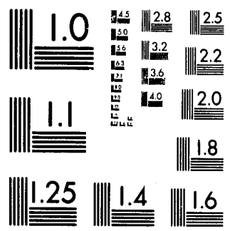

FINAL REPORT

Grant - #77NI-99-0064

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Forensic Science Seminar

Project Director: Joseph L. Peterson, D. Crim.

Submitted to:

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Law Enforcement Assistance Administration
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ATTENTION: Ms. Margaret Snoddy

il 15, 1978

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s of view or opinions in this document are those of the author and t necessarily represent the official position or policies of the Department of Justice..

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We are also indebted to the Los Angeles Police Department, and particularly Sgt. David Bailey and his staff of the T.V., Photo and Sound Unit, for their expert assistance in the taping of the seminar.

Lastly, we express our gratitude to the members of the Foundation staff who worked to make this a successful project . . . Deborah A. Heath and Beth Ann Lipskin.

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ABSTRACT

This project had the overall goal of reducing the communications gap which presently exists between forensic scientists and their community of "users" by enlightening leading legal and law enforcement practitioners throughout the nation regarding the current state-of-the-art in forensic science. During the period of this project a forensic science seminar entitled "Suspicious Death Investigation" was created and produced for presentation before groups of nonscientific legal practitioners. Appropriate visual aids were created and a nine member panel of outstanding forensic scientists were selected for the purpose of serving as participants in the dramatization.

The program utilized the scenario in which a newly elected prosecutor, anxious to successfully try a homicide case, meets with various forensic science experts who have worked on different facets of the investigation. The completed program was presented before a combined audience of the National College of District Attorneys and the National College of Criminal Defense Lawyers and Public Defenders, and the Annual Meeting of the International Association of Chiefs of Police.

In addition, a videotape of the presentation was also engineered which is presently available for viewing by interested legal and law enforcement groups.

EXECUTIVE SUMMARY

Forensic science is the study and practice of the application of science to the purposes of justice. In recent years Supreme Court decisions and several blue ribbon crime commissions have called for the greater use of science in the justice system. In the face of this mandate to place a greater reliance on scientific methods of investigation, many jurisdictions around the nation are still deficient in their understanding and utilization of forensic science services. Although substantial inroads have been accomplished in recent years, fundamental problems still remain:

- Frequent misunderstandings between the forensic science laboratory and users such as the police and prosecutors concerning the actual capabilities and limitations of laboratories;
- Forensic scientists and criminal justice practitioners often speak "different languages" which frequently result in serious communications barriers between the laboratory scientist and a police officer or attorney;
- Techniques in forensic science continue to advance and become more sophisticated as time passes which results in an ever widening gap between the scientist and the user;
- A critical absence of education and training programs which can inform legal and law enforcement users of the potential benefits and latest techniques in forensic science.

Although this small project was a modest approach to an extremely large and complex problem area, it made significant headway in efforts to lessen the communications gap between the forensic scientist and user

and to enlighten leading legal and police personnel in the country in the uses of forensic science. Specifically, this project had the following objectives:

- To develop and refine a forensic science seminar suitable for presentation before groups of law enforcement and legal practitioners and administrators;
- To develop appropriate visual aids to enhance the overall presentation;
- To assemble leading experts in all forensic science disciplines to deliver the presentations;
- To present the completed, live seminar before the Annual Meeting of the International Association of Chiefs of Police and before the National College of District Attorneys and National College of Criminal Defense Lawyers and Public Defenders to broaden their understanding and appreciation of the forensic sciences in a criminal prosecution.

The present LEAA grant has enabled the Forensic Sciences Foundation to refine the seminar entitled "The Utilization of the Forensic Sciences in the Investigation of a Suspicious Death" and to present it before two important gatherings of criminal justice officials. The seminar was presented before a combined audience of students attending the National College of District Attorneys and the National College of Public Defenders and Criminal Defense Lawyers, in Houston, Texas. The final presentation was before the 84th Annual Meeting of the International Association of Chiefs of Police, Los Angeles, California. Both presentations were very well received with both the police officials and legal practitioners providing feedback that their understanding of the forensic sciences was materially increased by attending the seminar.

Although it was not planned at the outset of the project, the seminar was also video taped through the technical assistance of the Los Angeles Police Department. While in Los Angeles for the I.A.C.P. presentation, arrangements were made with the L.A.P.D., T.V., Photo and Sound Unit to have the seminar video taped in their studios on the day prior to the actual "live" presentation. That video tape, lasting approximatley one hour and forty-five minutes accompanies this written report.

The dramatization, "Investigation of a Suspicious Death" is designed to give the non-forensic scientist a better understanding of the role of the forensic sciences in answering many questions surrounding the death and eventually in prosecuting the criminal case. This is accomplished through the format of a newly elected prosecutor, anxious to successfully try a homicide case, meeting with the various forensic experts who have worked on the different facets of the case. They include:

The Crime Scene Technician who was responsible for collecting and preserving all the physical evidence at the crime scene;

The Forensic Pathologist who performed the autopsy and determined the cause of death;

The Forensic Odontologist who confirmed the identity of the victim and examined tooth fragments found at the scene;

The Criminalist who performed the laboratory analyses of the physical evidence recovered;

The Forensic Toxicologist who investigated the presence of drugs or toxic substances;

The Forensic Document Examiner who ascertained the authenticity of an alleged suicide note;

The Physical Anthropologist who determined the identity of bones found in the apartment incinerator;

The Forensic Psychiatrist who examined the prime suspect; and

The Prosecutor who carefully weighs the evidence presented to him.

The full report contains the written script of the presentation. The script is accompanied by a set of 35mm slides which serves to illustrate the descriptions and explanations provided by the panel of experts.

CHAPTER I

PROJECT BACKGROUND

INTRODUCTION

The criminal justice system continually strives to avail itself of the most effective techniques and operating procedures in efforts to control crime while maintaining the highest quality of justice. Criminal justice practitioners are constantly searching for new techniques and programs which have proven to be successful in similar jurisdictions and those which will yield the greatest benefits with the minimum expenditure of limited financial resources.

A field which is utilized on an increasingly expanding basis by all criminal justice practitioners is forensic science. Forensic science is the study and practice of the application of science to the purposes of justice. The forensic sciences are composed of many individual sub-disciplines, including:

- *Criminalistics* is the scientific discipline directed to the recognition, identification, individualization and evaluation of physical evidence such as bloodstains, clothing, glass fragments, bullets, etc. These processes aid in reconstructing the facts surrounding an event at the time that it occurred.
- Forensic *Pathology* is the application to problems at law of the basic medical specialty of pathology. Pathology itself is the study of the reaction of the body to disease using disease to include everything from pneumonia, tuberculosis, to being struck by an automobile or shot with a firearm. The forensic pathologist investigates and interprets injury and death resulting from violence or occurring in a sudden, unexpected or unexplained manner.

- Forensic *Toxicology* is the study and understanding of the harmful effects of such external substances as poisons, drugs, pollutants and potentially toxic chemicals which may be introduced into living systems. The forensic toxicologist works in the areas of drug abuse, toxicological aspects of criminal investigations and postmortem cases.
- *Physical Anthropology* involves the use of standard physical anthropological techniques to identify skeletal remains. The physical anthropologist is routinely involved in mass disaster investigations such as aircraft accidents, floods, etc., in the identification of human remains.
- Forensic *Psychiatry* provides the legal system with an understanding of and recommendations about psychiatric factors that are relevant to specific civil or criminal cases. A forensic psychiatrist may provide services ranging from hypnosis of a witness to facilitate recall of an event, to preparing sentencing reports and recommendations to judges, to treating individuals who have a propensity to commit criminal acts.
- Forensic *Document Examination* involves the scientific examination of handwriting, typewriting, printing, ink, paper or other aspects of a document. The document examiner also works to establish the age of a document, detect alterations and restore erased writing.
- Forensic *Odontology* involves the application of dentistry to legal problems. More specifically, the odontologist, often working closely with the forensic pathologist examines and evaluates injuries to the teeth, jaws and oral tissues and examines dental remains for the purposes of victim identification. He also examines bite marks in cases of homicide, battered children and sexual assault to provide identification of a suspect.
- *Jurisprudence* is the discipline specializing in the communication of forensic scientist's findings to the triers of fact in legal settings. The jurisprudent helps determine the significance of the experts' tests and analyses and serves to elucidate the critical scientific issues of the case at hand.

All of the forensic sciences have the potential of offering the justice system with information which is unobtainable through other conventional, non-scientific means. More specifically, the forensic

sciences often aid in:

- Determining if a crime did indeed occur;
- Reconstructing the criminal act;
- Developing information and leads on likely suspects;
- Linking offenders with the crime scene or victim through physical evidence;
- Demonstrating the non-involvement of suspected offenders in the crime.

Above all, the forensic scientist is an objective, impartial participant in the investigation and adjudication of crime whose scientific findings and opinions serve to aid in the solution of crimes, the conviction of guilty parties and the exoneration of the innocent.

THE PROBLEM

Landmark Supreme Court decisions such as Miranda and Escobedo were significant in the field of forensic science for they stated that investigators would have to shift their emphasis from the collection of information from a suspect in a criminal case to other means. To quote Justice Goldberg:

> We have learned the lesson of history, ancient and modern, that a system of criminal law enforcement which comes to depend on the "confession" will, in the long run, be less reliable and more subject to abuses than a system which depends on extrinsic evidence independently secured through skillful investigation.[1]

[1]Escobedo v. Illinois, 378 U.S. 478, 12 L. Ed. 2d 977, 84 S. Ct. 1758 (1964).

The President's Crime Commission in 1967 also addressed the need for the greater use of science in the justice system:

> More and more, the solution of major crime will hinge upon the discovery at crime scenes and subsequent scientific laboratory analysis of latent fingerprints, hair, fibers, blood and similar traces.[2]

More recently, the LEAA financed National Commission on Criminal Justice Standards and Goals stressed the fact that many police and judicial jurisdictions in the nation were deficient in their utilization of physical evidence and subsequent forensic science services.[3] Although substantial inroads in the use of forensic science have been accomplished in recent years, fundamental problems remain:

1) Physical evidence and forensic science laboratories are still used in a small percentage (less than 5% nationally) of the index crimes;
2) There exist misunderstandings between the forensic science laboratory and users such as the police and prosecutors concerning the actual capabilities and limitations of laboratories;
3) Forensic scientists and criminal justice practitioners often speak "different languages" which frequently result in serious communications barriers between the laboratory scientist and a police officer or attorney;
4) Techniques in forensic science continue to advance and become more sophisticated as time passes, which results in an ever widening gap between the scientist and the user;
5) There is a critical absence of education and training programs which can inform legal and law enforcement users of the potential benefits and latest techniques in forensic science.

[2]President's Commission on Law Enforcement and Administration of Justice, Task Force Report: The Police (Washington, D.C.: U.S. Government Printing Office, 1967), p. 51.

[3]National Advisory Commission on Criminal Justice Standards and Goals, Police, Standards 12.1 and 12.2 (Washington, D.C.: U.S. Government Printing Office, 1973), pp. 295-308.

The recently published "Assessment of the Forensic Sciences Profession" study recommended, "An intensive training of judges and lawyers as well as police in the capacities of the forensic sciences . . . is urgently needed."[4]

OBJECTIVES

Although this small project was a modest approach to an extremely large and complex problem area, it made significant headway in efforts to lessen the communications gap between the forensic scientist and user and to enlighten leading legal and police personnel in the country in the uses of forensic science. Specifically, this project had the following objectives:

1) To develop and refine a forensic science seminar suitable for presentation before groups of law enforcement and legal practitioners and administrators;

2) To develop appropriate audio/visual materials to enhance the overall presentation;

3) To assemble leading experts in all forensic science disciplines to deliver the presentations;

4) To present the completed, live seminar entitled, "Suspicious Death Investigation," before the Annual Meeting of the International Association of Chiefs of Police;

5) To present the completed, live seminar before the National College of District Attorneys and National College of Criminal Defense Lawyers and Public Defenders to broaden their understanding and appreciation of the forensic sciences in a criminal prosecution.

[4]Oliver Schroeder, Jr., A Legal Study Concerning the Forensic Sciences Personnel, Stock # 027-000-00504-7, (Washington, D.C.: U.S. Government Printing Office, 1977), p. xii.

CHAPTER II

METHODS

INTRODUCTION

At the 1977 Annual Meeting of the American Academy of Forensic Sciences held in San Diego, California, a plenary session was presented before approximately 2,000 members, scientists and guests. The presentation was created for the purpose of illustrating how the various forensic science disciplines may be integrated into a comprehensive criminal case presentation.

The present LEAA grant has enabled the Forensic Sciences Foundation to refine the seminar entitled "The Utilization of the Forensic Sciences in the Investigation of a Suspicious Death" and to present it before two additional gatherings of criminal justice officials. The seminar was presented before a combined audience of students attending the National College of District Attorneys and the National College of Public Defenders and Criminal Defense Lawyers, in Houston, Texas. The final presentation was before the 84th Annual Meeting of the International Association of Chiefs of Police, Los Angeles, California. Both presentations were very well received with both the police officials and legal practitioners providing feedback that their understanding of the forensic sciences was materially increased by attending the seminar.

Although it was not planned at the outset of the project, the seminar was also video taped through the technical assistance of the Los Angeles

Police Department. While in Los Angeles for the I.A.C.P. presentation, arrangements were made with the L.A.P.D., T.V., Photo and Sound Unit to have the seminar video taped in their studios on the day prior to the actual "live" presentation. That video tape, lasting approximately one hour and forty-five minutes accompanies this written report.

THE PRESENTATION

A reclusive, well-known personality dies in his penthouse apartment from apparently violent causes. The police find the body when responding to a "dead body" call. The scene is secured and the crime scene investigation team is called in. Thus begins the complex task of investigating the cause of death and the circumstances surrounding it. At the same time as the police embark on their investigative tasks, the forensic science investigation begins.

The dramatization, "Investigation of a Suspicious Death" is designed to give the non-forensic scientist a better understanding of the role of the forensic sciences in answering many questions surrounding the death and eventually in prosecuting the criminal case. This is accomplished through the format of a newly elected prosecutor, anxious to successfully try a homicide case, meeting with the various forensic experts who have worked on the different facets of the case. They include:

The Crime Scene Technician who was responsible for collecting and preserving all the physical evidence at the crime scene;

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The Forensic Odontologist who confirmed the identity of the victim and examined tooth fragments found at the scene;

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The Forensic Toxicologist who investigated the presence of drugs or toxic substances;

The Forensic Document Examiner who ascertained the authenticity of an alleged suicide note;

The Physical Anthropologist who determined the identity of bones found in the apartment incinerator;

The Forensic Psychiatrist who examined the prime suspect, and

The Prosecutor who carefully weighs the evidence presented to him.

What follows is the written script of the presentation. The script is accompanied by a set of 35mm slides which serve to illustrate the descriptions and explanations provided by the panel of experts.

CHAPTER III

PRESENTATION: SUSPICIOUS DEATH INVESTIGATION

Peterson/Moderator: Good afternoon. My name is Joseph Peterson. I am the Executive Director of the Forensic Sciences Foundation. It is under the auspices of the Foundation and with the financial support of the Law Enforcement Assistance Administration, that this presentation is brought to you.

Forensic Science is the study and practice of the application of science to the purposes of justice. The Forensic Sciences Foundation seeks to promote the forensic sciences through research and continuing education.

The subject of our presentation this afternoon is "The Utilization of the Forensic Sciences in the Investigation of a Suspicious Death". The setting is the office of a newly elected prosecutor wherein the prosecutor is meeting with the forensic scientists involved in a criminal case investigation. Each participant is a practicing forensic scientist, highly qualified in his own area of expertise.

Let me introduce them.

Jan Beck, A.B.

I'd like to introduce Mr. Jan Beck, who is a document examiner from Seattle, Washington. Mr. Beck is

presently in private practice, handling both civil and criminal cases. He was formerly employed as a forensic document examiner by the federal government. He is a member of the American Society of Questioned Document Examiners, Northwest Association of Forensic Scientists and a Fellow of the American Academy of Forensic Sciences.

Emanuel Tanay, M.D.

Dr. Emanuel Tanay is a forensic psychiatrist who practices in Detroit, Michigan. He holds the position of Clinical Professor of Psychiatry at Wayne State University and is the author of a recently published book entitled "The Murderers" (Bobbs-Merrill Publishers). He holds Fellow status in both the American Academy of Forensic Sciences and the American Psychiatric Association and is chairman of APA's Committee on Law and Psychiatry.

Vincent J. M. DiMaio, M.D.

Dr. DiMaio is the Medical Examiner of the Southwestern Institute of Forensic Sciences of Dallas, Texas. He is a graduate of the State University of New York Downstate Medical Center and formerly the Chief of the Wound Ballistic Section and Legal Medicine at the Armed Forces Institute of Pathology.

Joseph F. Keefe, J.D.

Mr. Keefe is an active trial attorney in Connecticut with an emphasis on criminal defense. He lectures in the criminal area for Bar Association and Practicing Law Institute Programs. He is also a member of the National Association of Criminal Defense Lawyers and chairman of their Membership and Strike Force Committee in Connecticut.

Gerald Reichardt, B.A.

Jerry Reichardt is the Senior Crime Scene Investigator of the Dade County Public Safety Dept. Crime Laboratory where he has been employed for the last 18 years. He is also a faculty member at Miami Dade Community College where he teaches in the police science program.

Arthur D. Goldman, D.M.D.

Dr. Arthur Goldman is the Chief Forensic Odontologist, Office of the Chief Medical Examiner, Rockland County, New York. He also serves as Assistant Professor at the Columbia University School of Dental and Oral Surgery and as Police Surgeon for the Spring Valley Police Department, Spring Valley, New York. He is a Diplomate of the American Board of Forensic Odontology, and a Fellow of the AAFS and Academy of General Dentistry.

Anthony Longhetti, B.A.

Anthony Longhetti is the Director of the Criminalistics Laboratory for the San Bernardino County Sheriff's Department in San Bernardino, California. He received his degree in criminalistics from the University of California and was formerly employed as a criminalist by the State of Minnesota and the U.S. Army. He also serves as an Associate Professor of Criminalistics at the California State University in Los Angeles.

Robert V. Blanke, Ph.D.

Dr. Robert Blanke is Professor of Pathology and Pharmacology of Legal Medicine at the Medical College of Virginia in Richmond. He has 25 years of experience in forensic toxicology and was formerly Chief Toxicologist, Office of the Chief Medical Examiner, Commonwealth of Virginia. He is a Fellow of the AAFS and a Diplomate of the American Board of Forensic Toxicology.

Walter Birkby, Ph.D.

Dr. Birkby is the Physical Anthropologist for the Arizona State Museum at the University of Arizona and Director of the Human Identification Laboratory at the Museum.

His area of forensic expertise is in the identification of unknown human remains whether skeletalized, decomposed, mummified or, as in this case, badly burned.

Now, I'd like to turn over the program to the Prosecutor, Joseph F. Keefe.

Keefe & Prosecutor:

Well gentlemen, as you know, I'm newly elected and not familiar with this case. I called this conference this morning because I haven't met most of you. I want to go over what investigation and testing has been undertaken to date. I've asked you all to give me a little résumé in order that I can qualify you as expert witnesses. We'll do that individually later. Mr. Reichardt handled the crime scene and we will start with him. Can you tell us the background of the investigation with particular reference to the crime scene and what steps are undertaken at the scene. We can then look into any slides that you took at the crime scene.

Reichardt:

Our crime scene investigation team arrived at the victim's apartment building on Saturday, 9 AM, November 20, 1976 in response to a dead body call. The apartment building is situated within a high-income, waterfront area of the community. The investigators were escorted to the victim's penthouse apartment by uniformed police personnel who had already secured the scene. The crime scene investigators were briefed on the particulars of the case by one of the uniformed officers who said the victim had been tentatively identified as William Foster and that

he was attended to by two personal physicians, three staff asssociates and a chauffeur, and at the time the chauffeur was unable to be located. Upon entering the scene, the upper portion of the victim's body was clearly visible in the apartment doorway while the lower portion was concealed by a living room couch. A blood splatter was clearly visible on the far living room wall. As the investigators proceeded into the apartment, they observed a revolver lying on the carpet on the far side of the deceased. At this point it was noted that the body position did not appear to be consistent with the blood spatter on the far wall. An obvious contact gunshot wound was observed on the left side of the victim's head. Considering the possibility still of a self-inflicted gunshot wound, the investigator's attention was drawn to a table inside the entry door. On the tabletop was a manual typewriter and a typed message on a piece of typewriter paper. Closer observation indicated that the typed message could be interpreted as a suicide note. The paper bore the victim's signed name, William Foster. Upon entering the bedroom it was noted that the bed was unmade.

A pair of pants, dark blue in color, a white shirt with blue stripes and a pair of dark blue socks were observed lying on the bed. The clothing size was consistent with other clothing found inside the bedroom closet. The investigators observed a note pad bearing indented writing laying on the nightstand next to the bed. With little difficulty, the message was legible after the application of oblique lighting. It stated simply, "Bob, Sat. (an abbreviation for Saturday) AM". On the dresser top, opposite the bed was a box of Winchester Super X 38 caliber revolver ammunition, 3 loose live rounds lying next to the box. A thorough search of the bedroom failed to reveal anything else of significance. After complete scene photography was accomplished, a scale sketch of the apartment was initiated. During the measurement procedure, close inspection of the blood-stained wall revealed a high velocity blood splatter. This revelation solidified the original thought that the body position was inconsistent with the blood splatter pattern and the investigation intensified. At that point, the

scene was divided into specific search areas. A hand and knee search of the living room carpet revealed a lead projectile fragment within a shag carpet fiber. The fragment was located directly beneath the high velocity blood splatter on the living room wall. As the floor search continued, what appeared to be a broken tooth fragment was also found buried in the carpet fiber located beneath the corner of the living room couch and less than a yard away from the wall bearing the blood splatter. During the search procedure a blood print was detected on the hall side of the front door. The print was overlooked initially because the uniformed officer, securing the scene, had positioned himself in front of the doorway. The door was removed from its hinges and transported to the laboratory for evaluation and examination by fingerprint examiners and serologists. The remaining areas of the apartment were scoured for additional clues, but nothing that appeared to be of evidentiary value was located. By this time, the medical examiner's investigator had completed his scene examination and the body was prepared for

transportation to the morgue. Prior to removal from the scene, the victim's hands were placed in paper bags. After the removal of the deceased, evidence discovered and documented during the scene investigation was carefully collected and placed into appropriate containers and all suspect areas were examined for latent prints. The victim's typewriter, signature standards and pen were collected for document examination. The scene was sealed pending further investigation.

Keefe: Mr. Reichardt, did you take any photographs of the scene itself and the investigation as it progressed?

Reichardt: Yes, sir, I did.

Keefe: Do you have those slides with you today?

Reichardt: Yes, sir.

Keefe: What do we have here?

Reichardt: This is a photograph of the apartment building. The victim's particular apartment is located in the penthouse area. And this is the officer that was securing the scene as the crime scene investigators arrived. And this is merely a crime scene team

interviewing the uniformed officer.

Keefe: I gather that is where they got their initial information.

Reichardt: That's correct. This view is looking into the apartment from the hallway. The body can be observed on the floor, the lower portion concealed by the couch and on the distant wall there is a blood splatter. This view is just moving into the apartment, the victim is more clearly visible and the weapon is also visible, adjacent to the body, between the victim and a walking stick.

Keefe: Is there any significance to that walking stick?

Reichardt: Only that we believe that it was apparently used by the victim to support himself as he walked. This view is from the opposite side of the room and the distant table is where the typewriter and the note are located. This is a close-up of the typewriter and the note next to the typewriter that we interpret to be a suicide note. This is the bedroom, the clothing dispersed on the unmade bed. The open box of cartridges is located on the dresser top.

Keefe: Does there appear to be any sign of a struggle in the living room or the bedroom?

Reichardt: None that we can discern. This is the nightstand next to the bed. There's the pad that we used the oblique light on, detected the indented writing on it. Also, a tray full of cigarette butts. The open box of cartridges. This is the crime scene sketch in progress and the various measurements being taken. This is a close-up of the high velocity blood splatter, showing the mist that could only have been accomplished by the exiting projectile or fragment with the victim at close proximity to that wall.

Keefe: That mist would indicate that he obviously wasn't shot in the area of the room where he was found?

ichardt: That's right. And this is the floor below that wall where the lead projectile, the fragment of the projectile was discovered.

Keefe: And I gather that the fragment was found right under that blood splatter.

Reichardt: That's correct. And this is the corner of the living room couch, a few yards from the same wall where the broken tooth was also found in the fibers of the shag carpet.

And this was the partial bloodprint on the front door, the hall side of the front door. Here the victim is having his hand bagged prior to removal from the scene.

Keefe: Let me go back to that blood print on the door itself. Was that typed before removal from the scene?

Reichardt: No, what we did was remove the entire door from its hinges and transport the whole thing to the crime laboratory.

Keefe: So the crime lab did the testing?

Reichardt: That's correct. This is the sheared projectile being recovered and placed in a white pillbox. That's the standard of fiber from the shag carpet being collected. The suicide note also being collected and bagged and the latent processing of the apartment started here. And all of the evidence collected, the victim's clothing, the cartridges, the tooth, the gun and so forth were all packaged and submitted to the various analytical sections.

Keefe: O.K. What happened with the body?

Reichardt: The body was transported to the medical examiner's office.

Keefe: Dr. DiMaio are you the medical examiner that worked on this particular corpse?

DiMaio: Yes.

Keefe: Why don't you tell us what happened when you received the body, and what you did with it.

DiMaio: Right. Well, first as Mr. Reichardt pointed out, our own lay medical/legal investigator was at the scene, as he is at all violent death scenes and at that time he obtained statements from the police and witnesses concerning the circumstances leading up to and surrounding the death. He also took photographs for our office and made diagrams of where the body was and where there was recovery of any evidence. This was then used to prepare a report for me to do prior to doing the autopsy, because we don't do autopsies cold, we have a report from our investigators so that we know what techniques have to be utilized in the autopsy.

Keefe: In other words, you used the history to determine what type of inquiry or investigation you're going to conduct?

DiMaio: Yes. This would be equivalent to a doctor taking a medical history from you, asking you where the pain is, how long you've had it, a change with eating. This is our history because our patients don't talk. After obtaining this material he then had paper bags placed on hands. This is to prevent loss of trace evidence from the hands, which in this case, primer residues would be one of the most important . . .

Keefe: You mean from the gunshot itself?

DiMaio: Yes, sir, from the primer of the fired cartridge case. After the bags are put on the hands, the body is then wrapped in a clean, white sheet, again, to prevent loss of trace evidence, as well as to prevent other material from adhering to the body during the transportation of the body and being mistaken for evidence. The body was then transported directly to the medical examiner's office and placed in a secure cold room with only limited access to this storage area so nobody else can get at the body and disturb it. That afternoon, after viewing the report prepared by the investigator, I began the autopsy. Now, the body at this time was fully clothed, not embalmed. You don't want to embalm a body because it will destroy the appearance of wounds and also disturb your toxicology. The clothing is never

removed because in violent crimes the clothing may be just as important.

Keefe: Why is that?

DiMaio: Well, you may find powder grains on the clothing which may indicate a close-range wound and none of these powder grains may have penetrated to the skin. You may only find this on the clothing; there also may be trace evidence which would be lost if the body was just casually dressed. The first thing that I did was inspect the deceased's hands for evidence of visible powder set, powder set residue, as well as droplets of blood. Neither was found on the hands.

Keefe: Why would you be looking for the drops of blood?

DiMaio: Well, in theory if the individual shoots himself a fine spray of blood would come out and may be deposited in the hands. However, to be quite truthful, the absence of blood on the hands of an individual alleged to have shot himself is not significant, as in my experience, most of the people who do shoot themselves do not have this fine spray.

Keefe: But they would have the residue from the shell. Is that correct?

DiMaio: Well, they may or they may not, depending upon the weapon. Now what we do is that both hands are swabbed, back and front with a dilute acid solution to pick up this primer residue. Then this will be analyzed by atomic absorption for the presence of metallic components in the primers, which in this particular type of ammunition would consist of antimony, barium and lead. I'll come back to this point further on in the discussion.

Keefe: So that your knowledge of the type of weapon and the type of ammunition would be very significant in determining whether or not this was a suicide or a homicide? Is that correct?

DiMaio: It would be significant if the weapon, itself, leaks and part of the technique of evaluating handwashings is test firing the weapon.

Keefe: Do you know if the crime lab did that?

DiMaio: Yes, the crime lab did test fire this specific weapon and after it was test fired the hands of the firer were swabbed with this dilute acid solution and these swabs

were submitted to us for analysis. And in this case, it revealed that the crime lab test firer had deposits of antimony, barium, and lead on the back of the right hand. The deceased's hands, though, showed no primer residue deposits.

Keefe: As a result of that, if I laid the proper foundation, are you going to be able to give an opinion based upon reasonable probability that the decedent didn't fire that weapon?

DiMaio: Ah, no.

Keefe: Alright.

DiMaio: This is just one factor to be considered, but unfortunately nothing is 100%.

Keefe: Is it more probable than possible?

DiMaio: It is probable.

Keefe: Probable is the test.

DiMaio The clothing was then, after the handwashings were taken and the fingernails were clipped, retained for

examination. After examination of the hands, the clothing was then examined on the body and it was removed. Identification photos and fingerprints were taken, as is done in all of our cases, so as to conclusively document the identity of the individual, the head was then x-rayed for the presence of the missile. Again we feel that this is mandatory in virtually all gunshot wounds even through and through wounds that x-rays be taken because even in a through and through wound a portion of the bullet may remain in the body and may be missed by a pathologist, while if he has an x-ray he knows its there and he can look for it.

Keefe: Did you find the bullet in this case?

DiMaio: It was seen on the x-ray and subsequently recovered.

Keefe: Was that turned over to the crime lab for further testing?

DiMaio: Yes sir, it was labelled as 13 D and was turned over to the crime lab with a written transfer sheet, of course. The examination of the body itself revealed that the deceased had been a thin elderly white male appearing younger than the stated age of 67. He was

six feet tall and weighed 152 pounds. Hair was white. Examination of the extremities revealed that the left arm and leg appeared atrophied or wasted.

Keefe: What would that indicate to you, Doctor?

DiMaio: This is consistent with paralysis on the side with the inactivity and fibrosis of the muscle. In fact the subsequent autopsy confirmed the fibrosis as microscopic sections of muscle in the left arm did show fused fibrosis.

Keefe: What I want to know is whether or not he was able to use that left arm, particularly whether he would be able to inflict a gunshot wound with it.

DiMaio: No, but we'll get to that in a second. I think I want to discuss the outside of the body at this time if you don't mind. There was a 3 centimeter, slightly more than an inch in diameter, decubitus ulcer, or bedsore, in the deceased's back and this indicated that he had been bed-ridden for a while. A complete autopsy, of course, was performed on the body as is done in all homicides and suspected homicides. The injuries were primarily in the head. Present on the left side of the head, just above and behind the left ear there was a

contact wound of entrance. The wound of entrance was very irregular in nature. There was tearing of the skin due to the powder gases coming between the scalp and skull and lifting up and tearing the skin. There was some searing and blackening of the edges of the wound due to the gases of the flame from the muzzle of the weapon.

Keefe: That would indicate, Doctor, that the weapon was held very close, wouldn't it?

DiMaio: Yes sir, in this case it would have to be a contact wound. In fact when the scalp was incised and retracted, powder soot was present around the wound of entrance. The wound of entrance was extremely interesting in that it had the characteristics of both an entrance and an exit wound. When a bullet enters the skull it punches out a round oval sharp-edge hole in the outer cable (which is the outer surface of the bone) and when it goes through the bone, it levels out the opposite side. Now when you examine this wound, this edge here is sharp edge, this edge is beveled out so; from here to here, is an entrance, and from here to here is an exit. This indicates that one is dealing with what is called a key hole wound of entrance or key hole wound.

Keefe: Doctor, let me stop you for a second. Would that be consistent with the fragment that was found at the scene?

DiMaio: Yes sir, the key hole wound is caused when the bullet strikes at a shallow angle such that while the bulk of the bullet goes into the brain, part of the bullet exits at the same time it enters. So at one end you see the bullet starting to enter and then a piece was shaved off and then exited thus causing an exit type of appearance to one end of the wound with that lead fragment shear.

Keefe: That would be consistent with the blood splatter and the fragment being on the wall, would it not?

DiMaio: Yes.

(efe: In other words, he was shot over by the wall?

DiMaio: Yes sir. Now after the scalp was incised and retracted, the soft tissue and muscle around the entrance wound was cut out and examined under dissecting microscope for the presence of powder flakes. This examination revealed no flakes to be present. However, again, this is not unusual in that fifty percent or more of our cases

of known contact wounds we find no visible powder flakes using the dissecting microscope. The same tissue, however, was submitted to analysis by energy dispersive x-ray and flameless atomic absorption. These analytical techniques revealed large quantities of lead from the bullet and copper and zinc vaporized from the cartridge case. In addition, there was antimony and barium from the primer. Of course, some of the lead that came from the bullet also would have come from the primer as well. On entering the cranial cavity a soot was again seen on the inner surface of the bone and around the dura, which is a membrane which covers the brain, again indicating that this was a contact wound. The bullet itself followed a left to right downward, back to front path, producing extensive injuries in the left basal ganglia portion of the brain. A part of these injuries were also due to a fragment of bone being driven into the brain. The bullet itself passed through the lower portion of the right half of the front of the cerebral hemisphere and lodged in the right frontal bone from whence it was recovered, and again, it was labeled 13D. Aside from the evidence of the gunshot wound,

the most interesting findings in the brain had to do with evidence of an old stroke. The cerebral vessels showed atherosclerosis, or hardening of the arteries. The general public calls it hardening of the arteries. And present in the brain was an area in what we call encephalomalacia, or stroke, and this was present in the right half of the brain, a very extensive area and in what's called the internal capsule region and it was also further evidence when you look at the base of the brain, there was atrophy; in this case on the left side of the picture you can see the parametal tract is markedly thin on this side or partly atrophic and this as compared to the other side; and this would indicate that the individual had suffered a stroke in the past and he had severe paralysis on the left side.

Keefe: Now let me stop you for a second, Doctor. As I understand it, if a stroke occurs on the right side of the brain, then you have paralysis on the left side of the body?

DiMaio: Yes sir.

Keefe: And that would be consistent with your finding as to the astrophy of the left limb?

DiMaio: Yes sir, he was atrophied on the left side.

Keefe: That would be consistent with his using the cane, too, would it not?

DiMaio: Yes sir. Now in view of the extent of this encephalomalacia, or stroke, one could be fairly certain that he could not have manipulated a firearm with the left arm.

Keefe: Would you demonstrate for us what he would have had to have done in order to make the contact wound by using his left hand?

DiMaio: Well, you would have to hold the weapon back this way, pointing forward and downward, but of course he couldn't use his left arm due to the severe nature of the stroke.

Keefe: So we have ruled out that possibility? Is that correct?

DiMaio: Yes, if using the left hand, yes sir.

Keefe: And to use his right hand, it would be almost impossible, wouldn't it?

DiMaio: Yes, it would be almost impossible, yes sir...you would somehow have to maneuver it and then somehow the angle here would be the most important with the left hand, while theoretically it is possible to get over to the other side to get a stable shot you would have to support the barrel with the left hand and you would get primer residue on the palm of the hand. In fact, you usually get soot. But of course as I have said before, there was no residue on either the front or the back of this individual's hands.

Keefe: So that if I am clever enough to ask you the right series of questions, you can rule out the possibility of suicide. Is that correct?

DiMaio: Yes.

Keefe: What else did you find?

DiMaio: Well, essentially that was all. Blood and tissues were of course also removed at the time of the autopsy and submitted for toxicological and microscopic examination. Microscopic examination, however, did show increased numbers of mononuclear cells in what is called the portal areas of the liver. And this is usually associated with either a chronic infective process or someone who is abusing

drugs intravenously. As I mentioned before, the hand washings were negative on the deceased, while the back of the hand of the test fires were positive indicating that this weapon will leak a deposit. In summary, what we have is an individual, dead of a contact wound to the left side of the head with a key hole type of wound of entrance with part of the bullet exiting, the bullet followed a left to right downward forward path through the brain, and was recovered. There was left-sided paralysis and in view of the paralysis, the location of the wound, and the trajectory of the bullet and the hand washings, it would be my opinion that this wound is not self-inflicted and that it is a case of homicide.

Keefe: And when you couple that with Mr. Reichardt's finding regarding the blood splatter, the location of the body and the bloody fingerprints on the door, you are pretty sure between the two of you that it is homicide. Is that right?

DiMaio: Yes sir.

Keefe: Dr. Goldman, you are the odontologist. Why don't you indicate how we solved the problem of identification

and what you did with the tooth fragment turned up during the crime scene investigation.

Dr. Goldman: Because Mr. Foster had not been seen for a goodly length of time, he didn't travel much outside. Dr. DiMaio, who is very, very thorough, insisted on a corroborating identification. We used the dental arches as a means of identification. At the time of autopsy, we charted and x-rayed Mr. Foster's mouth and we were able to obtain from his dentist of ten-year's previous, his ante-mortem or pre-treatment x-rays. A very excellent chart that the dentist kept gave us a positive identification when he compared ante-mortem with post-mortem records.

Keefe: Do you have a slide which would indicate that?

Goldman: Yes, I do.

Keefe: Perhaps you want to use the pointer because we are going to have to show the jury where the points of identification are.

Dr. Goldman: Mr. Foster had undergone extensive dental care at this period of time; what we have is the 1965 pre-treatment x-rays and they are on the top and the

1976 post-mortem x-rays on the bottom. At first glance, they appear totally different; we not only look at the teeth, but we have to take into consideration that a great deal of dental work is done on people over the years. Things remain consistent in the mouth. One is the bone trabecular pattern, the wear edges on some of the teeth that have never been treated dentally, the area of bone architecture in the lower jaw and we also look at the written record and compare with what we have in the post-mortem record. However, in this case, the posterior teeth here and here had been extracted, the lower teeth were missing in 1965. The written record indicates that the upper right lateral incisor and the upper left lateral incisor, had had root canal therapy done on them. The lower bicuspids had caps made for them which were joined together and these caps had sophisticated female precision attachments built into them to accept the partial lower denture which also had a male attachment that fitted into the mentioned female attachments. A partial upper denture was made and this is consistent with the dental record. In these lateral incisors, this is a sort of interim film,

the dentist had then placed cast gold post in core and made a set of caps on each lateral incisor. We took shades of these caps, they were A_3 vitalumin and we took shades off the facings of the bicuspids; they were 65 biotone. This was consistent with the written dental record. We compared periodontal lesions in the post-mortem film with the peridontal lesion in the ante-mortem film. We also compared the bulbus root which doesn't change, in the post-mortem film with this bulbus root in the second bicuspid. At the time of autopsy, the partial denture was not in the mouth and I asked the investigators to go back to the scene, and they did find the partial wrapped in a tissue in the glove compartment of the gentleman's automobile. This was taken back to the morgue, fitted to the mouth, and it fit perfectly. I had eleven concordant points to positively state that this was indeed Mr. Foster.

Keefe: Mr. Longhetti, your laboratory received a number of items of physical evidence in this case. For purposes of my familiarization with laboratory operations, did you also bring slides of the various testing procedures and examinations that you conducted

on this evidence?

Longhetti: Yes, I did; except, of course, for those few slides that aren't ready yet.

Keefe: Suppose we start with the weapon. Would you describe it, please?

Longhetti: The weapon submitted was a .38 caliber Smith & Wesson, Model 36, with five chambers in the cylinder. When received, the cylinder contained four live rounds and one spent round. The chamber beneath the hammer contained the spent cartridge. The live rounds and the spent cartridge were removed from the weapon, marked for identification, and the weapon was subjected to a visual examination and checked for operational condition. This slide shows the analyst examining the weapon visually.

Keefe: Did you discover anything unusual about the weapon on visual examination?

Longhetti: Yes, we did. The visual and the low power microscope examination revealed the presence of small blood splatters on the front portion of the barrel which is shown in the slide before you. The analyst in this slide is removing the blood splatter so that the fingerprint powder will not interfere with any

subsequent testing of the blood. No hair or tissue was seen.

Keefe: What is the significance of the finding of the blood splatter?

Longhetti: Many times blood or other tissues from the body will be deposited on the weapon under the conditions of a contact wound, that is, when the muzzle of the weapon is in contact with the body at the time the round is fired.

Keefe: So these findings are consistent with a contact wound?

Longhetti: Yes, they are.

Keefe: Did you make any other significant findings on your visual examination of the weapon?

Longhetti: After the gun was processed on its exterior surfaces for latent fingerprints, we opened the cylinder and found that the chamber underneath the hammer displayed flaring, which indicates that a round had been fired in that chamber.

Keefe: What do you mean by flaring?

Longhetti: When the weapon is fired and the gasses escape from the cartridge case, the bullet is projected out of

the chamber and into the barrel. There is a slight opening between the cylinder and the entrance into the barrel. Some of these gasses escape and form what is called a flare at the end of the particular chamber where the round is fired.

Keefe: What other tests did you perform on the weapon?

Longhetti: We subjected the weapon to a trigger pull examination and found that the weapon submitted had a pull of five pounds, double-action, which is 3 1/2 pounds less than the specifications listed in the literature for a Smith and Wesson, Model 36 revolver...which would essentially put this weapon into a classification of "hair trigger". (Incidentally, this slide shows a trigger pull determination being made with the gun in the single-action mode - we'll have the double-action slide ready by the time of the trial.)

fe: Did you test fire the weapon?

Longhetti: Yes sir, the weapon was test fired at the laboratory and the test bullets and the test cartridges were marked for identification.

Keefe: Did you compare the test bullets and test cartridges with the evidence bullet and fragment submitted to the laboratory and the evidence cartridge removed

from the chamber of the weapon?

Longhetti: Yes sir, I did. Microscopic comparisons and analyses of the test bullets with the evidence bullet revealed ample evidence, in my opinion, that the large piece of evidence bullet identified as removed from the body was fired in the submitted weapon to the exclusion of all other weapons of similar make and model. Likewise, microscopic examinations and comparisons of the test cartridges with the evidence cartridge case removed from the chamber of the weapon revealed ample evidence, in my opinion, that the evidence cartridge case was also fired in the submitted weapon to the exclusion of all other weapons of similar make and model.

Keefe: How do you conduct a microscopic examination and comparison of test and evidence bullets, etc.?

Longhetti: Bullets and cartridge cases are compared on a firearms comparison microscope (actually, this is simply two microscopes joined together by a bridge having one eye-piece.) The slide here depicts the analyst examining and comparing two projectiles. You can rotate the projectiles 360 degrees around or you can move them left, right, front or back. This

enables the firearms examiner to study the lands and grooves on the projectile for the width and depth and other gross characteristics. He can, also, under magnification of 20 to 30 power, study the fine striations or characteristic markings placed on the projectile by the barrel of the weapon.

Keefe: What do you mean by lands and grooves?

Longhetti: The barrel of revolvers and rifles are grooved with a certain twist, so that when the projectile is fired, the twist of the grooves imparts a spin to the projectile and improves its accuracy. The groove in the barrel would be a raised surface or groove <u>impression</u> on the bullet. A Smith and Wesson revolver has 5 lands and 5 grooves with a right hand twist--the twist is clockwise. Other weapons have different numbers of lands and grooves. For instance, most Colt revolvers have 6 lands and grooves with a left hand twist.

Keefe: What do you examine on cartridge cases for comparison purposes?

Longhetti: In revolvers, we compare the firing pin impression on the cartridge cases--in this case in the primer cap. Also, we will normally have breech face marks

in revolvers. If it is a semi-automatic pistol, we would also have extractor and ejector marks, normally on the cartridge case.

Keefe: Do you have slides of the comparisons of the test and evidence bullets and the tests and evidence cartridge?

Longhetti: Yes sir, I have one slide with me. Others are still being prepared. This slide shows an excellent comparison of individual characteristics. Interestingly enough, the questioned bullet here is the smaller of the two pieces of bullet that we found, which illustrates how important it is to recover all bullet fragments.

Keefe: Did you perform any other tests on the weapon?

Longhetti: When the weapon was test fired, the firer's hands were swabbed to determine if this particular weapon would place primer residues on the firer's hands. Swabbings from the deceased's hands were also submitted to the laboratory. Atomic absorption analyses for barium, lead and antimony on the deceased's hand swabs were negative. Atomic absorption analyses for barium, antimony and lead on the test firer's hands were positive,

particularly on the right hand (the firing hand).

Keefe: What does this indicate?

Longhetti: This information indicates (1) that the submitted weapon will deposit residues using similar ammunition on the firer's hands, and (2) that the deceased's hands did not contain any residues, so therefore, it leaves some reason to doubt whether the deceased actually fired the submitted weapon prior to death.

Keefe: Did the weapon have any other peculiarities?

Longhetti: Yes, a serial number had been obliterated on the butt of the weapon. This slide shows crime laboratory personnel in the process of restoring the obliterated serial number by use of acid solutions. The next slide shows the restored serial number on the butt of the weapon. As you can see, the number is "J11285".

Keefe: Were you able to trace the weapon as a result of that serial number?

Longhetti: We had an NCIC (that's National Crime Information Center) check conducted on the weapon, but we got a negative response as far as the weapon being stolen or otherwise placed in the NCIC files.

We turned the information on the serial number over to the local investigating officials and I am sure they will determine who previously owned the weapon.

Keefe: You received a small fragment of bullet from the scene and a major fragment of bullet identified as from the deceased's body, is that correct?

Longhetti: That is correct.

Ke(:: Was the small fragment, in your opinion, originally a portion of the larger fragment of bullet?

Longhetti: The live rounds removed from the weapon contained a 150 grain projectile. The combined weight of the small fragment and the larger fragment submitted was 148 grains, so these are consistent with being a 150 grain bullet. Visual low power examination reveals the small fragment is consistent with the missing portion of the large fragment. Physically, however, there is not a fracture match as such between the two, i.e., they cannot be physically placed back together. Atomic absorption analyses and emission spectroscopy reveals that the

constituents of the two fragments are very similar, both quantitatively and qualitatively, indicating that the two fragments are consistent with being the same type of ammunition and by their physical size and shape are consistent with being originally one and the same projectile.

Keefe: Mr. Longhetti, let's go over the other evidence submitted to the laboratory, particularly the blood evidence. What items did you examine for blood?

Longhetti: We had a specimen of blood identified as from the body of Mr. Foster, and we received a known blood sample from Mr. Peterson. We analyzed the blood from the barrel of the Smith and Wesson revolver, the blood removed from the small bullet fragment identified as found in the room, the bloody fingerprint, and we analyzed the blood splatter found on the wall of the apartment. In addition, we analyzed saliva stains found on cigarette butts in the apartment.

Keefe: What determinations did the laboratory make on these blood samples?

Longhetti: We determined that Mr. Foster was a non-secretor

and Mr. Peterson is a secretor. We found that Mr. Foster's blood was Blood Group A, MN. The Rh factor was R^2R^2. The PGM was 2-1, and EAP was BA. We found these same blood group factors in the blood splatter on the barrel of the weapon submitted, the blood comprising the bloody fingerprint, and the blood splatter on the wall from the apartment. In addition, the blood delivered to the laboratory and identified as that of Mr. Peterson was found to be Group A, MN R^1R^1, PGM 1, EAP B. We found no blood at the scene which is consistent with Mr. Peterson's blood. However, cigarette butts submitted to the laboratory and identified as from the scene were found to contain saliva from a secretor. A secretor is an individual who "secretes" his blood type in his body fluids such as saliva. The saliva stains on the Winston cigarette butts were found to be Type A, PGM 1, which is consistent with Mr. Peterson's blood and which is not consistent with Mr. Foster's blood.

Keefe: The bloodstains on the revolver, the blood splatter on the wall, the bloody fingerprint, and the blood on the small bullet fragment are

all consistent with Mr. Foster's blood, is that correct?

Longhetti: That is correct, sir.

Keefe: Did you also receive some other evidence from the Medical Examiner's Office?

Longhetti: Yes sir, we also received scrapings from the fingernails and portions of the fingernails of the deceased, Mr. Foster.

Keefe: What findings did your laboratory make on this evidence?

Longhetti: At the laboratory, we found fibers of dacron and wool in the fingernail scrapings from the Medical Examiner's Office. We received from the investigating officers a jacket identified as that worn by Mr. Peterson on the day that Mr. Foster's body was discovered. Mr. Peterson's jacket is composed externally of dacron and wool fibers with the same characteristics of color and fiber mixture as those fibers identifed as from Mr. Foster's fingernails.

Keefe: What did the laboratory do with the bloody fingerprint?

Longhetti: The laboratory compared the bloody fingerprint with known prints of Mr. Peterson and others associated with the deceased. The fingerprint specialist at the laboratory is prepared to testify that the bloody fingerprint identified as found on the hall side of the doorway at the scene is the print of the right index finger of Mr. Peterson.

Keefe: Personnel in yourlaboratory, as I understand it, are prepared to say that the bloody fingerprint was made by Mr. Peterson. Is that correct?

Longhetti: That is correct, sir.

Keefe: However, the blood of which the print is comprised is not that of Mr. Peterson. Is that correct?

Longhetti: That is correct, sir. The blood is consistent with Mr. Foster's blood, but the print was placed there by the right index finger of Mr. Peterson.

Keefe: Did the crime laboratory receive any other evidence in regards to this case?

Longhetti: Yes sir, the laboratory also received the clothes of the deceased, Mr. Foster, and samples of his body and scalp hair from the Medical Examiner's Office.

Keefe: Did the examination of these clothes reveal any significant evidence?

Longhetti: Examination of the clothing was negative with exception of one finding. That was of a Caucasian scalp hair on the robe of Mr. Foster which does not match the scalp hair identified as Mr. Foster's.

Keefe: Did you compare this foreign hair removed from Mr. Foster's robe with scalp hair from other personnel which might have been in his vicinity immediately before his death?

Longhetti: Yes sir. We had the investigators collect known scalp hair from the five people associated with Mr. Foster. That is, everyone but the chauffeur, who I understand has not been located. We find that the hair from Mr. Foster's robe is inconsistent with four of the individuals, but is consistent in color, texture, scale patterns and other

characteristics, both under plain and polarized light, with Mr. Peterson's hair. I have some color slides in preparation which will demonstrate the similarities in the morphological features of the hair.

Keefe: Did the laboratory receive any other evidence on which you made significant findings?

Longhetti: No sir, we did not.

Keefe: In other words, the laboratory is prepared to testify that the bullet from the body and the spent cartridge from the weapon submitted were fired from that weapon?

Longhetti: That is correct, sir.

Keefe: Dr. Goldman, we'll now return to you.

Goldman: May I have the next slide, please. At the time this tooth fragment was brought to me, it appeared to be a corner of an anterior tooth; it could have been an upper right anterior tooth, either central or lateral incisor or could have been a lower left anterior

tooth.

Keefe: When you are using those terms, what you are really talking about is the area of the mouth where if someone smiles you could see that portion of their teeth. Is that correct?

Dr. Goldman: That is correct. We analyzed this and looked at it closely and this tooth appeared to have markings along the outside edge and tool markings along the biting edge or the incisal edge--

Keefe: What do you mean by tool markings, Doctor?

Dr. Goldman: A man-made marking made by a dental drill or a high-speed dental instrument, such as a diamond.

Keefe: O.K.

Dr. Goldman: We also found small flakes of dental cement on the fragment. (Next slide, please) This is a side view of the tooth, where we see a stain along this area here, this is the junction of the filling which I take to be a gold filling of some type because of the dental cement. The junction of the filling with the outside surface of the tooth which is enamel and

we also have the tool markings down along this incisal or biting edge of the tooth. (Next slide, please) I concluded from this that the individual, or as they say in New York, the "perpetrator" possibly had this tooth fractured in a struggle or it could have come from a guest who had been in the apartment, bitten on a olive pit and broke that edge of tooth.

Keefe: Did you subsequently learn that Mr. Peterson had this type of filling?

Dr. Goldman: Yes, when the investigators informed me that Mr. Peterson had a broken tooth and we then went back to the deceased and found this little puncture in a scratch on the middle knuckle, it was consistent with the story that the investigators brought me that there was a struggle, Mr. Foster did hit Mr. Peterson and broke a tooth. When we were able to examine Mr. Peterson, we found that he did have a broken corner of an upper right lateral incisor.

Keefe: So there is no question in your mind that that was Mr. Peterson's tooth, at least that portion was.

Dr. Goldman: No it did not. The configuration of the broken fragment fit the configuration of Mr. Peterson's tooth.

Keefe: Thank you. Dr. Blanke, were you the toxicologist who did some of the examinations?

Dr. Blanke: Yes, in view of the apparent cause and manner of death which have been described this morning, toxicology didn't seem to play a very important role. But since in our jurisdiction we always conduct routine examinations and especially in view of the fact that the history of this individual indicated that he had been a hypochondriac, and although he had a lot of medical advice he seldom availed himself of it, we decided that maybe a search of the tissues for drugs would be indicated. Since very little by way of drugs had been submitted, we sent other investigators back to look outside the immediate scene and they did recover a store of drugs.

Keefe: Where did they find those drugs?

Dr. Blanke: They were found in the car of the deceased. Investigators found in the car of the deceased the following items: (If I might have the first slide). This is

a facial tissue box which contains several layers of tissue on top of which was a yellowish stain which was dried and had no odor; on top of that stain we found a one milliliter hypodermic tuberculin syringe with a 23-gauge needle intact, and inside the syringe appeared to be several drops of a clear liquid. In addition to this, in the back seat we found this metal box which was properly labeled and inside the box a series of drugs and other facial tissue boxes. We removed the drugs from the container and put them on display. What you can see on the left is a dextropropoxyphene or Darvon; next to it is a bottle labeled Doriden, and I can't read the label of the one next to that, I believe it is Elavil or amitriptyline and then next to that one is tincture of cantharidin; on the bottom level was a bottle labeled to contain xylocaine, or lidocaine hydrochloride, in a solution of ten milligrams per milliliter and then a bottle of Elavil hydrochloride in ten milligram tablets, and then some morphine sulphate injectable 15 milligrams per milliliter and there were 20 milliliters in the bottle and then a bottle labeled to contain strychnine sulphate.

Keefe: Did you find any prescriptions for any of these drugs?

Dr. Blanke: No, no prescriptions were found for any of these.

Keefe: Anything unusual, unique, or bizarre about those drugs?

Dr. Blanke: Tincture of cantharidin is unique for some people. It is alleged to have a number of interesting properties and exactly what the heck it was here for I don't know. It is alleged to be an aphrodisiac. Strychnine may have been another unusual component of a medicine box; this, as you know, is a very deadly poison. It has been used to increase the euphoria from an injection of low grade heroin and it also has been used in so-called hot-shots to eliminate heroin addicts who are undesirable and it has also been used to improve the appetite. What the purpose of these particular drugs were, we didn't know. In addition to this, we found a paper sack which we found to contain newly purchased medication. These are Valium tablets and a bottle of Empirin compound with codeine. The Empirin shown in the slide is an

analgesic compound which contains caffeine, aspirin, and potassium; and, in this case, with codeine phosphate added. In addition to this, a search of the house revealed a closet filled with these containers; these are pint fruit jars all filled at varying levels with a yellowish, highly-odorous material which, if urine, had not been voided recently. These were not labeled but there is a sample of one that was submitted to the laboratory for chemical analysis.

At the autopsy, Dr. DiMaio obtained swabs of the nasal orifices for us, swabs of the oral cavity; we received an aliquot of the dilute acid washings from hands and, in addition, we requested that the hands be washed with ethyl alcohol and this solution was submitted to us. In addition, head hairs were removed and submitted. These were white in color. Then we had the fingernails from one hand removed and submitted to us and a sample of subclaviant venous blood measuring approximately three ounces in volume. At the autopsy there was found in the inguinal region a series of puncture wounds. Any one of these (that is the groin); one of these appeared to be fresh, so Dr. DiMaio removed this tissue and this skin layer and the surrounding tissue and then in

addition we requested a sample of skin from another portion of the body and the surrounding tissue which did not contain needle marks for control purposes. Then we received both lungs after sections had been taken for histology; these were placed in plastic bags. The entire liver minus the sections taken for histology and these were also stored in sealed plastic bags. We had a specimen of bile measuring approximately five milliliters in volume. This was stored in a glass cap vial. In addition to this, we had both kidneys, minus the tissues removed for histology, and then random slices of brain tissue which had been taken from areas of the brain not traumatized by the bullet. There were no stomach contents found when the stomach was opened by pathologists but approximately 100 grams of stomach tissue was submitted to us in a separate container. In addition then, we received sections of the duodenum and the jejunum and the ileum and sections of the colon. These were each collected and stored separately so that the contents would not contaminate the balance of the body. Urinary bladder was empty; we requested

the bladder after it had been open and this was put in a separate glass jar and then we received a section of adipose tissue which was removed at that time. Each one of these specimens we, of course, stored in separate containers and properly labeled. The blood was immediately examined for the presence of alcohols. These included ethyl alcohol, methyl alcohol and isopropyl alcohol and acetone and formaldehyde, and none of these were found to be present. The alcohols were not present in concentrations exceeding 10 milligrams per deciliter which was the limit of sensitivity with the gas chromatographic assay used in this case. And these concentrations would not be considered significant had they been present. Stomach contents were also examined for ethyl alcohol and none was found of concentration exceeding 10 milligrams per deciliter fluid was not found to be present.

Keefe: So basically we can rule out alcohol content.

Dr. Blanke: Yes, also these tissues had been received fresh, and had not been preserved at the time we received them. Then we examined the blood for the presence of a number of drugs and we found diazepam to be

present in the blood and the metabolite of diazepam, demethyldiazepam. A number of dilutions had to be made with the procedure that we employed in order to make a quantative estimation and we found the diazepam to be present in 1.05 milligrams per deciliter and that demethyldiazepam in concentration of .95 milligrams per deciliter. Since amitriptyline was found in the box, we also looked for this but that was not found to be present. We examined the blood for the presence of strychnine and this was not found to be present. We did, however, find propoxyphene, or Darvon, and the propoxyphene was found to be present in a concentration of a tenth of a microgram per milliliter and also its metabolite norpropoxyphene was found to be present in a concentration of .03 microgram per milliliter. These concentrations would be associated with therapeutic use of Darvon as a mild analgesic drug.

Keefe: So basically your findings were consistent with his being on the Darvon and the other types of drugs, sedatives or downers.

Dr. Blanke: Well, in the case of diazepam, these concentrations were extremely high and for someone who had not been using diazepam, these would be considered in a toxic range, if not fatal range. But for someone

who had become tolerant to the use of diazepam, these would be acceptable values for someone who was merely sedated and/or possibly euphoric. The high concentration of the metabolite of diazepam, which was present would suggest that this individual had been taking diazepam very regularly for some time and that he had a very recent amount of diazepam because the metabolite requires some time to generate and stays a while and since the current compound and metabolite were present in such similar and high concentrations we believe that this represents the use of diazepam by someone who had become tolerant to it.

Keefe: All right, and this is consistent with the medical history that you obtained too, isn't it?

Dr. Blanke: Yes, we continued the investigation and then looked for other common compounds and found that none of significance to be present. The urinary bladder was rinsed with water and examined with distilled water and it was screened for the presence of a number of drugs, including cannabinoids and these were not found to be present. For this screening procedure, one of the techniques was the

EMIT system and under this system cannabinoids can be detected 48 hours after an ordinary amount of marijuana has been used and in this case none was found to be present. We found in the urinary bladder, though, a relatively high concentration of salicylates which would be compatible with the use of Darvon compound or propoxyphene plus aspirin and we also found positive responses to benzodiazepines in this urinary bladder as well as the propoxyphene.

Keefe: What does that indicate?

Dr. Blanke: This indicated that Valium or diazepam had been present in that we found it in the blood. This would be consistent with the finding of diazepam in the blood. Since this was a rinsing of the urinary bladder aside from the fact that it was present in it, no other implication or interpretation would be really possible. We examined the bile for the presence of morphine and morphine derivatives and they were detected in concentrations of approximately .02 milligram per deciliter and this simply indicated the presence of these and other techniques were used to separate the two and find, in fact,

both were present, both morphine and codeine. In the concentrations in which they were found it is believed possible that the morphine was there to metabolize the codeine. The codeine possibly present from the use of the Empirin. The nasal swabs do not indicate the presence of cocaine, the principal compound to look for. But also it does not reveal the presence of cannabinoids (marijuana); neither do the oil swabs reveal the presence of marijuana, nor did the ethyl alcohol washings of the hands reveal the presence of marijuana and it is believed for some hours that these had not been used. An examination of the tissues, however, revealed the presence of an abnormal amount of arsenic. We have indicated on the right the normal range of concentrations of arsenic which one might expect to find in the various tissues which were examined in this case. For example, in the nails, which were 1/2 inch approximately to the nail beds, contained .44 milligrams of arsenic per 100 grams of tissue and this is in considerable excess of what we would expect to find in a normal range. It is believed that the concentrations found were not to have been associated with toxicity more than with some nausea and vomiting,

which would not have been associated with the fatality. Based on the finding of arsenic in the tissue the examination was made of the urine in the jar which had been submitted and a relatively low concentration of arsenic was found in this case, which means that inasmuch as arsenic does return in essentially normal value in three or four weeks after exposure, this urine sample was evidently secreted sometime after or before this amount of arsenic can be found. Incidentally, the hypodermic syringe was examined for the presence of morphine and codeine; these were found not to be present but diazepam was found to be present. No metabolite was found and this is believed to have been of pure injection solution in the diazepam. The region of fresh needle marks also was found to contain a high concentration of diazepam of demethyldiazepam was found not to be present. I think that this essentially completes my toxicology report.

Keefe: But basically when all is said and done, we have a man who had used some drugs, none of which appears to have caused a toxic state, either alcohol, cocaine, or marijuana.

Dr. Blanke: Yes, we believe in this case that the presence of diazepam could not account for the death.

Keefe: Mr. Beck, you are the document examiner in this case, what evidence did you examine?

Beck: There were two documents from the crime scene submitted to me: the notebook and the alleged suicide note. Later, I was sent two other items that related to the suicide note, namely a book and a small strip of paper from the suspect's home.

Keefe: Taking things in order, what is the significance of the note pad?

Beck: We have heard the crime scene investigator mention the spiral-bound notebook found in the bedroom and that it contained some writing impressions. My first slide (No. 1) shows the notebook in question

taken in ordinary studio light. The page is blank, and this light shows no impressions. But the second slide (No. 2) shows the impressions when the page is lighted from the side at a low angle of the light beam. We can now read impressions of handwriting from an earlier sheet in the notebook - the original of which is missing. The impressions read "Bob - Sat. A.M.", sloping upward on the lower half of the page. There are also other writing impressions from other pages of the book, but none of these was decipherable.

Keefe: Were you able to identify the handwriting in the impression, "Bob - Sat. A.M."?

Beck: No, there was not enough clearly defined handwriting to allow a definite opinion, but based on the comparison I made with known writing specimens by the victim, Mr. Foster, I can say that the writing is consistent with his writing.

Keefe: OK, what about the so-called suicide note, do you have slides showing the note and your findings on it?

Beck: The suicide note is here in the next slide (No. 3) in an overall view to show the general nature of the note. There are three things that stand out about the note in this view: one, the typing is neatly

arranged on the page; two, the signature angles strongly upward; and three, the paper is cream-colored and rather heavy. There is also barely visible in this view a peculiarity of the edges of the sheet in that the paper is square and cut straight on three sides. But on the left side the edge is not quite straight, as if cut by hand. The dimensions are 8 1/2 inches by about 1/8 inch.

(eefe: What do these features of the typing and the paper suggest to you?

Beck: Well, the unusual character of the paper and the very neat arrangement of the text raised suspicions in my mind as to the genuineness of the note. I would expect to see a more casual quality of typing and some other kind of paper, a writing paper of some kind. My suspicions also tied in with the character of the signature.

(Keefe: What do you mean, the character of the signature?

Beck: I would like to show the next slide (No. 4) to illustrate the point. The slide shows the text in greater closeup so that you can read the text (reads text). Maybe Dr. Tanay can comment on the character of the language and contents of the note

and say whether or not it is like a genuine suicide note.

Dr. Tanay: Yes, after reading this text I find that it is more like a fake note than a genuine suicide note (additional comments by Dr. Tanay).

Keefe: Mr. Beck, would you continue your comments on the signature.

(eck: This slide also shows the signature closer up. Here we see the natural and fluent quality of the writing. These signs are primary indications of genuiness in a signature. And when I compared this note signature with several undisputedly genuine specimens of Mr. Foster's signature I found that this note signature is genuine, without question. The next slide (No. 5) shows a closeup of the last name of the signature. Here we see even better the natural and fluent quality of the stroke and the character of the blue fiber-tip ink strokes. Now, in addition to my suspicions about the paper and the text and the uphill slope of the signature I have also found that the signature is genuine. By the way, I have also determined that the text was typed on the very same machine which was located on the crime scene and

belongs to the victim. I then suspected that the note may have been manufactured by typing a text above an existing signature on an otherwise blank sheet of paper. This is a fairly rare method of forgery, but we do see this kind of fabrication once in a while. Typically, in those situations, the forger wants to manufacture some kind of promissory note or even a will, and he contrives to get the person to sign a blank piece of paper, or he removes an existing text by erasure, or he can get a signature on a fly-leaf of a book by removing the whole page from the book. I suspected this was the case with the Foster suicide note. Then, as the next step, I examined the intersection of the typewriting and the signature to see which was written last. Using the microscope at the intersection of the "F" of the signature with the "a" of the word "fanfare", I determined that the typing was done last. In other words, the signature was already on the paper when the text was typed. So I was able to confirm my suspicion that the note is fabrication - based on the assumption that one does not make a genuine suicide note by signing a blank piece of paper, then typing a text above it.

Keefe: How did you reach the conclusion that the typing is over the signature?

Beck: By using the stereo microscope and a technique called "Micro-manipulation". This consists of using a very finely pointed needle to exert a gentle scraping or lifting action on a few fibers on the surface of the paper. If there is a distinct color difference in the two writings it is possible in some cases to get a very definite answer by this type of physical lifting of fibers.

Keefe: How does the paper of the note tie in with your findings thus far?

Beck: When I examined the paper more closely, I found that it was more like book paper than writing paper, based on the thickness, the texture of the surface and the lack of "sizing".

Keefe: What is "sizing"?

Beck: Sizing is an additive put into writing paper to make it take ink better; a kind of water-proofing that is either mixed in the pulp or added to the surface of the paper so that ink won't run.

Keefe: Please go on with the rest of your findings.

Beck: The crime scene investigators could not find any book on the scene that had the dimensions of 8' by 11 inches, but they did find such a book at the apartment of the suspect, Robert Peterson. The next slide (No. 6) shows the outside of this book - entitled Mushrooms of North America. This book has the fly-leaf missing, and the next slide (No. 7) shows the opened book with the inside cover on the left and the torn edge from the missing fly-leaf at the fold. I have inserted a sheet of black paper underneath the torn edge to bring it out more clearly.

The crime scene investigators did such a thorough job of searching the suspect's apartment that they even sorted all the contents of the garbage bag. That's where they located a crumpled strip of paper which I am showing here (Slide No. 8). The slide shows the strip of paper after it has been straightened out. It has one cut edge and one torn edge, and the length is 11 inches. I determined next that this strip had the same color, thickness and other physical features as the paper of the suicide note.

The next slide (No. 9) shows the open book again, this time with the strip of paper fitted in between the cover on the left and the suicide note on the right. The black paper is still behind the lighter sheets for contrast. The next and final slide (No. 10) shows the same arrangement in greater closeup. We can now see the fit of the cut edge between the strip and the note where the cut line is not perfectly straight but slightly bowed. We also see a portion of the fit of the torn edges, a so-called "fracture match". The ragged edges fit exactly, so that we now have to tie between the strip and the book as well as between the strip and the note.

Keefe: How specific can you be in stating that the strip and the note sheet came from this particular book?

Beck: Quite specific. I can state that the strip matches the note paper in physical features and in the bowed edge on one long side, and I can state that the strip came from this book and no other because of the completely individual randomness of the tearing of the paper.

Keefe: Dr. Birkby, you are a physical anthropologist and examined the bones that we found in the incinerator. Is that correct?

Dr. Birkby: Yes.

Reichardt: I might interject that the janitor found these bones in the building's incinerator and turned them over to me.

Keefe: In order that the jury will understand what your specialty is, would you run through your area of expertise, and what part you play in this case. What type of physical evidence did you find in this case, and do you have slides of it?

Keefe: Is this pretty standard?

Dr. Birkby: Yes, right, even with prehistoric material we do the same thing.

Keefe: Are there certain characteristics and muscle markings that bones have so that you can identify

specific parts and tell what parts of the body they come from?

Dr. Birkby: Yes, that is essentially correct.

Keefe: OK, that is how you form those groupings here. Now give me a specific example, of what types of bone.

Dr. Birkby: Well, for instance, the major pile of bones at the very top of the photograph here are cranial fragments. These are exemplified by inner and outer tables of bone interspersed with diploic material or honeycombed bone. They are fairly characteristic of cranial debris.

Keefe: All right.

Dr. Birkby: Now also on this we have some dentitions and I think Dr. Goldman has looked at these for traces of dental restorations, that type of thing.

Keefe: I think that we will call on him in a second.

What did you then do next?

Dr. Birkby: We began reconstructing some of the boney material

here, in much the same manner that you would attempt to put together a jigsaw puzzle. Reconstructing some of the cranial fragments we were able to come up with portions of a frontal sinus and also an epactal bone or an extra inclusion bone that occurs in the skull between the sutures. We thought that this was rather distinct, and we saved it out for that reason. Also, a very interesting feature about these particular cranial fragments was what appeared to be a healed surgical intervention to the right side of the skull. With this information given to the investigating officer, he secured some ante-mortem x-rays of an individual by the name of Mr. Bennett--

Keefe: He was the chauffer in this case.

Dr. Birkby: I believe he is the chauffer in this case. These happen to be the ante-mortem x-ray films of Mr. Bennett's and I think if you can look rather closely on the AP shot here you will see an epactal bone in this region which is at the intersection of the

lambdoidal suture and the sagittal suture in the back of the head. Also in this ante-mortem AP x-ray, we will see a rather well-defined fairly large frontal sinus which is characterisitc of a male--and this happens to be a male. These are the reconstructed frontal bone fragments and this is the epactal bone. On close examination of the x-ray film you will notice the fairly distinctive notch, a normal appearing notch which occurs not only on this epactal bone which has separated from the skull during the crematory process but this same notch and the same shape of bone is evident on the ante-mortem films. We will show you more of that later. Down in this area, we have bony speta which occur in the frontal sinuses; these are x-rays of the bone fragments that we recovered from the debris or box. Let me have the next slide. This is a drawing (super positioned drawing) of that material over the same anatomical features that occurs on the ante-mortem film. The bone septa indicated by these arrows match very well with the bone septa of the frontal sinuses on the Bennett film as does the size and shape of the epactal bone and this rather distinctive notch indicated by the arrow on the same film. Next--

Keefe: Doctor, before you go on, would the fact that this was recovered from the pre-death x-ray, would that weaken your identification in any respect?

Dr. Birkby: No, it wouldn't weaken the identification because it is a matter of determining points of concordance between ante-mortem and post-mortem.

Keefe: While you had that particular slide on, did you consult with Dr. Goldman concerning the dental teeth structure?

Dr. Birkby: Yes, we did.

Dr. Goldman: This film does not exhibit any metal restorations in the upper front teeth. We were also fortunate to again get ante-mortem dental x-rays and we took x-rays of the teeth fragments which were all anterior teeth; however, the clinical crowns had been exploded off but the roots were still present. The configuration of the roots appeared favorably with the ante-mortem dental films of this individual.

Keefe: Would that be another point of identification?

Dr. Goldman: That is correct.

Keefe: Go ahead doctor.

Dr. Birkby: Well, on the lateral aspect of the ante-mortem film you will notice that there is an area of lesser density wherein there appears to be a non-repaired surgical intervention in the right temporal area. The fragments and the reconstruction of bony material (we have here a radiograph of that) indicates that this is the same area, i.e., the anterior border of the surgical intervention. It's broken here and we're missing all the rest of it in that area, but this is the healed surgical invention anterior to the temporomandibular joint and mandibular condyle. This particular feature coupled with other findings which we do not have pictured from the shoe box, such as a rather prognathous mouth and also some nasal guttering, which indicates that these very probably come from a negro male would pretty much identify this individual as the missing chauffeur.

Keefe: Based upon Dr. Goldman's analysis and your findings, can you testify with reasonable probability that in your opinion these skeletal remains are those of the missing chauffeur?

Dr. Birkby: Yes, I could testify to that.

Keefe: Thank you. Was there anything which might suggest the cause of death prior to the actual cremation of the chauffer?

Dr. Birkby: Yes! Fragments of the cranial vault exhibited sharp instrument cut marks. These marks are shown in these slides and are suggestive of "frenzy" knife cuts. These could be ante-mortem, peri-mortem or immediately post-mortem - but they certainly were made prior to incineration. These could suggest that the individual had been stabbed!

Keefe: The laboratory is also prepared to testify that the blood in that bloody fingerprint, the blood on the barrel of the weapon, and the blood on the wall are consistent with the blood of the deceased, Mr. Foster?

Longhetti: That is correct, sir.

Keefe: The laboratory is further prepared to testify that the hair on the deceased's robe and the fibers under the fingernails of the deceased are consistent with the scalp hair of Mr. Peterson and the coat worn by Mr. Peterson on the day of the event?

Longhetti: That is also correct, sir.

Keefe: In addition, you are also saying that the saliva stains on the Winston cigarettes were from a secretor with the same blood type as Mr. Peterson?

Longhetti: That is also correct, sir.

Keefe: At this point we have tied Peterson into the murder.

Keefe: Dr. Tanay has examined Mr. Peterson, perhaps he can fill us in on what he found and where we are going from here.

Dr. Tanay: It doesn't look like you are going in the right direction from where I sit. I did examine Mr. Peterson in accordance with the order of the Judge and the examination was conducted in my office; he was brought to my office by two deputy sheriffs and no one was present during the examination itself. Mr. Peterson was given a detailed explanation first of all as to what my function was. I explained to him that I would conduct the psychiatric interview and that I will possibly testify on behalf of the prosecution on the examination. The actual interview lasted two hours. There was also psychological testing that took approximately three hours. My conclusions are based upon the review of the entire investigative file, which you have accumulated. I have the transcript of the preliminary examination and I tape recorded the interview which I conducted with Mr. Peterson with his permission. Naturally, I obtained written permission from him. I also used the psychological testing that I already mentioned. And I also reviewed the transcript

of the interrogation of the five other suspects, in particular I found of value the statements and records of Dr. Joseph Smith, who was the personal physician of the deceased. Now to be very brief about it, because this is a preliminary communication to you, Mr. Peterson is a 38-year old man who was very cooperative. He gave comprehensive history, but I will give you only highlights of it. In the interview situation, when observed, he showed no overt psychopathology; for jury purposes, he isn't crazy. He was straight forward; made a very excellent impression. He was persuasive. There was no evidence that he was manipulative and would try in any way to influence me. I would say just purely on clinical impressions and also confirmed by psychological testing that he is above average intelligence; he was given the MMPI (the Minnesota Multi-Phasic Personality Inventory Test) and that indicates on all scales low clinical scores, that means that really he is a pretty normal individual, psychiatrically. The details of the history were correlated or obtained from him with other information and there were no inconsistencies. Mr. Peterson gave no history of being impulsive or having lost control as far as his aggression is concerned. He does not consume alcohol; he did not drink any alcoholic beverages on the particular day when this incident took place. As far as his past history

is concerned, again, I will not go into details now. We have the tape recording of that interview. He is a college graduate, he began working for Mr. Foster at the age of 24, where he has been a loyal employee throughout the years with Mr. Foster. He was an executive assistant and in the recent past he functioned as sort of a nurse-maid, you might say, to Mr. Foster. There is no history of any kind of antisocial behavior on the part of Mr. Peterson. He is married, financially secure and the rest of the history at this point does not appear to be very contributory. Now as far as the event itself is concerned, obviously I questioned him a great deal about that, and he was perfectly willing to talk about it, and talked freely and rather consistently. He states that on November 20, 1976, Mr. Foster was unusually depressed and talked a great deal about the uselessness about going on, which was customary for him. He often did express many depressive ideas. On that particular day, Mr. Foster went over to a desk drawer where a revolver was kept, which was usually locked and Mr. Peterson stated that he realized that Mr. Foster was about to kill himself because he did in fact reach inside and he grabbed the gun from him and

a struggle ensued and during this struggle Mr. Peterson did secure the gun. In other words, he held on to it. And after this struggle, Mr. Peterson states that he was very exhausted, he was holding on to the weapon and to his best recollection he was standing at that point, when suddenly Mr. Foster lurched for the weapon and the weapon discharged. Mr. Foster fell to the ground and at first Mr. Peterson did not believe that he was shot, then he realized that Mr. Foster was dead, and he also realized that he would be accused of murder.

Keefe: Of course, there is no corroboration. This is just his self-serving story that he is giving you.

Dr. Tanay: You can call it self-serving: it's self-serving to you, too, to say it. I realize that you, being newly elected, are kind of concerned about this case--so he realized, he says, that he might be accused of murder and he went into the bedroom and just sat there and smoked cigarette after cigarette and finally he decided that the only thing he could do is to make it look like suicide and then deny any involvement in the act. He felt that making it look like suicide would be quite believable because, in fact, Mr. Foster was a rather bizarre, depressed individual who attempted

suicide on many previous occasions. I might say right now that the family physician does confirm that Mr. Foster did attempt suicide on a number of occasions before. Mr. Peterson also related to him many bizarre episodes of behavior on the part of Mr. Foster, and I think without going into any details, that it is pretty clear that Mr. Foster did suffer from manic-depressive illness, for many of his habits were very bizarre. He collected urine in jars and kept them all.

Keefe: What is wrong with that?

Dr. Tanay: In fact, it might be a pretty smelly evidence in the courtroom, I must say. I had Mr. Peterson describe in detail what happened just prior to the shooting and Mr. Peterson said that in the first encounter with Mr. Foster when they fought for the gun Mr. Foster did grab his jacket and he says, "I never realized that he was that strong" and he just grabbed on to his jacket. He also said that during that first encounter, Mr. Foster did accidentally strike him and chip his tooth. He did say that. He described the shooting in some detail and he says that after the shooting and

after he decided to make it look like a suicide, he went home, because first of all he had a problem. The gun was originally purchased for Mr. Foster by Mr. Peterson and he realized that it could be traced to him so he went home to erase the markings and also to talk to his wife about what happened and his wife did encourage him to make it appear to look like suicide. So he obliterated the serial number of the gun at home; he also decided that it would be best if he had a suicide note. So he manufactured a suicide note. He had a book that belonged to Mr. Foster at home which contained a signature of Mr. Foster so he just cut that out from the book and took it to the penthouse, used the typewriter and did manufacture the suicide note. Now in conclusion, I would say, without going into a great many details, from a psychiatric standpoint, it would be consistent that this was a situation where the accidental shooting could have occurred. We have here a victim who was depressed, who was suicidal; it is consistent with the past history, and we have an accused who has no criminal record; we have no basis to suspect that he would want to kill his employer so I would say it's at least believable

to some degree that there was an accidental shooting. I would assume that the defense would be based upon the concept of no intent and psychiatric testimony I believe would be offered by Dr. Brown, who is an experienced forensic psychiatrist. I know that Mr. Peterson was examined by Dr. Brown and one of your assistants indicated to me that no insanity defense was filed and that supports even more the notion that no intent would be the defense in this case. My recommendation to you is that you offer him the guilty plea to careless discharge of firearms.
I realize that that would not be a very good idea in view of the publicity that this was a homicide that your office solved, but after all, I understand Prosecutors are supposed to go for justice, not only convictions. Isn't that true?

Keefe:

That is true.

Dr. Tanay:

Anyway, in the event that you decide to proceed with this case, I certainly could not testify in good conscience, from the psychiatric standpoint, that there was any evidence that he intended to kill the deceased

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and therefore if the defense offers testimony on the issue of no-intent, then your best bet to pursue your gamemanship would be to offer no psychiatric testimony; just rely upon cross-examination. That is essentially my view of this case.

Keefe: Do you think the problem of flight and cover-up and the contact wound are really consistent with his story as told to you?

Dr. Tanay: I think so. There was--here was a situation where he felt that he would be accused of murder; there was no one to support his view of it, so he did give in to the temptation of making it look like suicide. And I may say, in my experience in dealing with many cases I have run into situations many times where it looks like homicide and, in fact, turns out to be suicide. I might also add, Mr. Peterson was perfectly willing to undergo polygraph examination, asked for a sodium amytal interview or hypnosis. He was very insistent that he had no fear of being subjected to these particular methods of inquiry.

Keefe: Thank you.

Keefe: That concludes our presentation.

Because this is a fictional case we must leave the question of Mr. Peterson's guilt to you, the audience. I must admit that, at this pre-trial stage, although the physical evidence in this case points to a verdict of guilty, the findings of the forensic psychiatrist will certainly provide the defense with information to support their position that the death was accidental. The jury would have to weigh the evidence carefully and arrive at a verdict which would best serve the interests of justice.

FINDINGS

This project serves as a pioneering effort to develop training seminars which can reduce the communications gap between the forensic science and "user" communities and to enlighten legal and police personnel around the nation in the proper utilization of the forensic sciences. Unless the police officer, prosecutor, defense attorney and judge are sufficiently trained to recognize the potentials of the forensic sciences and are prepared to communicate with a wide array of forensic experts, science will continue to be at the periphery of the judicial process.

In summary, the major findings of the project are as follows:

1. The "Investigation of a Suspicious Death Seminar" proved to be a successful vehicle for informing interested groups of police and legal practitioners in the uses of the forensic sciences.

2. Feedback received from the attendees at the "live" seminars presented during the project clearly points to the need to provide programs such as this on a <u>continuing</u> basis to the legal and police communities.

3. The "live" presentation technique used in this project is an extremely effective means for communicating with "users", however, in the long run, it would prove to be prohibitively expensive in order to satisfy the needs of the total criminal justice community. Seminars such as this need to be developed at the regional, state and local levels reaching all jurisdictions throughout the country.

4. The video tape and slides produced under this project should prove to be a cost-effective means to disseminate this type of information to all interested parties.

RECOMMENDATIONS

1. Workshops for police and legal practitioners in the proper utilization of the forensic sciences should be sponsored at the federal, state and local levels throughout the United States.

2. All recruit level and in-service training programs for police officers should include a component addressing the proper recognition, examination and interpretation of the forensic sciences.

3. The curricula of all law schools in the nation should include a basic course in the capabilities, limitations and proper utilization of the forensic sciences.

4. The video tape which was produced during this project should be made available to all criminal justice agencies and organizations which express a desire to view it.

5. The Law Enforcement Assistance Administration should take the lead in this area of education and training and be prepared to allocate funds to those institutions which propose to sponsor seminars and workshops having the objective of preparing the police and legal user in the proper utilization of the forensic sciences.