



U.S. Department of Justice
National Institute of Justice

122084

Office of the Director

Washington, D.C. 20531

REMARKS

BY

THE HONORABLE JAMES K. STEWART, DIRECTOR
NATIONAL INSTITUTE OF JUSTICE

BEFORE

THE COMMITTEE ON DNA TECHNOLOGY IN FORENSIC SCIENCE
OF THE NATIONAL RESEARCH COUNCIL'S COMMISSION ON LIFE SCIENCES

11:15 A.M.

MONDAY, JANUARY 22, 1990

NATIONAL ACADEMY OF SCIENCES GEORGETOWN FACILITY

WASHINGTON, D. C.

NCJRS
FEB 23 1990
ACQUISITIONS

122084

**U.S. Department of Justice
National Institute of Justice**

This document has been reproduced exactly as received from the person or organization originating it. Points of view or opinions stated in this document are those of the authors and do not necessarily represent the official position or policies of the National Institute of Justice.

Permission to reproduce this ~~copyrighted~~ material has been granted by

Public Domain/NIJ

U.S. Department of Justice

to the National Criminal Justice Reference Service (NCJRS).

Further reproduction outside of the NCJRS system requires permission of the ~~copyright~~ owner.

COMMENTS TO THE COMMITTEE ON DNA TECHNOLOGY IN FORENSIC SCIENCE
OF THE NATIONAL RESEARCH COUNCIL COMMISSION ON LIFE SCIENCES
JANUARY 22, 1990 AT THE NATIONAL ACADEMY OF SCIENCES

IT IS A PLEASURE TO BE HERE WITH YOU TODAY TO LAUNCH THE IMPORTANT WORK OF THIS NEWLY CONVENED COMMITTEE ON DNA TECHNOLOGY AND FORENSIC SCIENCE. THIS IS INDEED A DISTINGUISHED PANEL AND YOUR INDIVIDUAL ACHIEVEMENTS CLEARLY ATTEST TO THAT. THE CHALLENGING WORK THAT IS BEFORE YOU CERTAINLY REQUIRES YOUR EXPERTISE, AND IT ALSO REQUIRES YOUR INSIGHT AND YOUR JUDGEMENTS ON MATTERS THAT CAN HAVE AN IMPACT ON CRIME VICTIMS AND OUR CRIMINAL JUSTICE SYSTEM FOR MANY YEARS.

IT IS ALSO A PLEASURE TO BE HERE TODAY WITH THE PRESTIGIOUS SUPPORTERS OF THIS STUDY. THERE ARE VERY FEW STUDIES THAT ARE CONDUCTED WITH SO MANY DIFFERENT SPONSORS. JUSTICE RESEARCH, LAW ENFORCEMENT, HEALTH AND SCIENCE BRING IMPORTANT PERSPECTIVES TO DNA ISSUES. THIS DIVERSITY OF PUBLIC SUPPORT IS UNIQUELY COMPLEMENTED WITH PRIVATE FOUNDATION SUPPORT.

ITS ALSO A PLEASURE TO BE WITH OUR HOSTS FROM THE NATIONAL ACADEMY OF SCIENCES - OSKAR ZABORSKY AND JOHN BURRIS. I WOULD ALSO LIKE TO ACKNOWLEDGE BERNIE AUCHTER OF THE NATIONAL INSTITUTE OF JUSTICE FOR HIS WORK AND HIS PERSEVERANCE IN ENCOURAGING THE FORMATION OF THIS COMMITTEE.

SOME OF YOU MAY NOT BE AWARE OF THE WORK OF THE NATIONAL INSTITUTE

OF JUSTICE. SO I WOULD LIKE TO TAKE A FEW MOMENTS TO GIVE YOU A SENSE OF THE DIMENSIONS OF OUR CRIMINAL JUSTICE RESEARCH PROGRAM AND THEN TO OFFER YOU MY VIEWS AND INTERESTS IN REGARD TO THIS STUDY.

THE NATIONAL INSTITUTE OF JUSTICE IS THE RESEARCH ARM OF THE UNITED STATES DEPARTMENT OF JUSTICE. OUR MANDATE IS TO SUPPORT CRIMINAL JUSTICE RESEARCH OF NATIONAL IMPORTANCE. OUR RESEARCH PROGRAMS ADDRESS MANY OF THE PROBLEMS AND NEEDS OF THE CRIMINAL JUSTICE SYSTEM. WE ALSO FOCUS ON IMPROVING OUR UNDERSTANDING OF VICTIMIZATION AND THE OFFENDER SO THAT WE CAN MORE EFFECTIVELY INTERVENE IN REDUCING AND CONTROLLING CRIME. WE ADDRESS THESE RESEARCH AREAS THROUGH A BALANCED PROGRAM OF POLICY RELEVANT RESEARCH COUPLED WITH MORE LONG RANGE BASIC RESEARCH THAT EXAMINES QUESTIONS SUCH AS THOSE THAT WILL CONCERN YOU IN YOUR WORK ON THIS COMMITTEE.

SOME OF YOU MAY BE FAMILIAR WITH OUR DEVELOPMENT OF THE BULLET PROOF VEST OR OUR CURRENT DEVELOPMENT AND TESTING OF A LESS THAN LETHAL WEAPON. THESE ARE INDEED SIGNIFICANT ACHIEVEMENTS, BUT LET ME BRIEFLY FOCUS ON ANOTHER IMPORTANT AREA -- OUR DRUG RESEARCH. THIS IS AN AREA WE HAVE ADDRESSED FOR MANY YEARS. WE HAVE SUPPORTED STUDIES ON SPECIFIC DRUGS, EXAMINED THE LINKS BETWEEN DRUGS AND CRIME, CONDUCTED RESEARCH ON THE ANALYSIS OF HAIR, AND SPONSORED DRUG PROGRAM EVALUATIONS. FOLLOWING OUR PIONEERING WORK IN WASHINGTON D.C. USING URINANALYSIS TO SCREEN ARRESTEES, WE CREATED THE DRUG USE FORECASTING SYSTEM. THIS SYSTEM OF SCREENING ARRESTEES FOR TEN DIFFERENT DRUGS PROVIDES AN ONGOING MEASURE FOR

ANALYZING THE VARIATIONS IN OUR NATIONAL DRUG PROBLEM. OUR DUF REPORT FOR THE SECOND QUARTER OF 1989 SHOWS A RANGE OF 56% OF MALE ARRESTEES TESTING POSITIVE IN PHOENIX TO 84% TESTING POSITIVE IN PHILADELPHIA.

OUR ANALYSIS OF THE DUF PROGRAM DATA IS DONE BY STAFF AT THE NATIONAL INSTITUTE. AND WHILE THE MAJORITY OF OUR RESEARCH IS SUPPORTING PROJECTS OUTSIDE THE INSTITUTE, WE ALSO HAVE SEVERAL RESEARCH SCIENTISTS ON STAFF. THEY ARE ADDRESSING VARIOUS CRIMINAL JUSTICE ISSUES AND PROBLEMS, INCLUDING CAREER CRIMINALS, SHOCK INCARCERATION, PRISON POPULATION PROJECTIONS, AND DRUG ENFORCEMENT. (CHRISTY VISHER, FORMERLY WITH THE NAS COMMITTEE ON BEHAVIORAL AND SOCIAL SCIENCES AND EDUCATION IS ONE OF OUR RESEARCH SCIENTISTS.)

MUCH OF OUR RESEARCH SUPPORTS PROJECTS IN THE SOCIAL AND BEHAVIORAL SCIENCES. WE SUPPORT RESEARCH ON CAREER CRIMINALS, SPOUSE ASSAULT, WHITE COLLAR CRIME, AND ORGANIZED CRIME. IN REGARD TO WORK WITH THE NATIONAL ACADEMY WE HAVE SPONSORED A NUMBER OF COMMITTEES IN THE SOCIAL AND BEHAVIORAL SCIENCES. A CURRENT PROJECT HAS ESTABLISHED A PANEL ON THE UNDERSTANDING AND CONTROL OF VIOLENT BEHAVIOR WHICH IS EXAMINING THE PAST 25 YEARS OF RESEARCH ON VIOLENCE. OUR PAST SUPPORT OF ACADEMY PANELS HAS ADDRESSED THE SUBJECTS OF CAREER CRIMINALS, SENTENCING, AND THE REHABILITATION OF CRIMINAL OFFENDERS. EACH OF THESE PANELS PROVIDED AN INSIGHTFUL ANALYSIS OF PAST RESEARCH AND RECOMMENDATIONS FOR FUTURE RESEARCH INVESTMENTS THAT HAVE BEEN USEFUL IN DEVELOPING OUR AGENDA.

WITHIN THIS CONTEXT OF SUPPORTING BOTH POLICY RELEVANT AND BASIC RESEARCH WE HAVE ALSO SUPPORTED A SUBSTANTIAL AMOUNT OF RESEARCH

IN THE FORENSIC SCIENCES -- AND NOW, I'D LIKE TO TOUCH ON THE AREAS THAT ARE MUCH MORE FAMILIAR TO MOST OF YOU. WITHIN THIS PROGRAM WE ARE ADVANCING THE RESEARCH ON FINGERPRINT TECHNOLOGY, BLOOD TYPING, TRACE METAL IDENTIFICATION, AND PHOTOGRAPHIC IMAGE ENHANCEMENT FOR CRIMINAL IDENTIFICATION.

OUR SUPPORT OF DNA RESEARCH, WHICH IS ALL RIGOROUSLY REFEREED, INCLUDES WORK BY DR. GEORGE SENSABAUGH (DNA COMMITTEE MEMBER) AT THE UNIVERSITY OF CALIFORNIA. YOU MAY BE FAMILIAR WITH HIS RESEARCH ON PCR, AN INNOVATIVE TOOL IN DNA ANALYSIS THAT ADDRESSES THE PROBLEM IN FORENSIC SCIENCE OF HAVING AN INSUFFICIENT QUANTITY OF A BODY FLUID FOR ANALYSIS. I AM SURE WE'LL BE HEARING MUCH MORE ABOUT PCR IN THE FUTURE. OTHER NIJ DNA RESEARCH IS BEING CONDUCTED BY DR. HENRY LEE (DNA COMMITTEE MEMBER) AND HIS COLLEAGUE DR. ROBERT GAENNSLEN. THEIR WORK INVOLVES AN ANALYSIS OF DNA FROM HUMAN BONE TISSUE. WE HAVE ALSO RECENTLY INITIATED DEVELOPMENTAL WORK WITH THE NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY THAT WILL MOVE US TOWARD VARIOUS STANDARDS ON DNA TECHNOLOGY. I WOULD HOPE THAT THIS COMMITTEE WILL BE ABLE TO INFORM THIS EFFORT AND OTHER DEVELOPMENTAL WORK ON DNA.

THE NATIONAL INSTITUTE OF JUSTICE, ALONG WITH SEVERAL PRIVATE SPONSORS, SUPPORTED A 1988 CONFERENCE ON DNA TECHNOLOGY AND FORENSIC SCIENCE AT THE BANBURY CENTER IN COLD SPRING HARBOR, NEW YORK. THE PAPERS FROM THAT MEETING HAVE RECENTLY BEEN PUBLISHED AND I KNOW THEY WILL BE OF INTEREST TO THIS COMMITTEE. (I KNOW SOME OF YOU WERE INVOLVED IN THAT MEETING AND HAVE COPIES OF THIS REPORT.)

SO, YOU CAN GET A SENSE, FROM EVEN THIS VERY BRIEF REVIEW OF THE WORK OF THE NATIONAL INSTITUTE OF JUSTICE, THAT OUR RESEARCH COVERS A WIDE VARIETY OF PROJECTS AND TOPICS. YET THE UNIFYING FOCUS IN ALL OF OUR WORK IS JUSTICE. IT'S IN OUR NAME, IT'S IN OUR MANDATE, AND IT GUIDES OUR FUNDING ACTIONS. JUSTICE IS ALSO AT THE HEART OF OUR INTERESTS IN REGARD TO THE WORK OF THIS COMMITTEE.

AS A FORMER CHIEF OF DETECTIVES FOR THE OAKLAND POLICE, I AM WELL AWARE OF THE TRADITIONAL WAY IN WHICH WE FOCUS ON SUSPECTS. WE CONSIDER THE MOTIVE AND OPPORTUNITY TO COMMIT THE CRIME. WE ALSO RELY ON ADMISSIONS, CONFESSIONS AND THE ACCOUNTS OF WITNESSES. MANY HOMICIDE AND RAPE CASES ARE BUILT ON THESE HUMAN RELATIONS APPROACHES THAT OFTEN INCLUDE A "STREET CORNER PSYCHOLOGY" IN ATTEMPTING TO RESOLVE THE CASE. BUT A FAIR AMOUNT OF DECEPTION IS POSSIBLE IN THESE APPROACHES. FOR EXAMPLE, RESEARCH HAS SUGGESTED HOW UNRELIABLE THE TESTIMONY OF AN EYEWITNESS CAN BE.

SINCE I HAVE COME TO THE NATIONAL INSTITUTE I HAVE WORKED TO PROMOTE DNA USE IN FORENSICS. A NUMBER OF YEARS AGO THIS WAS RATHER DIFFICULT SINCE OTHERS BELIEVED ABO BLOOD TYPING WAS SUFFICIENT. THE POTENTIAL OF DNA IS MORE OBVIOUS NOW.

WITH DNA EVIDENCE WE CAN ACHIEVE A LEVEL OF CERTAINTY IN EXCLUDING OR INCLUDING SUSPECTS OF VIOLENT CRIMES. JOHN HICKS INFORMS ME THAT WITH THE FIRST 500 CASES HANDLED BY THE FBI NEARLY A QUARTER OF THESE POTENTIAL DEFENDANTS WERE EXCLUDED - AND THESE WERE CASES THAT WERE WELL ALONG IN THE PROCESS OF BEING DEVELOPED FOR TRIAL. JUSTICE REQUIRES BOTH CONVICTING THE GUILTY AND

EXONERATING INNOCENT SUSPECTS, AND DNA EVIDENCE CAN PROVIDE SIGNIFICANT ASSISTANCE TOWARD THIS GOAL. DNA EVIDENCE IN MANY OF OUR MOST VIOLENT CRIMES CAN ADD MUCH GREATER PRECISION IN CORROBORATING OUR OTHER INVESTIGATORY TECHNIQUES OR IN EXONERATING AN INNOCENT SUSPECT. JUSTICE AND SECURITY: THIS IS THE GOAL OF OUR CRIMINAL JUSTICE SYSTEM AND THIS IS THE GOAL THAT OUR RESEARCH SEEKS TO SUPPORT.

IN CLOSING, WE LOOK TO THE COMMITTEE TO INFORM US AND TO FOCUS OUR DIRECTION. I HOPE THE COMMITTEE WILL BE ABLE TO IDENTIFY THE RESEARCH ISSUES THAT WE SHOULD PURSUE AS WELL AS ADDRESS CURRENT PROCEDURES AND NEEDS FOR STANDARDS. YOUR INSIGHTS ON THE MOST FRUITFUL DIRECTIONS PROVIDE US WITH A MEANS OF PRIORITIZING OUR LIMITED RESEARCH FUNDS. FOR INDEED WE ARE A SMALL RESEARCH AGENCY BUT WITH A VERY BROAD MANDATE.

I THANK YOU FOR THIS OPPORTUNITY AND I WISH YOU WELL IN YOUR WORK ON THE COMMITTEE.