabolites of marijuana and hashish in urine was discovered and documented.¹⁸⁴ The military soon began using the results of the urine drug screenings in courts-martial. At this point, the time was ripe to find a case that would apply a Fourth Amendment reasonableness test to a new type of drug inspection, the compulsory urinalysis.

In the 1983 case *Murray v. Haldeman*,¹⁸⁵ the COMA upheld the constitutionality of the military's compulsory urinalysis drug testing program. While the case involved a urine specimen from a member of the Naval service, the Court noted that the questions posed in this case were common throughout the Armed Forces.¹⁸⁶

The court noted, consistent with *Schmerber*, that the use of an accused's blood sample as evidence of guilt does not

¹⁸³ *Murray v. Haldeman*, 16 M.J. 74, 81 (1983).

¹⁸⁴ *United States v. Brown*, 19 M.J. 826, 829 n.5 (1984) (discussion of process and science involved).

¹⁸⁵ 16 M.J. 74 (1983).

¹⁸⁶ *Murray*, 16 M.J. at 77.

fall within the purview of the Fifth Amendment, and, consistent with *Armstrong*, that blood and urine samples are not included within the protections of Article 31.¹⁸⁷ Next, the court found that compulsory urine testing did not violate due process. It noted that the manner of obtaining the urine sample was non-intrusive; it involved no physical intrusion into the accused's body. On the other hand, stomach pumping, catheterization, or drawing of blood¹⁸⁸ all involve intrusions which may violate due process, as did the stomach pumping procedures used by the police in *Rochin v. California*.¹⁸⁹

¹⁸⁷ *Id.* at 80-81.

¹⁸⁸ *Id.* at 81.

¹⁸⁹ 342 U.S. 165 (1952). The *Rochin* decision was delivered by Mr. Justice Frankfurter. The pertinent part of the facts were described in these details:

Inside [the deputies] found petitioner sitting partly dressed on the side of the bed, upon which his wife was lying. On a "night stand" beside the bed the deputies spied two capsules. When asked "Whose stuff is this?" Rochin seized the capsules and put them in his mouth. A struggle ensued, in the course of which the three officers "jumped on him" and attempted to extract the capsules. The force they applied proved unavailing against Rochin's resistance. He was handcuffed and taken to a hospital. At the direction of one of the officers a doctor forced an emetic solution through a tube into Rochin's stomach against his will. This "stomach pumping" produced vomiting. In the vomited matter were found two capsules which proved to contain morphine.

The court then focused on the Fourth Amendment prohibition against unreasonable searches and seizures. The COMA reiterated its position that the protections provided by the Fourth Amendment apply to service members,¹⁹⁰ citing *United States v. Middleton*,¹⁹¹ and *United States v. Ezell*.¹⁹² The court also noted that the application of the Fourth Amendment takes into account the exigencies of military necessity and unique conditions in the military society. However, it found that "[w]hen it is suggested that a different rule should apply to military searches and seizures than to those in the civilian community, some burden exists to show the need for such a variation".¹⁹³ In addition, the court found that the taking of a urine sample is a "seizure" for purposes of the Fourth Amendment. Within this position is the assumption that

¹⁹⁰ The C.M.A. has long held that the entire Bill of Rights applies to members of the military services unless expressly or by necessary implication a provision is made inapplicable. *United States v. Jacoby*, 11 U.S.C.M.A. 428, 29 C.M.R. 244 (1960); *United States v. Stuckey*, 10 M.J. 347 (C.M.A. 1981) (Bill of Rights applies with full force to men and women in military service unless any given protection is, expressly or by necessary implication, inapplicable and, therefore, Fourth Amendment shields the American service person); *United States v. Thatcher*, 28 M.J. 20 (C.M.A. 1989); *United States v. Phillips*, 30 M.J. 1 (C.M.A. 1990); *United States v. Frazier*, 34 M.J. 135 (C.M.A. 1992). But see Lederer and Borch, *Does the Fourth Amendment Apply to the Armed Forces?*, 144 MIL. L. REV. 110 (1994).

¹⁹¹ 10 M.J. 123, 127 (C.M.A. 1981).

¹⁹² 6 M.J. 307, 313 (C.M.A. 1979).

¹⁹³ *Murray v. Haldeman*, 16 M.J. 74, 81 (1983).

there is a reasonable privacy interest in one's urine and the process of urination.¹⁹⁴

COMA noted that in "...a previous program of compulsory urinalysis conducted by the Army in Europe, the Fourth Amendment issue was resolved in favor of the Government in *Committee for GI Rights v. Callaway* [citation omitted]."¹⁹⁵ However, this does not appear to be the case.¹⁹⁶

The court then balanced the government's need for compulsory testing against Fourth Amendment protections using the five factors announced in *Callaway*. It found that the seizure of Murray's urine was reasonable.

¹⁹⁴ This position is set out more explicitly in later cases. See, e.g., *National Treasury Employees Union v. Von Raab*, 489 U.S. 656, 665 (1989) (citing *Skinner v. Railway Labor Executives' Association*, 489 U.S. 602 (1989) (the production of urine sample for chemical testing implicates the Fourth Amendment, as the tests invade reasonable expectations of privacy)).

¹⁹⁵ *Murray*, 16 M.J. at 81.

¹⁹⁶ The *Callaway* case does not clearly identify the degree to which "compulsory urinalysis" constituted the "warrantless drug inspections" provided for in the Army Drug Control Program, and it is clear from note 7 of the *Callaway* decision that the Program involved many different methods of identifying drug abusers. The warrantless drug inspection described in the *Callaway* decision, at page 474 and note 21, involves inspections of rooms, clothing, equipment, arms, and personal items such as wallets, pictures, and open envelopes. Reliance by COMA on the *Callaway* case as precedence for a Fourth Amendment analysis of compulsory urinalysis seems misplaced. Nevertheless, the degree to which the intrusiveness involved in a warrantless inspection of one's urine and one's personal effects are compatible, the Fourth Amendment analysis between the two areas should produce a consistent result.

The court also analyzed the accused's Fourth Amendment rights under Military Rule of Evidence (MRE) 312(d), which had been promulgated after the *Callaway* decision.¹⁹⁷ The COMA found that in the context of MRE 312(d), compelling someone to provide a urine specimen through the normal process of excretion did not amount to an "extraction" as contemplated by the rule.¹⁹⁸ The court reasoned that "extraction" as contemplated by MRE 312(d) referred to procedures more intrusive to the body, such as catheterization or drawing blood with a needle.¹⁹⁹

Ultimately, the Court justified the urinalysis under the same considerations that permit health and welfare inspections. But rather than apply MRE 313(b) as the government suggested, the court relied on MRE 314, dealing with "Searches not requiring probable cause", in particular, subparagraph (k) dealing with "Other searches". This rule indicates that searches not specifically provided for in MRE 314 but proper under the Constitution are also lawful.

¹⁹⁷ The Military Rules of Evidence were promulgated 12 March 1980.

¹⁹⁸ COMA cited as support for this position *United States v. Wade*, 15 M.J. 993, 999 (N.M.C.M.R. 1983), *rev'd on other grounds*, 16 M.J. 115 (C.M.A. 1983).

¹⁹⁹ *Murray*, 16 M.J. at 82. Having thus ruled MRE 312(d) inapplicable to an order to a service member to provide a urine sample for testing, the court additionally found MRE 312(c), "[I]ntrusion into body cavities", and MRE 312(e), "[O]ther intrusive searches" inapplicable to this situation as well.

Premised on its findings that the urinalysis testing was conducted in a non-offensive manner and that the accused had not been singled out in any way for the testing, the court found that the urinalysis was an otherwise constitutional non-probable cause search under MRE 314(k). The court reasoned that, "...it is not necessary--or even profitable--to try to fit compulsory urinalysis within the specific terms of [MRE 313(b)]. We have made clear that a search may be reasonable even though it does not fit neatly into a category specifically authorized by a Military Rule of Evidence."²⁰⁰ The editorial comment to MRE 313(b) provides, in reference to this holding, "[P]resumably, the only limitation on urinalysis under the court's reasoning is that the procedure must be reasonable and that the service member must not be singled out in any way."²⁰¹

In 1984, MRE 313(b) was amended to explicitly permit the compulsory production of body fluids. Since that time the military's compulsory urinalysis program has generally been held an inspection pursuant MRE 313(b),²⁰² thus calling into question the status of *Murray*.

²⁰⁰ *Id.*

²⁰¹ STEPHEN A SALTZBURG ET AL., *MILITARY RULES OF EVIDENCE MANUAL* 298 (3d ed. 1991).

²⁰² *United States v. Gardner*, 41 M.J. 189 (C.M.A. 1994); *United States v. Bair*, 32 M.J. 404 (C.M.A. 1991); *United States v. Bickel* 30 M.J. 277 (C.M.A. 1990);

Compulsory urinalysis testing has also been approved in the civilian sector when the government has been able to provide the courts with a compelling government interest to balance against a citizen's privacy interest.

In *National Treasury Employees Union v. Von Raab*,²⁰³ the Supreme Court approved the U.S. Customs Service's urinalysis drug testing program of employees who applied for or occupied sensitive positions. While the Commissioner of the Service believed that "Customs is largely drug-free",²⁰⁴ the compelling need for a drug testing program was based on the critical mission of the Customs Service, to include drug interdiction, seizure of contraband, direct contact with those who traffic in drugs for profit and the potential for violence or its threat.²⁰⁵ While the Court acknowledged that "[t]he interference with individual privacy that results from the collection of a urine sample for subsequent chemical analysis could be substantial in some circumstances",²⁰⁶ it nevertheless

United States v. Johnston, 24 M.J. 271 (C.M.A. 1987); *United States v. Patterson*, 39 M.J. 678 (N.M.C.M.R. 1993); *United States v. Murphy*, 28 M.J. 758 (A.F.C.M.R. 1989); *United States v. Valenzuela*, 24 M.J. 934 (A.C.M.R. 1987); *United States v. Shepherd*, 24 M.J. 596 (A.F.C.M.R. 1987), *pet. denied*, 25 M.J. 238 (C.M.A. 1987).

²⁰³ 489 U.S. 656 (1989).

²⁰⁴ *Id.* at 660.

²⁰⁵ *Id.* at 559-60.

²⁰⁶ *Id.* at 671.

ruled that a warrant would not be required considering the Service's compelling interests. The Court additionally found that while requiring the Service to get a warrant prior to the drug testing would provide little or nothing in the way of additional protection of personal privacy, such a requirement would compromise the Service's mission if it had to get a warrant every time it wanted to conduct drug testing prior to employment decisions.²⁰⁷ The Court also found that there was no discretion with the official in the field as to what employees would be tested,²⁰⁸ thus justifying the testing in the absence of probable cause based on individualized suspicion. The Court ultimately ruled in favor of the urinalysis testing by finding, "While reasonable tests designed to elicit this information doubtless infringe some privacy expectations, we do not believe these expectations outweigh the Government's compelling interests in safety and in the integrity of our borders".²⁰⁹

²⁰⁷ *Id.* at 667.

²⁰⁸ The Customs Service drug testing program provided for testing of those who met one of three criteria: 1) anyone holding or applying for a position with direct involvement in drug interdiction or enforcement of related laws, 2) anyone whose duties involved the carrying of a firearm, and 3) anyone involved in the handling of classified material. The Court upheld the testing program only with respect to the first two criteria.

²⁰⁹ *Von Raab*, 489 U.S. at 672.

In *Skinner v. Railway Labor Executives' Association*,²¹⁰ the Supreme Court also upheld compulsory urinalysis testing. The *Skinner* case involved regulations promulgated by the Federal Railroad Administration governing drug and alcohol testing of railroad employees involved in major train accidents or incidents, or who violate certain safety rules. The Court found that the employees' reasonable expectations of privacy were diminished by their participation in an industry pervasively regulated to ensure safety of the employees and the public.²¹¹ The Court's holdings on the issues of the lack of need for a search warrant or probable cause were similar to its findings in the *Von Raab* decision.²¹² In validating the drug testing, in this case of urine, blood and breath, the Court found that the nature of the intrusions to individual privacy were minimal and were outweighed by the government's compelling interest in railroad transportation safety. The Court ultimately ruled:

Because the testing procedures...effect searches of the person, they must meet the Fourth Amendment's reasonableness requirement. In light of the limited discretion exercised by the railroad employers under the regulations, the surpassing safety interests served by toxicological tests in this context, and the diminished expectation of privacy that attaches to information pertaining to the fitness of covered employees, we believe that it is reasonable to conduct such tests in the absence of a warrant or

²¹⁰ 489 U.S. 602 (1989).

²¹¹ *Id.* at 627.

²¹² *Id.* at 621; *Von Raab*, 489 U.S. at 665.

reasonable suspicion that any particular employee may be impaired. We hold that the alcohol and drug tests...are reasonable within the meaning of the Fourth Amendment.²¹³

The constitutional validity of the military's compulsory urinalysis program and of civilian programs in certain circumstances is well established. The courts have extensively detailed the necessity for such a program. Balanced against this necessity, the individual service member's constitutionally protected privacy interests have been subordinated.

3. *Urinalysis Program Compared to DNA Program*--The DoD DNA registry and the urinalysis testing program share few similarities. The most important distinguishing feature between the military urinalysis program and the DoD DNA registry is the primary purpose of the respective programs. The primary purpose of the military urinalysis program is to protect the health of the unit and assure its fitness to accomplish its mission by addressing the threat posed by illegal drug use upon military readiness and efficiency. On the other hand, the DoD DNA registry's primary purpose is to identify remains long after combatants have departed the field of battle. In *Mayfield v. Dalton*,²¹⁴ the District Court of

²¹³ *Skinner*, 489 U.S. at 633-34.

²¹⁴ *Mayfield v. Dalton*, Civil No. 95-00344 (D. Haw. Sept. 8, 1995).

Hawaii found that the next of kin of fallen service members will derive the greatest benefit, and solace, from the DNA collection program.

This ultimately demonstrates why the DoD DNA registry could not survive in its present configuration if held to the criteria for an inspection provided in *Committee For GI Rights v. Callaway*.²¹⁵ For example, urinalysis testing was justified because the increased incidence of drug abuse in the armed forces during the 1970s and 1980s posed a substantial threat to the readiness and efficiency of the U.S. military. In contrast, the inability to identify a very small number of remains is not a threat to the readiness and efficiency of the U.S. military. This is an administrative and fiscal issue rather than a combat readiness issue. The benefit of the DNA registry is the administrative ability to identify the small number of remains that cannot be otherwise identified using the conventional techniques of remains identification. There is a definite value to being able to identify every single combat fatality. However, the difference between a positive identification rate of 99.5% and 100% does not impact upon the readiness and efficiency of the U.S. military.²¹⁶ The lessons of Desert Shield/Desert Storm demonstrate that other remains

²¹⁵ 518 F.2d. 466 (D.C.Cir. 1975).

²¹⁶ Percentages derived from Desert Shield/Desert Storm statistics.

identification methods are still quicker and less expensive than DNA analysis.

Another difference is the heightened privacy expectation a service member has in his or her blood as opposed to the privacy expectation one has in a urine sample. As is discussed above, the Supreme Court has recognized the collection of a blood sample to more intrusive than the collection of a urine sample.²¹⁷ The Supreme Court wrote in *Skinner* that "[c]ompelling a person to submit to the piercing of his skin by a hypodermic needle so that his blood may be extracted significantly intrudes on the 'personal privacy and dignity against unwarranted intrusion by the [government],' against which the Fourth Amendment protects."²¹⁸

Lastly, the military urinalysis program was implemented in a manner that sought to guard the service member's dignity and privacy to the greatest extent practicable. Such is not the case with the DoD DNA registry. The lack of regulatory guidance on access to the specimens, dissemination of the specimens to outside requests, length of storage period and inability of service members to retrieve samples once out of the military demonstrate areas that require additional attention.

²¹⁷ *Skinner*, 489 U.S. at 617; *Vernonia School District v. Acton*, 115 S. Ct. 2386, 2393 (1995).

²¹⁸ *Skinner*, 489 U.S. at 644 (citing *Schmerber v. California*, 384 U.S. 757, 770 (1966)).

C. *HIV Testing.*

1. *Background*--Another reason the military collects body fluids, blood in this instance, is to conduct service-wide testing for the Human Immunodeficiency Virus²¹⁹ (HIV). The need for the military to respond to the presence of HIV infection in service members was clear by 1983.²²⁰ Public health officials and blood banks were struggling to address this mysterious health crisis, and medical researchers had not yet developed an HIV test. Health concerns for the U.S. military were only underscored by concerns for the health of the entire U.S. population. The military, as well as society at large, has a compelling interest in having those who defend the nation remain healthy and capable of performing their duty.²²¹ In addition, since the disease can be transmitted through contact with blood, it is important to keep those infected with HIV away from the battlefield where they may

²¹⁹ The Human Immunodeficiency Virus-1 is the virus most commonly associated with the Acquired Immune Deficiency Syndrome (AIDS). For an excellent description of AIDS, see Robert C. Gallo & Luc Montagnier, *AIDS in 1988*, 259 SCIENTIFIC AMERICAN 41 (1988).

²²⁰ C.R.S. by D.B.S. v. United States, 11 F.3d. 791 (8th Cir. 1993).

²²¹ United States v. Woods, 27 M.J. 749 (N.M.C.M.R. 1988), *aff'd*, 28 M.J. 318 (C.M.A. 1989) (citing National Treasury Employees Union v. Von Raab, 489 U.S. 656 (1989)).

transmit the disease more easily to others. The presence of HIV positive service members on the battlefield can increase the risk to non-infected service members during procedures such as organ transplantation and hastily cross-typed battlefield blood transfusions.

The Centers for Disease Control and the Food and Drug Administration led the organizational charge to develop reliable testing methods to address this potentially devastating health risk. Crude testing methods for the presence of HIV infection were developed as early as 1983, and were implemented in the newborn battle against the disease.

In 1985, the military began testing active duty service members for HIV infection.²²² Since that time the program has undergone refinement²²³ to update and improve policy, testing methods, and procedures on identification, surveillance, and

²²² Memorandum, Assistant Secretary of Defense (Health Affairs), ASD(HA), subject: Military Implementation of Public Health Service Provisional Recommendations Concerning Testing Blood and Plasma for Antibodies to HTLV-III (17 Jul. 1985) (canceled); Memorandum, Assistant Secretary of Defense (Health Affairs), ASD(HA), subject: The DoD HTLV-III Testing Program (5 Dec. 1985) (canceled).

²²³ DEP'T OF DEFENSE, DIR. 6485.1, HUMAN IMMUNODEFICIENCY VIRUS-1 (HIV-1) (19 Mar. 1991) (C1, 10 Aug. 1992) [hereinafter DOD Dir. 6485.1]; DEP'T OF ARMY, REG. 600-110, IDENTIFICATION, SURVEILLANCE, AND ADMINISTRATION OF PERSONNEL INFECTED WITH HUMAN IMMUNODEFICIENCY VIRUS (HIV) (22 Apr. 1994); DEP'T OF NAVY, SECRETARY OF THE NAVY INSTR. 5300.30.C, MANAGEMENT OF HUMAN IMMUNODEFICIENCY VIRUS-1 (HIV-1) INFECTION IN THE NAVY AND MARINE CORPS (14 Mar. 1990).

administration of civilian²²⁴ and military personnel in the Department of Defense (DoD).

The testing protocol requires all initially positive results from the enzyme-linked immunosorbent assay (ELISA) testing method to be confirmed using the Western Blot testing method or the supplemental recombinant protein testing method.²²⁵ This sequence of tests produces a result 99.8 percent accurate.²²⁶ Current DoD HIV testing covers active duty and reserve component military personnel, to include applicants for enlisted and commissioned military service. Testing is accomplished biennially for most active duty Army personnel,²²⁷ and on an annual basis for active duty and

²²⁴ DoD DIR. 6485.1, *supra* note 223, encl. 8, provides that civilians may not be mandatorily tested for serologic evidence of HIV infection except as necessary to comply with valid host-nation requirements for screening of DoD employees. Requests for authority to screen DoD civilian employees for HIV must be directed to the Assistant Secretary of Defense (Force Management and Personnel). Only requests that are based on a host-nation HIV screening requirement will be accepted. Requests based on other concerns, such as sensitive foreign policy or medical healthcare issues, will not be considered.

²²⁵ DoD DIR. 6485.1, *supra* note 223, encl. 4, requires the use of only FDA-approved testing methods.

²²⁶ *Virgin Islands v. Roberts*, 756 F. Supp. 898, 900 (D.V.I. 1991) (quoting Report of the Presidential Commission on the Human Immunodeficiency Virus Epidemic 2 (June 1988)).

²²⁷ DEP'T OF ARMY, REG. 600-110, IDENTIFICATION, SURVEILLANCE, AND ADMINISTRATION OF PERSONNEL INFECTED WITH HUMAN IMMUNODEFICIENCY VIRUS (HIV), para 2-2.h. (22 Apr. 1994) [hereinafter AR 600-110].

reserve personnel in the Naval service.²²⁸ HIV testing is conducted during entrance processing and preappointment physicals for enlisted and officer candidate accessions, respectively.²²⁹

Prior to February 10, 1996, active duty personnel testing positive for exposure to HIV infection, but who demonstrate no evidence of immunologic deficiency or clinical indication of disease associated with HIV infection were retained in the service unless some other reason for separation existed.²³⁰ Service members were restricted from overseas duties and, depending on the unique procedures of the different services, were restricted from units normally programmed for deployment and from hazardous duties such as service on flight crews or explosive ordinance disposal units.

On February 10, 1996, new legislation became law mandating discharge of all HIV positive service members.²³¹ On March 19, 1996, the Senate voted to repeal the new legislation

²²⁸ DEP'T OF NAVY, SECRETARY OF THE NAVY INSTR. 5300.30.C, MANAGEMENT OF HUMAN IMMUNODEFICIENCY VIRUS-1 (HIV-1) INFECTION IN THE NAVY AND MARINE CORPS, para. 6 (14 Mar. 1990).

²²⁹ DoD DIR. 6485.1, *supra* note 223.

²³⁰ *Id.* para. F.16 and encl. 10. Separation for cause or for other disciplinary reasons were not precluded by a service member being HIV positive.

²³¹ National Defense Authorization Act for Fiscal Year 1996, Pub. L. No. 104-106, § 1177, 110 Stat. 328 (1996).

requiring that service members with the AIDS virus be discharged.²³² The House has not yet voted on the bill.

The military HIV program limits the permissible uses of information obtained from laboratory tests and from the epidemiological investigation conducted on all service members testing positive for the HIV infection. Positive results of the HIV test cannot be used as an independent basis for adverse disciplinary action, including punitive actions under the UCMJ.²³³ Strict rules of confidentiality apply to the disclosure of a service member's positive HIV test. The various Federal Circuit Courts of Appeals have recognized a person's right to privacy in preventing non-consensual disclosure of an HIV-positive status.²³⁴

²³² Eric Pianin, *Senate Votes to Repeal Requirement That GIs With AIDS Virus Be Released*, WASH. POST, Mar. 20, 1996, at A12.

²³³ DoD DIR. 6485.1, *supra* note 223, encl. 3. However, a positive HIV test can be used to establish the HIV infection of a service member under certain circumstances. For example, if the service member disregards the preventive medicine counseling or the preventive medicine order, or exposes another to the HIV infection, the positive HIV test may be used to establish an element of proof of an offense charged under the UCMJ. See *United States v. Dumford*, 30 M.J. 137 (C.M.A. 1990), *United States v. Womack*, 29 M.J. 88 (C.M.A. 1989), *United States v. Woods*, 28 M.J. 318 (C.M.A. 1989).

²³⁴ See *Harris v. Thigpen*, 941 F.2d. 1495, 1512 (11th Cir. 1991); *Woods v. White*, 689 F. Supp. 874, 876 (W.D.Wis. 1988), *aff'd*, 899 F.2d. 17 (7th Cir. 1990); *A.L.A. v. West Valley City*, 26 F.3d. 989 (10th Cir. 1994) (there is no dispute that confidential medical information is entitled to constitutional privacy protection).

Confidentiality is based on the recognition that dissemination of this information can lead to discrimination in areas such as employment,²³⁵ health and life insurance,²³⁶ and school attendance. Within the military context, reckless dissemination of positive HIV results can unjustly harm an individual's reputation and acceptance within a unit, and cause disruptive and unwarranted apprehension about the spread of the disease. For this reason, an attempt has been made to protect HIV infected service members from unwarranted invasions of their privacy. HIV test results are treated with the highest degree of confidentiality and released to no one without a demonstrated need to know. Command and medical personnel with access to this information must ensure careful, limited distribution.

2. *HIV Program Legality*--HIV testing has not been subject to the same level of judicial scrutiny as the military

²³⁵ See *Doe v. City of Chicago*, No. 94 C 4122, 1994 U.S. Dist. LEXIS 17154, (E.D.Ill. 1994); *Resolution Trust Corp. v. Kolea*, 866 F. Supp. 197 (E.D.Pa. 1994); Dee Lord, *Something in the Genes: EEOC Takes Steps to Forestall Discrimination for Predisposition to Illness*, 82 A.B.A.J. 86 (1996).

²³⁶ Contention between insurance companies and individuals with the HIV infection is neither conjecture nor fanciful speculation. For examples of the problems that arise between an insurer and an HIV positive insured, see *Berkshire Life Insurance Company v. Owens*, 94 Civ. 7556 (LAK), 1996 U.S. Dist. LEXIS 190 (D.C.N.Y. 1996); *Fioretti v. Massachusetts General Life Insurance Company*, 53 F.3d. 1228 (11th Cir. 1995).

urinalysis program. This is probably because service members cannot be criminally prosecuted based solely on the results of the test.

The taking of a blood sample for HIV testing is a seizure and the subsequent testing of the sample is a search.²³⁷ The HIV program's constitutionality can be analyzed using the same criteria set out above for the DNA program. Based on the serious threat HIV poses to the military and the U.S. population, a balance of military necessity against the program's intrusiveness on service members' privacy interests would very likely come out in favor of the testing. While a Fourth Amendment challenge to the military HIV testing program could be brought by a service member in federal court, no such challenge has yet been raised.

Beyond the apparent Fourth Amendment justification for HIV testing, the seizure involved in HIV testing appears to also comply with two separate provisions under the Military Rules of Evidence (MREs), depending on the stated purpose for which the testing is being done. The military has determined that the HIV testing program is necessary to, "...[e]nsure the continued readiness and deployability of the total force."²³⁸ An inspection of a unit or organization pursuant to MRE

²³⁷ *Skinner v. Railway Labor Executives' Association*, 489 U.S. 602, 617, (1989); *Schmerber v. State of California*, 384 U.S. 757 (1966).

²³⁸ AR 600-110, *supra* note 227, para. 2-1.

313(b)²³⁹ is justified to determine and to ensure the military fitness of the unit or organization. An order to produce body fluids is permissible in accordance with this rule. As discussed above, such is also the case for the current mandatory urinalysis program in the military.

A secondary purpose under the military's HIV testing program is to preserve the health of service members by identifying HIV infected individuals and providing appropriate counseling and medical treatment. Blood testing for a valid medical purpose is authorized by MRE 312(f),²⁴⁰ and also by regulations of the military services requiring a service member to submit to medical care considered necessary to preserve his or her life, alleviate undue suffering, or protect or maintain the health of others.²⁴¹ These regulations provide for the medical care of service members without their consent as long as the procedure fits within the designation of "necessary medical care". Beyond emergency medical treatment and immunizations, these regulations do not otherwise specify all procedures that will be deemed necessary. When a question arises, orders to undergo

²³⁹ MANUAL FOR COURTS-MARTIAL, United States, MIL. R. EVID. 313(b) (1984) [hereafter MCM].

²⁴⁰ MCM, *supra* note 239, MIL. R. EVID. 312(f).

²⁴¹ See, e.g., DEP'T OF ARMY, REG. 600-20, ARMY COMMAND POLICY, para 5-4 (30 Mar. 1988).

treatment are left to the discretion of the service member's commander, acting on the advice of the attending physician.

Concerns about the military's HIV testing program do, however, exist. Once the specimens have been tested, they are collected in a central serum bank,²⁴² and authorized for research.²⁴³ The HIV research efforts focus on the causes and control of HIV and on improving methods for rapid diagnosis of HIV. Ordinarily, research involving human subjects requires informed consent from the subject.²⁴⁴ As discussed above, there is no requirement for informed consent from the service member for body fluids collected pursuant a valid military inspection or for a valid medical purpose. The subsequent use of the samples for research purposes, however, arguably goes beyond the original authority to collect the samples. Further, research of this type has been held by the U.S. Court of Appeals for the Ninth Circuit²⁴⁵ to be of the type requiring informed consent.²⁴⁶ These questions do not, however, impact upon the propriety of the original blood sample collection.²⁴⁷

²⁴² DoD Directive 6485.1, *supra* note 223, encl. 2, para. 5.

²⁴³ DoD Directive 6485.1, *supra* note 223, para. F.15.

²⁴⁴ Protection of Human Subjects, 32 C.F.R. § 219 (1995), 28 C.F.R. § 46 (1995).

²⁴⁵ *Stanley v. Swinson*, No. 93-16078, 1995 U.S. App. LEXIS 2262, at *5 to *8 (9th Cir. 1995) (comparing key portions of 28 C.F.R. § 46 with 28 C.F.R. § 512).

3. *HIV Program Compared to DNA Program*--The differences between the military's HIV testing program and the DoD DNA collection program are stark. The medical purpose for collection and HIV testing of blood specimens from service members is not broad enough to authorize DNA specimen collection, a procedure without a valid medical benefit to the sample donor. Also, as discussed above, the effort to store DNA from every active duty and reserve service member is arguably not an inspection within the purview of MRE 313(b).

These distinctions between the military's HIV testing program and the DNA collection program do not require a conclusion that the DNA collection program is unconstitutional. The distinctions are merely illustrative of the point that the DNA collection program cannot be summarily assumed constitutional merely because blood is also collected from service members for HIV testing. The DNA collection program does not enjoy the same type of provision under the military rules of evidence as the HIV testing program. The

²⁴⁶ For an example of how the mandate for informed consent supports the protection of human subjects involved in research, see *Stanley v. Swinson*, No. 93-16078, 1995 U.S. App. LEXIS 2262, at *5 (9th Cir. 1995) (prisoners in the U.S. Bureau of Prisons are protected by the requirement of informed consent prior to their being involved in research where "epidemiological studies" research was distinguished from the more benign HIV testing for purposes of diagnosis, treatment, or release into the community).

²⁴⁷ The answers to these questions are beyond the scope of this work.

DNA collection program impacts greater privacy rights than does any other military body fluid collection program. The military necessity of this program must rank well below that of the HIV testing program or the urinalysis program.

The DNA collection program, with the appropriate safeguards and limitations, may very well be reasonable and, therefore, constitutional. But the purpose behind the DNA collection program is sufficiently distinct from the purpose behind every other body fluid collection requirement on service members as to require it to undergo a Fourth Amendment reasonableness challenge on its own merit without justification from other body fluid collection programs.

VI. Recommendations.

The DoD remains identification effort should provide the American public with confidence that DoD is capable of applying the latest scientific techniques to identifying service member remains. Service members' dependents deserve no less. The present lack of statutory or regulatory limits on the DNA registry unfortunately may only undermine service members confidence in the program. Providing samples on a voluntary basis with application of the principles of informed consent would do much to cure the infirmities of the DNA registry.

However, apparent in the creation of the DNA registry is a belief that including any form of service member consent to the program would undermine the program's effectiveness. This belief may not withstand judicial scrutiny. If specimens held within the DNA registry are involved in any type of research, informed consent may also be mandated.²⁴⁸ Implementation of the following recommendations will go far to adequately protect service members' privacy interests in their DNA specimens.

A. *Legislation.*

A bill sponsored by Representative Joseph P. Kennedy was introduced in the House of Representatives in January, 1996, that would limit the collection and use by the DoD of individual genetic identifying information strictly to the purpose of remains identification.²⁴⁹ House Resolution 2873 would require the DoD to get an individual's consent before his or her genetic information could be derived from any blood or other organic matter sample for any purpose other than remains identification.²⁵⁰ The bill does not seek to require

²⁴⁸ Protection of Human Subjects, 32 C.F.R. § 219 (1995).

²⁴⁹ H.R. 2873, 104th Cong., 2d Sess. (1996).

²⁵⁰ This bill will likely be offered as an amendment to the National Defense Authorization Act for Fiscal Year 1997 in the Spring of 1996.

DoD to get consent from service members for the collection of blood and saliva samples for inclusion into the DoD DNA registry and specimen repository, and for this reason does not appear to be an impediment to the DoD DNA registry operating for its expressed purpose of remains identification.

House Resolution 2873 would also require that whenever a DoD health care professional obtains a blood sample or other organic matter from a person, that person will be provided notice of the limitations on the use of the sample. While the term "health care professional" is not defined, the term by implication covers corpsmen, medical lab assistants, and any other person who would be put into a position of drawing blood from a service member in the military health care system. The notice requirement appears to apply no matter what the primary purpose for drawing the sample was. Notice would be required when the DoD DNA kit samples are collected, and also when drawing blood for any other purpose, to include medical physicals and HIV testing.

Notice of this nature may be seen by many health care professionals as a nuisance and just one more legal requirement that impedes the orderly and swift provision of medical care in the military services. But this is not the case. In the pursuit of medical care, serological research, and service-wide testing programs, it is easy to minimize and over look the interests of the individual in his or her own genetic information.

Most people in the military services have no concern about providing their DNA samples to the military, and would consent to the use of their DNA for whatever purposes the military could conceive of to use the samples. It is one form of recognition of the strength and value of our commitment to our country and to its military. However, we should also remain loyal to the constitutional principles that have defined and differentiated our society from all others since its beginning. The better course is to protect constitutional interests from reckless intrusion. In the DoD DNA collection program, a fair balance is available if changes are made. With additional protections to specimen security and confidentiality, the DoD DNA registry would remain able to carry on with its mission of creating the country's, and possibly the world's, largest collection of DNA specimens from young adults, and the service member would be assured that his or her genetic information will not be used for any purpose other than remains identification.

This legislation has its shortcomings though. It does not provide a mechanism by which the service member can retrieve the DNA specimen from the DoD DNA specimen repository upon leaving active duty. Additionally, since the sample will not be necessary to identify the remains of those departing the service, keeping the specimen for 75 years, as currently provided for, is unnecessary.

B. Limit Specimen Use.

Use of DNA specimens should be statutorily limited to remains identification purposes. The proposed systems notice published in the Federal Register²⁵¹ does not propose any other use for the specimens and therefore a statutory limit of this nature should not be perceived as a severe limit on the DNA registry mission. In addition, outside access into the DNA registry by any government or civilian organization other than the AFIP should be statutorily curtailed.

This provision should not be objectionable to those who never intended to create a DNA database for the purposes of law enforcement. The obvious utility of the DNA registry to aid in law enforcement offers another tempting option for specimen use. Officials within the DNA registry, or any official for that matter, should not be left to decide permissible specimen use in a vacuum of statute or regulation. Such an environment precipitates the type of arbitrary decision-making that gives the DNA registry its specter for abuse.

C. Limit Collection from Reservists and National Guard Members.

Specimen collection should be limited to active duty personnel. There is an obvious problem with creating a DNA

²⁵¹ DOD DNA Registry, 60 Fed. Reg. 31,287 (1995).

registry on the civilian population of approximately one million persons serving in the U.S. military reserves and national guard. These personnel are generally civilians who "suit up" once a month for drill. The military does not represent the same level of lifestyle choice as it does for the active duty service member. The increased expectation of privacy these individuals legitimately claim should outweigh the military's need of collecting their DNA unless they deploy for combat operations. The Fourth Amendment balance between military necessity and privacy interests is different between active duty service members and reservists. This provision more narrowly tailors the DNA specimen collection effort to the true need, and is the type of governmental consideration of privacy interests that the Supreme Court considers in a Fourth Amendment balancing test.

The military's interest in remains identification could be satisfied by permitting collection of DNA when a reserve unit is activated for service. DNA specimen collection at unit activation can be implemented as part of the medical screening during the deployment process.

This hierarchy of testing recognizes current DoD fiscal constraints. The reserves constitute almost forty percent of our nations military forces.²⁵² Cost savings to the AFIP in personnel hours, storage facilities, and specimen kits alone justify implementation of this recommendation. The cost of

²⁵² See *supra* text accompanying notes 32-35.

DNA sampling the hundreds of thousands of civilians this program needlessly entangles is wasteful. The policy of spending the money on a program only if it becomes necessary is the better path, particularly with a program unrelated to national security.

D. *Regulate Mandatory Security Measures.*

Mandatory security measures for the DNA registry should be implemented in an Army Regulation. The Army is the Executive Agent for the DNA registry and is in the position to best know and implement the security provisions necessary to ensure DNA specimen and computer file protection. The current security provisions of the DNA registry may be adequate. Having a mandate for the security provisions adds stability to the DNA registry. In the event that changes become necessary, an administrative change to the Army Regulation would be more easily implemented than provisions that had been implemented in a DoD Directive.

Promulgation of security provisions would also satisfy the administrative prong of the Privacy Act requirement for "...appropriate administrative, technical, and physical safeguards to ensure the security and confidentiality of records and to protect against any anticipated threat or hazards to their security or integrity which could result in

substantial harm, embarrassment, inconvenience, or unfairness to any individual on whom information is maintained."²⁵³

E. *Implement Specimen Recovery Procedures.*

Procedures need to be implemented by which service members leaving active duty can recover their DNA specimen or require that it be destroyed. Once a person leaves the military service alive, there is no further justification to retain a DNA specimen on that individual.

Such a procedure would not be too expensive, since the number of persons making this request is not likely to become overly burdensome to the DNA registry. A reasonable "user fee" could be established to offset any costs incurred in returning or destroying these specimens.

Retaining all DNA specimens is more burdensome than an organized system to destroy or return unneeded DNA specimens. Thousands of service members leave active duty every year. The willingness of the DNA registry to store DNA specimens for seventy-five years on the thousands of persons leaving the military and becoming civilians is cause for concern. Currently, the government is essentially keeping a DNA sample of every U.S. citizen that had ever been in the armed forces for that person's entire life. Such a program disregards the legitimate privacy interests service members have in their

²⁵³ 5 U.S.C. § 552a(e) (1988).

genetic information and disregards principles of fiscal responsibility.

F. Reduce Specimen Storage Period.

Current policy at the DNA registry is to retain DNA specimens for seventy-five years. While this issue is secondary to the issue of person's ability to recover their DNA specimen upon leaving military service, this specimen retention time is nevertheless troublesome. While there may be circumstances under which a remains identification issue can linger for this length of time, crafting the DNA retention policy around it causes the program to be overly broad in its scope.

Rather than retain millions of DNA specimens for seventy-five years, the better approach is to implement a retention policy that better reflects reality. A twenty-five year retention time would be of sufficient length to cover the great majority of service members' military service.

The argument can be made that the more lengthy retention time is necessary to provide for remains identification of those listed as missing-in-action in a conflict. These remains may not present themselves within twenty-five years. While the future is difficult to predict, the U.S. conflicts in Vietnam and Southwest Asia provide some insight from the past.

In January 1994, 2,238 persons were unaccounted for in Southeast Asia from the Vietnam conflict.²⁵⁴ By March 5, 1996, the number was down to 2,157, and by March 28, the number was 2154.²⁵⁵ Since the end of the Vietnam conflict, 430 American service personnel have been identified by the U.S. Army Central Identification Laboratory.²⁵⁶ Of that number, 5 of the identifications were made with the assistance of DNA analysis.²⁵⁷

Bone is the most predominant material of the remains that can be recovered. Mitochondrial DNA, which degrades more slowly than chromosomal DNA, can sometimes be recovered from bone.²⁵⁸ If a mitochondrial DNA specimen can be recovered from the remains, that specimen can be compared with a specimen

²⁵⁴ S. 130, 103rd Cong., 2d Sess. (1994).

²⁵⁵ Secretary of Defense, Prisoner of War/Missing in Action Office, Vietnam-Era Unaccounted For Statistical Report, (28 Mar. 1996) (on file with author).

²⁵⁶ Memorandum from Major Waymond L. Ray, External Liaison Officer, U.S. Army Central Identification Laboratory to Captain Simmons (2 Apr. 1996) (on file with author) [hereinafter Central Lab. Memo].

²⁵⁷ *Id.* Because bone is most frequently recovered, mitochondrial DNA analysis is used over other methods of DNA analysis. Analysis using mitochondrial DNA does not provide positive identifications by itself, but is used as one piece of the identification effort.

The Central Identification Laboratory most frequently can depend only on conventional remains identification methods in the difficult task of identifying remains.

²⁵⁸ See *supra* note 14, at 5.

collected from any family member of the same maternal lineage as the deceased for a match.²⁵⁹

As discussed above, the statistics from operations Desert Shield/Desert Storm are less grim. From that conflict only five years ago in 1991, no service members are listed as missing-in-action, and only one set of remains is yet unidentified.²⁶⁰ DNA analysis provided positive identification of one set of remains and ruled out a tentative identification in one other.

These statistics demonstrate that remains identification that can be accomplished by DNA analysis are, for the most part, going to be resolved at least within a twenty-five year time frame. Storage of samples for longer than twenty-five years depends on the remote possibility that remains will be recovered. DNA specimens stored for seventy-five years cannot be expected to provide significantly greater identification opportunities than DNA specimens retained for twenty-five years.

Additionally, there are other provisions that continue to provide alternate opportunities for remains identification if the identification window falls outside the proposed twenty-five year mark. Blood relatives eagerly awaiting any

²⁵⁹ Id. at 6.

²⁶⁰ Telephone Interviews with James Canik, Deputy Program Manager, Department of Defense DNA Registry (Feb. 28, 1996; Mar. 15, 1996).

information on their loved one would remain available to provide DNA specimens to aid in the identification process. Also, provisions for a more lengthy storage period for DNA specimens belonging to missing service members would be reasonable. These alternatives to a seventy-five year storage period provide better protections to service members' legitimate privacy interests and additionally allow for the more effective stewardship of DoD dollars.

G. *Genetic Research.*

With the creation of a DNA specimen repository of all U.S. military personnel, other uses for the repository will undoubtedly present themselves. Interest in and research into the human genome can only be expected to increase as we learn more about our biological blueprints. Such a large specimen pool could facilitate most any area of research into the human genome. One such area involves research into population genetics, which is the study of large population groups to determine the frequencies of each allele and genotype for various ethnic groups.²⁶¹ Statistical probability of the occurrence of any number of specific alleles within an ethnic group can be useful information in endeavors such as identifying criminal suspects or determining paternity.

²⁶¹ Kamrin T. MacKnight, *The Polymerase Chain Reaction (PCR): The Second Generation of DNA Analysis Methods Takes the Stand*, 9 COMP. & HIGH TECH. L.J. 287, 311 (1993).

In these and other areas of genetic research, care must be taken to comply with laws mandating protection of human subjects.²⁶² Since research is beyond the scope of intended purpose of the DNA registry, the United States Code should be amended to require notice to and informed consent from a service member before his or her DNA could be used for any purpose other than remains identification or provided to any other governmental or private agency or organization.

Taken together, these recommendations would provide the type of protections to specimen security and confidentiality warranted by service members' privacy interest in their DNA. These recommendations help to assure the narrow focus of the DoD DNA registry as proffered by DoD and the Army. These protections would also help to assure that the DoD DNA registry does not fall victim to the phenomenon known as "mission creep".²⁶³

VII. Conclusion.

The recommendations made above seek to strike a meaningful balance between private and public good.

²⁶² Protection of Human Subjects, 32 C.F.R. § 219 (1995); Limitation on use of humans as experimental subjects, 10 U.S.C. §980 (West Supp. 1996).

²⁶³ Occurs when armed forces take on broader missions than initially planned.

Implementation of the recommendations would assist the DoD DNA collection program with its mission of creating the country's, and possibly the world's, largest collection of DNA specimens from young, healthy adults, while still assuring the service member that his or her genetic information will not be misused.

Policy makers in the military services must remain mindful that the U.S. depends upon an all-volunteer military force that competitively draws personnel from a free society. To the degree that the military dismisses legitimate privacy interests of its personnel, it can expect a negative impact upon personnel accessions and retention. The military is engaging in such a dismissal by implementing the DNA collection program without adequate protections in place for privacy and specimen protection. In our society, the only group of individuals who have been subjected to this type of wholesale governmental intrusion are convicted felons and sexual offenders.²⁶⁴

The Supreme Court may soon take notice of the utility of DNA analysis for the purpose of remains identification. The Court may additionally find though, that the current state of remains identification in the military is not so dire as to justify nonconsensual DNA sampling of all active duty, national guard and reserve service members.

²⁶⁴ Rise v. Oregon, 59 F.3d. 1556 (9th Cir. 1995).

In *Von Raab, supra*, the Supreme Court ruled by a five-to-four margin that drug testing for Customs Service employees who apply for certain sensitive jobs within the organization was reasonable. In his dissent, Justice Scalia wrote that by its own admission, the Customs Service was "largely drug free".²⁶⁵ Additionally the Customs Service had not shown that drug testing would have any effect on the perceived evil toward which it was aimed, insofar as there was not a single recitation of even one instance of bribe-taking, or poor marksmanship, of unenergetic law enforcement, or of compromise of classified information that was caused by drug use.

The dissent further argued that such broad generalizations of a threat did not justify the drug testing without a warrant and devoid of individualized suspicion; that Fourth Amendment protections were not that frail. The dissent closed with:

Those who lose ... are not just the Customs Service employees, whose dignity is thus offended, but all of us--who suffer a coarsening of our national manners that ultimately give the Fourth Amendment its content, and who become subject to the administration of federal officials whose respect for our privacy can hardly be greater than the small respect they have been taught to have for their own.²⁶⁶

Humans as a species have become so advanced that we have moved beyond the capability to redesign our environment and

²⁶⁵ 489 U.S. 656, 684 (1989).

²⁶⁶ *Id.* at 687 (Scalia, J., dissenting).

have begun to understand how to redesign ourselves. Geneticists currently understand how to genetically engineer some lower species to redraw the blueprint of their development. Genetic engineering and microtechnology move toward the creation of present day cyborgs, part human, part machine. Outlandish as that may sound, not so outlandish is current research for a neural implant into the cornea of blind persons to provide the brain with electrical impulses it interprets into sight, or a microchip implant to enhance memory. Researchers are now seeking to restore the connection between thought and action by developing devices that can detect neural commands, either in the brain or along the neural pathway, and transform them into electrical impulses. These surgically implanted devices could produce electronic impulses to induce paralyzed muscles to contract and thereby restore some function to the limb.²⁶⁷

Many in the field of genetic research have posed the question of whether by tampering with our nature we may be innocently starting down a road from which there is no return.²⁶⁸ More certain is that there are many who would prefer not to have their DNA in a government repository during the struggle over DNA research and its scientific application

²⁶⁷ John Hogan, *The Bionic Mind: Electrodes in the Brain May Someday Aid Paralysis Victims*, 259 SCIENTIFIC AMERICAN 37 (1988).

²⁶⁸ Ultra Science (The Learning Channel broadcast, Mar. 10, 1996).

to different areas of our lives. A DNA registry may be useful to compliment more conventional methods of remains identification. The current program must better ensure service members' privacy interests in their genetic information so as not to contravene Fourth Amendment guarantees against unreasonable searches and seizures.