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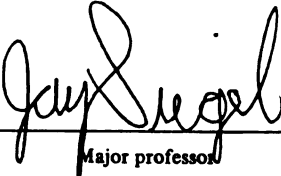
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**PHYSICAL EVIDENCE IN THE PROSECUTION OF FELONY
CASES: A STUDY OF FORENSIC AND NON-FORENSIC
EVIDENCE IN INGHAM COUNTY FELONY CASES**

presented by

M. Katherine Voelker

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of the requirements for

M.S. degree in Criminal Justice


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PHYSICAL EVIDENCE IN THE PROSECUTION OF FELONY CASES: A STUDY OF
FORENSIC AND NON-FORENSIC EVIDENCE IN INGHAM COUNTY FELONY CASES

By

M. Katherine Voelker

A THESIS

Submitted to
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in partial fulfillment of the requirements
for the degree of

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ABSTRACT

PHYSICAL EVIDENCE IN THE PROSECUTION OF FELONY CASES: A STUDY OF FORENSIC AND NON-FORENSIC EVIDENCE IN INGHAM COUNTY FELONY CASES

By

M. Katherine Voelker

The purpose of this study was to determine how often physical evidence (forensic and non-forensic evidence) is collected in felony prosecution cases and its relationship to crime type and the case outcomes. The methodology consisted of content analysis of 1303 Ingham County Circuit Court felony cases closed in 1992. After excluding drug and drunk driving cases, analysis was conducted on 905 cases with frequency distributions, contingency tables, chi-square and correlation coefficients. Physical evidence was collected in 78% of the cases. Non-forensic evidence was collected more than forensic evidence. The forensic evidence types most analyzed were latent prints, alcohol and blood. Trace evidence was the least common forensic evidence. The only statistical relationship was between crime type and impression evidence with a weak degree of association. There was no statistical relationship between physical evidence and charge one outcome and a slight relationship between physical evidence and charge two outcome.

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INTRODUCTION

The purpose of this study was to examine the use of physical evidence in felony cases and its effect on those cases. Felony cases were examined to determine the extent to which physical evidence was found in these cases. Then, two types of physical evidence, forensic and non-forensic evidence, were isolated to determine the extent at which the forensic evidence was collected and analyzed. There was an emphasis on the scientifically analyzed forensic evidence and its rate of use.

Forensic evidence is considered to be evidence of a physical nature which is dependent on scientific analysis to determine identification and its relation to persons or things. For example, a bullet of unknown origin, removed from a victim, may be compared with expelled bullets of known origin to determine the weapon the unknown bullet was fired from.

Non-forensic evidence is considered to be evidence of a physical nature with relevance to the case but does not need to be scientifically analyzed for identification. For example, a victim describes the assailant as a man wearing a blue and red jacket with a patch on the right sleeve. A jacket matching the victim's description is worn by a suspect. The jacket can then be collected by the police and held as evidence in the case. It has relevance to the case but there is no need for scientific analysis to identify it.

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A lot of time and money is spent in the criminal justice system for the collection of physical evidence especially on the analysis of the forensic evidence. Therefore, this study was conducted to see in how many cases physical evidence was collected and whether it has an influence on the disposition of felony cases. Another purpose of this study was to show how often forensic evidence types occur in particular types of crimes.

Evidence can play an important role in the criminal justice system. It is found in many forms. It can be the words of testimony from victims and witnesses. Evidence can also be of a physical nature such as a fingerprint on a glass, a bloody knife or a stolen car. Detectives use physical evidence to reconstruct the crime in order to identify and link a suspect to a crime. Prosecutors use physical evidence to corroborate other evidence to prove a defendant is the perpetrator of a crime. Defense attorneys use evidence in order to prove the innocence of their clients. Evidence has the potential to incriminate or exculpate suspects in a crime. Valuable characteristics of physical evidence are its ability to show that a crime has been committed, identify the suspects and/or exonerate the innocent.

It is easy to presume that physical evidence plays an important role in the criminal justice system. The media typically represents it as the backbone of an investigation and an essential element in solving a crime. Sherlock Holmes characterized it as 'elementary'. Modern crime stories on television or in films romanticize it by creating suspense. They use physical evidence as a climactic discovery which undeniably identifies the guilty person and solves the crime.

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Real life situations, such as the O. J. Simpson trial, fortify the concept that a criminal case relies on physical evidence. How could it not, with its extensive procession of expert witnesses and forensic evidence? Objectively, one must realize this was an extraordinary case of a very violent crime with the defendant being a person of notable wealth and fame. Therefore, one ought to wonder how this example of physical evidence use truly fit into the scheme of reality – a reality consisting of thousands of other crimes of less violence and much less notoriety.

Therefore, this study has several objectives in order to discover the role physical evidence plays in felony prosecutions. The objectives of this study were to identify:

1. The rate that physical evidence is collected in felony prosecution cases.
2. The rate of collected physical evidence distributed by the type of crime.
3. The rate each individual forensic evidence type was analyzed.
4. The rate that each type of forensic evidence is used in the type of crime as well as the relationship between forensic evidence and the type of crime.
5. The effect physical evidence has on the disposition of felony cases

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Overview of Thesis

The review of literature addresses physical evidence uses in the criminal justice system. It also describes the few research projects relating the use and effects of physical evidence. The methods used and results found in each will be discussed.

The methodology section of this report defines the sample and population. It gives background information about the data collection site. It explains the methods of data collection for the specific variables used in the analysis of the data. It defines the variables. The techniques of analysis are also described.

The results are tabulated and described in chapter 4. In chapter 5, results are discussed and compared with the results of previous studies. Also, recommendations and suggestions for future studies are offered.

Chapter 1

REVIEW OF LITERATURE

A review of criminal justice literature contains conclusions of how and why physical evidence is used as well as to the discretionary powers of prosecutors to use such evidence. The first section of this chapter is a brief overview of the criminal justice system's use of physical evidence. The second half of the chapter is a review of the specific research studies that most closely resemble this study.

Physical Evidence in the Criminal Justice System

Prosecutors are reliant on police investigators for information relevant to a crime. Prosecutors need evidence to determine whether a suspect will be charged with a crime and how to proceed with the case, as in negotiating a plea bargain or taking it to trial. In *Trial Preparation for Prosecutors*, Marcus states that prosecutors "reject the case if more work [investigation] is needed" (1989, p.18). During an investigation the officer has a lot of discretion about the collection of evidence. As stated by Peterson:

The patrol officer, the crime scene evidence technician and the detective all play important roles in determining which crime scenes are investigated for evidence, what physical evidence is collected and which items are ultimately examined in the laboratory (1984, p.24).

Situations which can have an effect on decisions of evidence collection are: type of crime (personal or property), amount of physical interaction, location of the crime, witnesses present, as well as any traces of actions and the sites of interactions between the perpetrator and the victim.

Greenwood et. al (1977), Eck (1983), Ericson (1981) and others indicate that physical evidence is not used often in criminal investigations. Peterson (1982 and 1986) agrees that it is not used in a high percentage of criminal cases. But, when physical evidence is collected, the majority of it is collected for crimes against a person (homicide, rape and assault). In general, Peterson found that the more a victim was physically injured the more evidence types were collected (Peterson, 1984). This is due to the greater interaction between the victim and assailant, as well as, the higher motivation by the officers to solve the more serious crime. On the other hand, property crimes tend to be less often examined for physical evidence. But, it is suggested that it is not unheard of for evidence technicians to arbitrarily look for prints and other evidence at burglary scene to pacify the victim. This is a result of the victim believing that the police must look for physical evidence to solve the crime. It also makes the victim feel that the police are taking his/her case seriously.

Physical evidence can establish an element of a crime. Cases of drugs, rape, and arson need physical evidence to even determine if a crime has actually been committed. An element suspected to be a drug must be analyzed and identified as a controlled substance before any charges can be filed. This is due to the fact that if the material is not a controlled substance then

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no law has been broken¹. The presence or lack of semen is very important in an alleged rape case. Therefore, prosecutors need lab reports that indicate criminality before charging or continuing the investigation of a case. Peterson concludes "that crime laboratories are most often requested to analyze evidence that is mandatory for prosecution (as with drugs)" (1986).

Once a suspect is arrested, it must be decided if charges are to be filed. Peterson (1986) reports that prosecutors feel scientific evidence is relatively unimportant in charging decisions (with the exception of drug, rape and arson cases). A reason for this is most evidence is not available at the time of charging decisions because of the time factors in the analysis of the evidence. Consequently, prosecutors rely on the statements of eyewitnesses. Peterson does add that "...charges are generally more likely to be filed for arrests where physical evidence is collected and examined than cases without such scientific evidence." (1986, p. xxii) In *the Prosecution of Felony Arrest*, 1979, Boland (1983) concurs that evidence plays an important role in a case, but emphasize that witness and victim cooperation impact a case more than physical evidence.

Prosecutors like to have physical evidence that corroborates other evidence. It is unlikely that the suspect will be charged with a crime if there is no other evidence to corroborate the physical evidence.

Plea Bargaining is a common practice of prosecutors and defense attorneys. For the prosecution, it is an effective way of ensuring a conviction and avoiding the uncertainty of a trial. For defense attorneys, it decreases the

¹ Note: In Ingham County, this study's sample site, a charge of possession and or delivery of an imitation controlled substance is brought against the suspect when the material is analyzed and found not to be a controlled substance.

risk of stiffer sentence as well as the unpredictability of a trial. Peterson asserts physical evidence is a bargaining tool which gives the prosecutor more leverage as the evidence becomes more and more incriminating. If evidence strongly associates a defendant with a crime the prosecutor will be less likely to offer a plea bargain because the chances appear better for conviction through trial. Defense attorneys are more apt to suggest a plea when there is strong evidence against the defendant (Peterson, 1987).

Conversely, McDonald (1979,) reports that the threat of trial is not an issue when deciding whether or not to plea bargain. He states that "case strength, [viciousness] of the defendant, and seriousness of the offense" are the determining factors for plea bargaining.

At trial, the case is heard by a judge or jury who determine the guilt or innocence of the defendant based on the evidence presented. Peterson (1986) contends that a jury is influenced in favor of the prosecution by the presence of lab reports and expert witnesses. Expert testimony is considered to be the most influential because it is deemed more reliable by the jury. The explanation of forensic evidence is often romanticized in movies, television and books, creating a feeling of mysticism and intrigue. Prosecutors will use physical evidence especially when they feel the jury expects it. They also think they must explain why no evidence is present if it is not used in a particular instance in a trial. (Peterson, 1986) Boland "found that cases in which physical evidence was recovered were more than 2½ times as likely to result in a conviction" (1983, p.10).

A condition that must be met when presenting forensic evidence is it must be understandable to a jury. The average juror will become frustrated and angered if the expert talks in confusing scientific mumbo-jumbo. Evidence that is claimed to be most understood and accepted by juries is fingerprint and firearm analysis. The jury is less likely to understand the evidence examined by chemical and biological methods. When it is used, physical evidence increases the chances of conviction when it corroborates other evidence (Peterson, 1986).

In its unadulterated form, physical evidence is a non-biased form of evidence that cannot knowingly or unwittingly lie, as can witnesses, victims and suspects. Physical evidence may or may not play an important role in the arrest and conviction of a criminal. When collected and examined properly, forensic evidence is a respected form of evidence. It assists the investigating officers by identifying and linking a suspect to a crime. It can exculpate the innocent by eliminating the possibility of a person being connected with a crime.

Research on Physical Evidence

The first study discussed is *The Use of Scientific Evidence in Litigation* by Michael Saks and Richard Van Duizend (1983). It was written from the attorney's perspective. It addressed the use of only forensic evidence in all court proceedings (civil and criminal). The present study concentrates only on felony cases which use forensic evidence as well as non-forensic evidence. *The Use of Scientific Evidence in Litigation* is cited in this paper to reveal the attorney's viewpoint of forensic evidence use.

The purpose of the Saks/Van Duizend study was to summarize what is known about the use of forensic evidence in the courts, and to identify the issues and problems that occur when this evidence is used. It focused on the legal issues of forensic evidence as opposed to trying to identify the exact rate of use and the effects of it. The methodology consisted of a review of literature, interviews, and a review of nine case studies ranging from a homicide to a civil rights case. Six of the cases were criminal cases. The case studies were chosen by interviewing judges, attorneys and experts about their cases and asking for "run-of-the-mill" cases for study. They conducted non-structured interviews with various individuals involved in each case and inspected transcripts, briefs, lab reports and exhibits.

Validity problems exist in the fact that the cases studied were not selected randomly nor were the interviews structured. A non-random study cannot be generalized to the patterns of the rest of the criminal justice system. They admit to these problems and indicate that the "purpose [was] to identify the range of solutions" to the problems that were discovered (p.12). Conclusions and solutions suggested in the report were numerous. One conclusion reached was that scientific evidence helps in the settlement of a case by clarifying the facts. It was also suggested that prosecutors feel "scientific evidence is very believable and would be used more if it were more readily available" (p.39).

The next study to be reviewed is *The Role of Forensic Science Evidence In Criminal Proceedings* by Paul Roberts and Chris Willmore (1993). The study was conducted in Great Britain. The methodology consisted of reviewing 24 cases that had physical evidence submitted for forensic analysis. The sample was

chosen by consulting the accounting list of the prosecution's payment to the forensic experts. Therefore, the validity of the results are suspect due to a lack of randomness.

They collected data by interviewing one prosecution representative, one defense representative and one forensic expert involved in each of the cases. Like the present study, the cases were taken from one geographical area. Although this is a limitation, one argument is that the study site is of average size and could be representative of the average community.

Roberts and Willmore found that the police were the initiators of collecting forensic evidence. Drug cases always had analysis of forensic evidence. Burglary cases were also found to have much scientific evidence (glass, footprint, fibers, etc.) All five of the burglary cases had some form of forensic analysis. This conclusion is opposed in Peterson's research which states that trace evidence are not collected often. It must be noted that Roberts and Willmore's conclusions cannot be generalized to all burglaries because their whole data sample consisted of cases that had some form of forensic analysis. There was no comparison of other burglary cases to determine how often forensic evidence is not collected.

The Roberts/Willmore study differs from the present study in that it focuses on the preparation of evidence and experts in a trial. It is a qualitative study. Whereas, the present study concentrates on the quantitative use of physical evidence and compares it to cases with no physical evidence. Also, the aforementioned study was conducted in a foreign country with different social priorities and criminal justice policies.

Another study that relates to the use of physical evidence is *Forensic Evidence and the Police: The Effects of Scientific Evidence on Criminal Investigations* by Joseph Peterson (1984). The primary objective of this study was to describe frequently used physical evidence types in criminal investigations. It focused on the perspective of police uses of physical evidence. The study sites included: Peoria, Illinois; Chicago, Illinois; Kansas City, Missouri; and Oakland, California. They examined two types of cases, those with physical evidence and those without it. They obtained a random selection of cases (homicide, rape, robbery, aggravated assault, burglary and arson) from the crime labs in the study sites. Then, they gathered information from cases of robbery, aggravated assault, and burglary without physical evidence collected. The study was continued by reviewing the police files of the cases, followed by examining the prosecutor and court files of those cases that were charged (Peterson, 1984).

The results of the study showed that clearance rates for robberies and burglaries were higher in cases that had included physical evidence. Also, the offenders in those cases had higher rates of conviction. Rape cases had higher rates of conviction when semen was identified or when other evidence linked the defendant to the victim. Aggravated assault case clearance and prosecution were not affected by physical evidence. Peterson concluded, "Forensic evidence has its greatest effect in cases which, traditionally, have the lowest solution rates—cases with suspects neither in custody nor identified at the preliminary investigation stage" (Peterson, 1984).

Peterson conducted another study as a continuation of the previous research, *Forensic Evidence and the Courts: The Uses and Effects of Scientific Evidence in Criminal Case Processing* (1986). It is the principal scientific exploration which is most closely related to the present study.

Peterson (1986) conducted an extensive search into the use and effects of forensic evidence in the felony court system. The study utilized many forms of data from six jurisdictions across the country. The sites included: Chicago, Illinois; Peoria, Illinois; Kansas City, Missouri; Oakland, California; and Litchfield and New Haven in Connecticut. The data collection methods included: inspection of prosecutor case files; a mail survey of the nation's crime labs, interviews with prosecutors and defense attorneys; and in Chicago only: hypothetical felony case questionnaires given to the prosecutors and a survey of Chicago jurors. The prosecution case files were a random sample of all cases from criminal cases that occurred in the years 1975, 1978 and 1981.

Of the types of crimes committed, violent crimes were the least common, averaging only 32% of the cases, whereas, property offenses comprised most of the cases prosecuted. Peterson found that lab reports were included in a range of 25% to 40% of the case files in the six jurisdictions. He also found that almost 100% of murder and drug cases contained lab reports. The next type of crime most likely to analyze forensic evidence were rape cases, ranging from 14% to 78% of the rape case files. Forensic evidence was least often analyzed in burglary (30%), robbery (less than 20%) and attempted murder cases (10 to 20%) (Peterson , 1986).

The most predominant evidence types described in the lab reports were drugs (90%) and fingerprints (34%). The next most frequent types were blood and bloodstains, firearms, and semen. Peterson concluded that forensic evidence is most analyzed for cases that need evidence to affirm a crime has been committed (drugs) or "can conclusively link a defendant with a crime (fingerprints)" (Peterson, 1986, p.294). Also, Peterson reported that the trace evidence types of hairs, fibers, glass, paint and soil rarely appear in routine criminal cases. He reports this is a result of "the infrequency with which such evidence is recovered from the scenes of crimes...as well as the more limited information which is extracted from it" (Peterson, 1986, p. xxi).

A benefit for the Peterson study was in the use of varied forms of data, from case files to surveys of actual role players. Facts of cases intermingled with opinions and beliefs of the individuals involved in the system has a potential for a well-rounded study. However, the study only utilizes the cases of major cities, each of which are a single component in the prosecution system of its respective county. In contrast, the present study comprises all felony crimes prosecuted in one county during one calendar year.

Another weakness of the Peterson study is its date. It included data from cases in the 1975, 1978 and 1981. One of its objectives was to determine if the use of forensic evidence increased over time. It found that in the study sites there was no increase in forensic evidence use. With the tremendous technological advancement of today, changes in forensic techniques are continuously being improved and updated. With quicker and more accessible techniques it is logical to assume certain evidence types that were avoided

may be more likely to be used in the future. For example, 15 years ago DNA analysis was in its infancy. Today, the techniques are still long and arduous but comparably more feasible than several years ago.²

Another objective of Peterson's study was to determine the impact forensic evidence has on the outcome of a case. In the study sites, conviction rates ranged from as low as 66% to as high as 90%. As for the association of forensic evidence with conviction rates, only one of the study sites had statistical significance. It revealed that forensic evidence had a statistical association with the conviction.

Peterson also calculated the significance of tangible³ evidence in the conviction of a case. The results were that tangible evidence has a "sizeable and statistically significant relationship" in all but one of the study sites. He concluded that tangible evidence has a greater impact on case outcome than forensic evidence.

In summary, Peterson found that forensic evidence is used most often in cases that need it to prove a crime has been committed (drug and rape). The other forensic evidence types (fiber, soil, paint, etc.) are used much less frequently. Property crimes comprise most of the cases prosecuted. And, of physical evidence, tangible evidence is the only one with a statistically significant relationship to case outcome.

²Note: In the present study, there were no cases using DNA analysis.

³ Note: Peterson defines tangible evidence as "something physical but which is not examined scientifically" (1986, p. A-10). For example, these include stolen property, firearms, other weapons, etc. In the present study non-forensic evidence is synonymous with tangible evidence.

Chapter 2

METHODOLOGY

The purpose of this study is to determine the use of physical evidence in the prosecution of felony cases. The study describes the rate that physical evidence was collected and the forensic evidence that was analyzed. In this report, physical evidence refers to both forensic evidence and non-forensic evidence. Forensic evidence is evidence of a physical nature dependent on scientific analysis to determine identification and relation to persons or things connected to a crime. Non-forensic evidence is considered to be evidence of a physical nature that was not collected for the purpose of scientific analysis.

Data for the study was collected from all Ingham County Circuit Court felony case files closed in the year 1992. The actual crime, though, may not have necessarily occurred in 1992. The earliest date of a crime in the cases reported occurred in 1982. The year 1992 was chosen because data collection was started in October 1993. Therefore, 1992 was the most recent year of a complete set of closed cases.

The case files that were used to collect the data were the property of the Ingham County Prosecutor's Office located in Lansing, Michigan. The files were stored in boxes in alphabetical order per defendant. However, the actual order of data collection was not alphabetical. In other words, the first case (#0001)

should not be assumed to be derived from the file of "Abe Abraham" nor was the last case (#1303) necessarily from the file of "Zoe Zycke"¹. The total number of cases collected was 1303². The intention was to collect the data from a complete year of felony cases. There was no random sampling because the entire population of cases for that year was included.

Ingham county is located in the mid-Michigan region of the lower peninsula. It consists of the state capital, Lansing, as well as Michigan State University. It is approximately one hour's drive northwest of the metropolis of Detroit and one hour east from Grand Rapids. According to the 1990 Census Report, Ingham County has a general population of 281,912. The county has a range of cities, villages and townships. It is a mostly rural county with many farming communities. The urban core of the county is located in the region of the capital city, Lansing.

The largest city is Lansing with a population of 127,321. The next largest city is East Lansing with a population of 50,677. East Lansing is home to Michigan State University which during the school year has a student body of over 40,000. Meridian township has a population of 35,644 and is adjacent and to the east of East Lansing. The smallest community in the county is the village of Stockbridge with a population of 1,202. Another feature of Ingham county is that it contains

¹ **Note:** These are hypothetical names and do not indicate any criminality relating to those persons with such names. All data was collected under the agreement of keeping the defendants anonymous.

² **Note:** Six completed codebooks and a box of files containing approximately 35 files were misplaced and never located. The data from those files could not be included in the study. Therefore, the total sampling frame of the study is smaller than the total number of closed cases for Ingham County in 1992.

the Michigan State Police Forensic Science Headquarters, which is located in East Lansing.

Ingham County is a consolidated prosecution jurisdiction. The prosecution gets cases from twelve police agencies³. These include the Michigan State Police and its various divisions, Ingham County Sheriff Department, the local agencies of Lansing, East Lansing, and Michigan State University. The court system in Ingham County consists of seven circuit courts which preside over felony cases and civil cases. The district courts handle cases of misdemeanor crimes. Evidence is collected by police investigation teams and is transferred to the Michigan State Police Forensic Science Laboratory when analysis is needed.

The 1992 Michigan Uniform Crime Report indicates the 'total actual offenses' reported for Ingham county in 1992 was 39,656 and, in 1991, it was 40,937. The 'total actual offenses' includes index offenses and non-index offenses⁴. Index offenses are state felony violations of a serious nature such as murder, robbery, arson. The non-index offenses are "violations of state and local laws" and include such violations as negligent manslaughter, fraud, weapons, drugs, and drunk driving. Lansing reportedly had 20,421 total offenses in 1992. The State Police and Ingham County Sheriffs Department reported 918 and 4,392 offenses, respectively. East Lansing and Michigan State University reported the number of actual offenses to be 5,921 and 3,821, respectively.

It is interesting to note the number of reported offenses (which include all crimes from murder to vagrancy--felonies and misdemeanors) for 1991 and 1992

³ **Note:** See Codebook variable v8 for a complete listing of the agencies.

was about 40,000 each year. Yet, the approximate number of felony prosecution cases closed in the course of 1992 was just over 1,300. This indicates that only a small percentage of offenses were actually prosecuted.

A codebook was constructed as a data collection tool (see Appendix A). It was a questionnaire-type guide for the data investigator. It was modeled after and revised from a version created in 1982 by Jay Siegel and Frank Horvath for a study similar to this one. The base part of the codebook consisted of 166 variables. It was divided into the following sections:

- **Crime Information:** Variables v1-v12⁵ identify: the number of defendants and victims; the location, date, day and time of the crime; the arresting agency; and the number of eyewitnesses.
- **Non-forensic Evidence:** Variables v13-v18 identify non-forensic evidence: personal effects; fruits of crime; prima facie evidence; weapons; and tools.
- **Forensic Evidence:** Variables v19-v73 identify forensic evidence types collected and the results (if analyzed): latent fingerprints; firearms; toolmarks; serial number restoration; questioned documents; arson; glass; fiber; paint; soil; shoe-prints; tire tracks; hair; semen; blood; toxicology; postmortem; and drugs.
- **Expert Witness Information:** Variables v74-v78 identify expert witness information: number of experts used in the case; number of experts who testified at trial; and the area of expertise.

⁴ **Note:** A complete list of index and non-index crimes is found in Appendix C.

⁵ **Note:** v# identifies the variable numbers used in the codebook.

- **Defendant Number 1 Information:** Variables v79-v85 classify defendant #1 information: race; age; date of birth; gender; occupation; and place of residence.
- **Criminal History:** Variables v86-v90 describe the criminal history of the defendant: total number of arrests; number of misdemeanor and felony convictions; total number of prior convictions; and classification of habitual criminal.
- **Present Criminal Arrest Information:** Variables v91-98 indicates the circumstances of the arrest of the crime in question: arrest status (where defendant was arrested); admission and confession; psychological examination; and polygraph examination.
- **Charges:** The next set of variables, v99-v141, describe up to six possible charges brought against defendant #1 and their results: type of charge; actual charge; specific drug (if a drug related charge); charge category (felony or misdemeanor); result of charge; trial type; and trial result.
- **Pretrial Information:** Pretrial information is classified in variables v142-v145: preliminary hearing and outcome; and Grand Jury and outcome.
- **Sentence:** Variables v146-v155 describe sentence information: jail status and length; prison term; probation length and terms; amount of restitution; and the fine amount.

- **Victim Information:** The last section of the base codebook, v156-v166, identifies the victim information: nature of victim; race; age; gender; place of residence; occupation; relation victim has to defendant; and damages to victim.

The base codebook includes case information for one defendant with variables accounting for 6 possible charges and one victim. Additions to the base codebook were added per case, dependent on the information in that case. For example, a case that involved three victims would have the extra pages of victim information variables added to it in order to collect the information for each victim. Also, additional variables were added to account for cases with multiple defendants and/or cases where defendant #1 was charged with more than six charges. Therefore, any one codebook could vary in length relative to the previous case or the next case.

Each case file consisted of an assortment of the following documents from which the data were obtained:

- | | |
|--|-----------------------------------|
| •The arrest warrant; | •Trial verdict information sheet; |
| •Trial and motion information sheet; | •Pre-sentencing review report; |
| •List of witnesses; | •Crime check report; |
| •Police reports (initial and follow-up); | •List of charges; |
| •Forensic psychiatric report; | •Lab reports; |
| •Confession reports; | •Subpoenas; |
| •Interrogation transcripts; | •Medical reports. |
| •Nolle prosequi information sheet; | |

The file was read and the corresponding variable codes were entered into the codebook. Each variable had multiple categories used to identify the characteristics of the variable. The code numbers were used to represent the categories. The numbers were subsequently entered into a computer for data processing. For example, variable v3 identifies the location of the crime. The possible category answers for this variable were: 0-unknown; 1-city; 2-village; 3-township; 4-university; and 5-community college. Therefore, if the crime for the case happened in Lansing, the code number '1' would be entered on the code book to classify it as a city. Then variable v4 of that case would be coded '2' for the identification of Lansing (see appendix A for the other codes of v4).

Defendant statistics (age, gender, race, date of birth, etc...) were found on the arrest warrant and/or the police report. Also, the crime date, time and location were found on either the arrest warrant or the police report. The data collector would read through the police reports for an overview of the crime. The police report would indicate if any physical evidence was collected. Laboratory reports would identify what evidence was examined and the results of the analysis.

The following is an explanation of the process of collecting the data and the variables that were used in the analysis of this study.

The nominal variable of non-forensic evidence were identified by reviewing the prosecutor's copy of the police reports found in the case file. The variable v14, personal effects, included items which were found on or near the suspect, victim or scene of the crime that were of a personal nature. This includes, but is not limited to; clothing, wallets, purses, identification, etc. The

fruits of crime variable, v15, refers to evidence that was stolen and later recovered. Prima facie evidence, v16, was considered to be items that established a fact in the case (e.g., bank statements, inventory lists, controlled substance contraband, etc).

Weapons and tools (v17 and v18, respectively) included those items that are considered a weapon (e.g. gun, knife...) or tool (crow bar, screwdriver, etc) found on or near the suspect or at the scene of the crime. Any item that could be classified as a tool (e.g., a crowbar) but was reported to be used as a weapon, in any way, was classified as a weapon. For example, a felonious assault case where a defendant hit the victim with a baseball bat would have the bat coded as a weapon. Any non-forensic type evidence (e.g., a suspect's coat with possible blood stains on it) was coded in the forensic evidence section if any part of the item had scientific analysis.

Evidence of a forensic nature was coded in the nominal variables v19-v73. If no forensic evidence was collected in the case, v19 was coded 1-no and the contingent nominal variables v20-v73 were coded as 9-none. The data collector would then proceed to record the data for the variables in the rest of the codebook. If, however, any forensic evidence type was found to be collected, the data collector would answer yes in v19. The forensic evidence type variables v20-v73 would be coded appropriately. Each evidence type that was collected and then analyzed by an expert was coded in the codebook as 2-yes. Analysis of the evidence was indicated by the presence of a lab report. If a forensic evidence type was collected but never analyzed then it was coded as 3-collected, but not analyzed.

The first forensic evidence types listed in the codebook were impression evidence: latent prints (v20); firearms (v22); toolmarks (v25); and serial number restoration (v27). Latent prints included identification and removal of any print (finger or otherwise) from a crime scene or object connected to the crime. Firearms analysis consisted of the comparison of the caliber and impression marks on bullets and or shells resulting from firearms allegedly related to a crime. Toolmarks were the evidence of impressions left by a tool at the scene of a crime and the comparison of those impressions with a suspect tool. Serial number restoration refers to evidence (firearms, stereos, TV's, etc.) that had alleged relation to a crime where the identifying serial number was removed and attempts to restore the number were made.

The nominal variable of questioned document, v30, evidence was separated into two types: check signature and other documents. This was to distinguish between forensic evidence of forged or questionable checks from other questionable documents, such as letters, titles, ledgers, etc.

Next came the nominal variable v35 for arson forensic evidence. If any of the trace evidence types: glass (v38), fiber (v40), paints (v42), soils (v44), or hair (v50), were collected in a case, they were coded accordingly. The variable v46, shoe-prints, was coded as yes in cases where it was collected as an impression as well as when the footprints were used in tracking the suspect with a dog tracker.

If semen was collected in a case it was coded in the nominal variable v53. The nominal variables identifying blood evidence, v55-v61, were coded for those cases that had blood analysis. These include samples tested as a result of

a postmortem and/or toxicology screening of alcohol content of OUIL (drunk driving) defendants. The toxicology variable, v61-v64, included any screening done on victims' or defendants' blood for poison, drugs or alcohol content. The alcohol variable v64 also identified the type of toxicological screening, including, breath, blood, urine or a combination.

The next set of variables utilized in the analysis of this study relate to the charges against the first defendant. Variable v99 tallies the total number of charges of the defendant. The subsequent variables, v100-141, identify the characteristics and result of each charge. The main codebook was formatted for six possible charges. Not all defendants had multiple charges. Therefore, those variables which account for the extra charges were coded a 9 or 99 for 'none' to identify no data for this variable. The reasons for the 'none' code were to keep the data from having missing values or empty spaces in the data columns. Allotting a code for no data makes data transfer into the computer easier and reduces the risk of data entry error because there are no empty columns.

The nominal variable of type of charge, v100 defines the charge as a violent crime committed against a person (criminal sexual conduct, assault, robbery, etc...), a property crime (B & E, auto theft, malicious destruction of property, etc...), a vice crime, and 'other'. The category of 'other' ranges from carrying a concealed weapon, to perjury, to non-sufficient funds, etc.

The next variable, v101, of the charges section was the actual legal charge against the defendant. At the beginning of data collection, the number of categories in this nominal variable was small (only 13 categories). By the end

of the data collection, the actual charge variable had been increased to include 124 charges. Table 1 lists the categories of crime type with the corresponding charges.

The charges were continually added to the variable when new ones were encountered. With each charge identified there is the potential to differentiate the seriousness in the multiple charges, as well as calculate any relationship between charge reduction and physical evidence in a case. For example, charge 1 could be UDAA (auto theft) with its outcome nolle prosequi (no prosecution for the charge). Whereas, charge 2 for that defendant could be joyriding with the outcome of a plea, which is a reduction in a charge.

The other charge type variable, v103, was collected to determine whether the charge was a felony, a misdemeanor, or a supplemental charge. These were identified on the list of charges. Supplemental charge is defined as an added charge that gives greater weight or seriousness to the other charges against the defendant. It is usually charged against a defendant with a history of repeated offenses. For example, there is an habitual criminal charge which is an additional charge to the crime for which the defendant was arrested. There is no actual 'law' against being a person who has committed a lot of crimes. By classifying the defendant as a habitual criminal, it reinforces the seriousness of the defendant as a person with a propensity to commit criminal acts. Also, a supplemental charge adds weight to the seriousness of the crime and gives the judge more to consider when a sentence is given.

The nominal variable, charge outcome v104, was used to determine whether a charge was resolved by a dismissal, plea bargain, trial, or a nolle

Table 1 Categories Of Types Of Crimes**A Violent Crimes against a person**

2* assault &/or battery	41 negligent	73 CSC 3
5 assault W/I GBH	homicide	74 CSC 4
7 criminal sexual	47 child abuse	78 aggravated assault
conduct(unk deg)CSC	50 assault W/I CSC	85 simple assault
9 felonious assault	56 assault W/I	93 willfully annoy
11 murder 1st	murder	100 involuntary
14 armed robbery	59 kidnapping	manslaughter
15 unarmed robbery	66 assault w/Intent	104 parental
34 assault W/I rob unarmed	maim	kidnapping
35 Assault W/I rob armed	71 CSC 1	107 conspiracy-A & B
36 murder 2 nd	72 CSC 2	121 felony driving

B. Non-Violent/ Property Crimes

1 arson	27 embezzlement	96 arson-prepare to
3 auto theft/UDAA	33 R & C < 100	burn
4 breaking &/or entering	48 joyride	98 bank robbery
10 larceny	79 ATM fraud	102 trespassing
12 uttering & publishing	88 failure to return	108 conspiracy-B & E
19 retail fraud	rented prop.	109 conspiracy-larceny
23 <u>Malicious Destruction</u>	95 computer	110 conspiracy-MDOP
<u>Of Prop. (MDOP)</u>	damage >100	118 safe breaking
25 R & C > 100		

C. 'Other' Types of Crimes

6 counterfeiting	60 abscond on bond	92 poss. Weapon w/
13 use Cs device (mace)	61 reckless driving	unlawful intent
16 OUIL/ UBAL	62 carrying	94 false police report
17 forgery	dangerous weapon	97 poss. Unlocking
20 carrying concealed	63 carry pistol W/O	device (MSU ord.)
weapon (CCW)	license	101 poss. Counterfeiting
22 conspiracy	64 maintain gamble	tools
(misdemeanor)	room	103 indecency between
26 Supplemental	65 poss. Short-	male & female
28 felonious firearm	barreled shotgun	106 conspiracy-false
29 escape prison	67 resisting/opposing	pretense
30 no account check	officer	111 aiming firearm w/
31 financial transaction	68 poss. Firearm on	malice
device	school prop.	

* Numbers indicate the code entered into the computer for category identification.

continued on next page.

Table 1 Cont'd**C. 'Other' Types of Crimes** Cont'd

32 suspended/ revoked license	69 discharge firearm	112 consp. poss. bomb w/o permit
37 remove body	70 fail to present for inspection	113 poss. bomb
38 false pretense	76 altering operator license	114 furnish false info.
39 obtain by fraud	77 poss. Firearm	115 disturbing the peace
40 supplemental/ Habitual	80 incite minor to commit crime	116 impaired driving
42 possess switchblade	81 flee/elude police	117 maliciously killing a dog
43 possess brace knuckles	82 operating unlicensed daycare	119 altering operator's lic. (ops)
44 disorderly person	83 false info to obtain	120 using other person's ops
45 Non Sufficient Funds (NSF)	84 purchase pistol w/o license	122 obscene conduct
46 Obstruct justice	86 no license	123 possession of an automatic weapon
49 open alcohol auto	87 perjury	124 transporting a pistol
51 open intoxicant	89 attend dog fight	
52 weapon auto	90 use of canceled FTD	
53 expired plates	91 poss. burglary tools	
55 indecent exposure		
58 leaving scene accident		

prosequi. A charge was dismissed by the court for reasons such as lack of evidence or witnesses, constitutional issues, or other legal issues. The result of nolle prosequi was a prosecutor's decision to not prosecute a particular charge as a result of a plea bargain, lack of evidence or other discretionary reasons.

When a charge went to trial it was classified as either a bench or jury trial in the nominal variable v105. The nominal variable v106 identifies the result of the trial: acquittal (including cases of not guilty by reason of insanity); guilty; plea before the trial was finished; dismissed (including mistrial); and nolle prosequi.

Analysis

The data codes from the completed codebooks were entered into the statistics program StatView™ SE+ Graphics version 1.04. The completed study yielded 1303 cases.

The data file was checked for data entry error. Each variable data column was checked for category codes that did not match the given codes of that variable. For example, the variable of v19 forensic evidence has three possible codes: 0-unknown; 1-yes; and 2-no. If '11' was a value found in that data column, it is obviously an error, because there is no '11' code. The error would be corrected by comparing the codes of the following and/or preceding variables of that case to determine the correct code number.

After the data errors were corrected, the variables were re-coded to facilitate data analysis. The re-coding process was conducted in two ways. The data were entered into the computer as numbers. One way to re-code was by changing the numerical codes of a variable to 'word' codes. This allowed for

easier identification of the codes when they were presented as words opposed to numbers. For example, v19 identifies whether forensic evidence was used in a case. The data column for that variable would be a list of numbers. The column was re-coded into category names to make data analysis easier. Therefore, where there was once a '0' it would read 'unknown', '1' would read 'yes', and '2' would read 'no'.

The second procedure for re-coding a variable was to change a range of category values to a specific value. This is termed collapsing variables. This method was used to consolidate categories of similar characteristics in variables with many categories. For example, by the end of data collection, variable v104, charge result, ended up with 12 categories (see Table 2.)

Table 2 Charge Result—v104

1 Plea of a lesser charge	8 Nolo Contendere
2 Plea to charge before trial	9 none
3 Nolle Prosequi (Nolle Pro)	10 Nolle Pro--double jeopardy
4 Dismissed	11 Nolle Pro--cannot sustain
5 Plea to attempt	burden of proof
6 Trial	12 Nolle Pro--victim recants
7 Nolle Pro--in the interest of justice	

When variables have more categories, it decreases the chances of overlooking some characteristics of the cases. It also creates a situation of having very low frequency rates for some categories. In this example the categories of 7) Nolle Pro--in the interest of justice, 10) Nolle Pro--double jeopardy, 11) Nolle Pro--cannot sustain burden of proof and 12) Nolle Pro--victim recants were collapsed and re-coded to 3- nolle prosequi, since they all have that characteristic. Other collapsing of this variable was done to the categories 1) Plea

of a lesser charge, 5) Plea to attempt, and 8) Nolo Contendere. They are all a form of plea bargaining. Therefore, they were re-coded to '2- Plea to charge'. The re-coding of 'like' categories was conducted on the variables: charge result, case type, and trial result. Also, the categories of 'none' or 'unknown' were re-coded to 'no' in all non-forensic and forensic evidence variables.

The variable of case type identifies the primary charge prosecuted in the case. It is also referred to as type of crime. It was not a variable sought in the data collection. It was created after all the data was gathered in order to classify the cases. The first charge was the primary charge brought against the defendant and was usually the most serious charge. Therefore, the case type was represented by the first charge. The case type categories include: violent crimes against a person; nonviolent/ property crimes; OUIL (drunk driving); drug cases and; 'Other' types of crime. 'Other' pertains to all cases that cannot be classified in the other categories. These include, but are not limited to: carrying a concealed weapon; obstructing justice; false pretense; reckless driving; perjury; etc.

Charge 1 result and charge 2 result identify the disposition of the charge as: plea bargain; nolle prosequi/dismissed; or trial. Trial results for charge 1 and charge 2 are identified as: not guilty; guilty; plea bargain (before trial ended); or dismissal/nolle prosequi.

A description of the use of physical evidence is best accomplished through a frequency distribution (a count) of the variables' categories. How much the variable was used in all the cases is indicated when the categories

are tabulated. For example, the frequency of the forensic evidence variable represents the number of cases which used forensic evidence.

Data analysis was based on the frequency distributions of the following variables:

- Type of crime;
- Physical evidence: Forensic and non-forensic;
- Impression evidence: latent fingerprints, firearms, toolmarks, serial number restoration, shoe-prints, and tire tracks;
- Trace evidence: arson, glass, fiber, paint, soils, and hair;
- Serology evidence: semen, blood, and toxicological;
- Questioned documents;
- Charge 1 and Charge 2 results for defendant #1.

Tests of statistical significance (chi-square) were calculated to determine the association physical evidence has with type of crime and charge results. The contingency coefficient and Cramer's V were the correlation coefficients used to determine the strength of the relationship. Analysis was conducted by forming contingency tables that identified the frequency of physical evidence distributed in type of crime. Additional analysis was conducted to establish the relationship physical evidence had with the charge outcomes. This was done by tabulating the results of charges 1 and 2 and their trial results with the variable physical evidence. Also, contingency tables were made to isolate the frequencies of the forensic evidence types that were analyzed and not analyzed and determine their relationship with type of crime.

The reason for this analysis was to discover the type of crimes which contain the most physical evidence and what impact forensic and non-forensic evidence had on the outcome of the charge. Also, the identification of the most used forensic evidence types was sought. The variables comparisons used were:

- type of crime with physical evidence;
- type of crime and each forensic evidence types.
- physical evidence and charge 1 results
- physical evidence and charge 1 trial results
- physical evidence and charge 2 results
- physical evidence and charge 2 trial results.

Chapter 3

RESULTS

The total number of cases collected was 1303. The majority (86%) of the cases were one defendant cases committed by males (84%). The races of the defendants were almost equal at 603 (46.3%) white defendants, and 598 (45.9%) black defendants. Hispanics comprised 6.8% of the defendants. The mean age of the defendants was 26.7 years with ages ranging from 15 to 68 years.

Most of the cases (55%) 708 had only one victim and 7% (94) of the cases had two or more victims. Victimless crimes (e.g. drugs, carrying a concealed weapon, etc.) comprised 38% (500) of the cases.

The majority (66%) of the crimes were committed in Lansing. The second and third most frequent locations of the crimes were East Lansing (9%) and Meridian Township (8.5%). From the case files, the Lansing Police Department was the agency that submitted most of the police reports (60%) followed by Ingham County Sheriff's Department with 9% of the police reports. Meridian Township police submitted 8% of the police reports and the East Lansing Police Department submitted 7.6% of the police reports.

Rate of Physical Evidence

The first question being addressed is: What is the rate of physical evidence use in felony prosecution cases? Table 3 identifies the frequencies of forensic

Table 3 Physical Evidence in the Data with and without Drug and OUIL Cases

	<i>Forensic Evidence (percentage)</i>	<i>Non-Forensic Evidence (percentage)</i>	<i>Physical Evidence* (percentage)</i>
All cases (n=1303)	596 (46%)	507 (39%)	1103 (85%)
Drug cases and OUIL cases excluded (n=905)	201 (22%)	507 (56%)	708 (78%)

*Total number of cases with forensic evidence and/or non-forensic evidence.

evidence and non-forensic evidence as well as the combination of the two in physical evidence.

It is unfortunate that this country is plagued with illegal drug use. When individuals are arrested and a suspected controlled substance is found, it is necessary to perform chemical analysis of the substance in order to identify it. It was reported earlier in this paper that suspected drug cases require scientific analysis in order to establish that a crime has been committed. Drug related cases comprised 348 of the cases. All of those cases had forensic evidence in the form of drug analysis.

Drunk driving cases also require the use of scientific evidence to establish that the law has been broken. There were 50 OUIL cases¹. Table 3 shows the difference in percent of forensic evidence when the 348 drug cases and the 50

¹ Only 47 of the OUIL cases analyzed evidence. A possible reason for three of the OUIL cases not having forensic evidence is the refusal of the suspect to take a breathalyzer test.

OUIL cases are excluded from the total number of cases. The exclusion of these cases is based on the effect they have on the forensic evidence, not the non-forensic evidence. Forensic evidence was reported in 46% of the 1303 cases. When the drug cases and OUIL cases are excluded, the rate of forensic evidence drops to 22%.

It can be asserted that drug and OUIL cases need forensic analysis to establish grounds for charging a suspect. Upon acceptance of that assertion, the drug cases and OUIL cases were excluded in order to reveal the use of forensic evidence that is not necessarily required to establish a crime. Therefore, analysis was conducted on the remaining 905 cases.

Non-forensic evidence was collected in more cases than forensic evidence 56% and 22%, respectively (see Table 3). The variable of physical evidence identifies those cases that collected non-forensic evidence and/ or forensic evidence. It is a representation of those cases with at least one form of physical evidence. More cases had physical evidence collected than those without any physical evidence. A total of 78% (708) of the cases had some form of physical evidence.

Table 4 Frequencies of Type of Crime

	<i>Number of Cases (percentage)</i>
Violent crimes against a person	205 (23%)
Non-violent/property crime	490 (54%)
Other crimes	210 (23%)
total	905 (100%)

Physical Evidence Rates Distributed In Type of Crime

Knowing that 78% of the cases used some form of physical evidence, what is the rate that evidence was used in each type of crime? First, the frequencies of the type of crime needs to be identified. Table 4 is a distribution of the cases distinguished by the type of crime that was prosecuted. More than half of all the cases, 54%, were non-violent/property crimes. The 'other' types of crimes and the violent crimes each comprised 23% of the cases.

Table 5 identifies the observed frequencies of non-forensic and forensic evidence distinguished in the type of crime. Only 20% of the cases had no physical evidence of any kind collected. Non-forensic evidence was collected in more than half the cases. Forensic evidence was found in 22% of the cases.

Forensic evidence was collected in 24% of the violent crimes, 22% of the non-violent crimes, and 21% of the Other cases. Non-forensic evidence was in 42% of the violent crimes, 61% of non-violent crimes and 57% of Other crimes.

Table 5 Distribution of Physical Evidence by Type of Crime

<i>Physical Evidence</i>	<i>Type of Crime</i>			<i>total</i>
	Violent against a person (%) n=205	Non-Violent/ Property (%) n=490	Other (%) n=210	n=905
Forensic Evidence	49 (24%)	108 (22%)	44 (21%)	201 (22%)
Non-Forensic Evidence	86 (42%)	301 (61%)	120 (57%)	507 (56%)
No Physical Evidence	70 (34%)	81 (17%)	46 (22%)	197 (22%)
Chi Square: $X^2=30.875$, Level of Significance: $p=.0001$, Degree of Freedom: $df= 4$, Contingency Coefficient: $c=0.182$				

The deduction reached in the comparison of physical evidence use in types of crime is that non-forensic evidence is collected more often than forensic evidence. Non-forensic evidence was found in almost two times as many violent crimes and three times as many non-violent crimes than forensic evidence. It seems logical that property crimes would have the most non-forensic evidence collected since stolen property and tools are likely to be recovered. Non-forensic evidence was collected in over two times as many 'other' crimes.

Rates of Usage of Each Forensic Evidence Type

The next characteristic of physical evidence use to be described is the rate of each individual forensic evidence. Table 6 tabulates the rate at which each forensic evidence type was found in each case file. It was categorized as 'analyzed' and 'not analyzed'. 'Not analyzed' indicates evidence that was collected with the intentions of being scientifically analyzed but was not.

As indicated previously, drug evidence was obviously the most analyzed forensic evidence. The forensic evidence type that was next most analyzed was latent prints at 7.3%, followed by alcohol analysis at 3%, then blood at 1.8%. The next most frequent forensic evidence types were questioned document signatures and firearms evidence. The forensic evidence types least analyzed were toolmarks, paint, toxicology-poison and soils. Serial number restoration was never conducted in any of the cases.

In order to calculate the chi square and the level of significance (addressed later in the study), each forensic evidence types were combined

Table 6 Instances of Each Forensic Evidence Type

<i>Classified Evidence</i>	<i>Forensic Evidence Categories</i>	<i>Analyzed (percentage)</i>	<i>Not Analyzed (percentage)</i>
Impression	latent prints	70 (7.7%)	28 (3%)
	firearms	8 (0.9%)	7 (0.8%)
	toolmarks	1 (0.1%)	4 (0.4%)
	serial number	0	0
	restoration		
	shoe-print	7 (0.8%)	6 (0.7%)
	tire track	1 (0.1%)	1 (0.1%)
	totals:	87	46
Trace	hair	7 (0.8%)	7 (0.8%)
	arson	5 (0.6%)	1 (0.1%)
	glass	2 (0.2%)	10 (1%)
	fiber	2 (0.2%)	5 (0.6%)
	paint	1 (0.1%)	2 (0.2%)
	soil	0	1 (0.1%)
	totals:	17	26
Serology	blood	16 (1.8%)	9 (1%)
	semen	5 (0.6%)	5 (0.6%)
	totals:	21	14
Toxicology	poison	1 (0.1%)	0
	drugs	7 (0.7%)	0
	alcohol	21 (3%)	0
	totals:	29	0
Questioned Documents	signature	13 (1.4%)	25 (2.8%)
	other	4 (0.4%)	10 (1%)
	totals:	17	35
Pathology	postmortem	11 (1.2%)	0

Table 7 Cases with Classified Forensic Evidence Types

<i>Forensic Evidence Categories</i>	<i>Analyzed* (percentage)</i>	<i>Not Analyzed* (percentage)</i>
Impression Evidence	75 (8%)	34 (4%)
Trace Evidence	15 (2%)	18 (2%)
Serology Evidence	17 (1.9%)	11 (1.2%)
Toxicology Evidence	21 (7%)	0
Questioned Documents	14 (1.5%)	33 (3.5%)

**Note: The numbers do not add up to the totals in Table 6 because some cases had more than one kind of impression evidence or trace evidence or serology evidence or toxicology evidence or questioned documents.*

into their respective forensic evidence classifications. These are indicated in the first column of Table 6.

Table 7 identifies the rate of use of the classified forensic evidence types. The combined variables include cases that analyzed at least one form of forensic evidence. For example, latent prints were collected in 70 cases and are classified as impression evidence. The combined impression variable shows impression evidence was collected in 75 cases. Table 6 indicates the total for all the impression evidence is 87. Therefore, by collapsing the individual forensic evidence variables into one variable, evidence appears to have been 'lost'. This is unavoidable. The difference in the rates is because there were individual cases that had more than one impression evidence collected. To conduct statistical analysis on the data, there must be enough data to allow for reliable statistical conclusions. Contingency tables could not be calculated with the small frequencies of the individual forensic evidence types.

The Rate and Effect of the Types of Forensic Evidence in Type of Crime

The main objective of this study was to discover how often forensic evidence is used and in which type of crime forensic evidence is collected most often. Tables 8-12 indicate the rate at which each forensic evidence is distributed in type of crime.

Table 8 identifies the rate of impression evidence. Impression evidence was analyzed in 11% of violent crimes, 9% of non-violent crimes, and only 4% of other crimes. It appears as though non-violent crimes use impression evidence more than violent crimes. It can be explained in the assumption that property crimes, such as burglary and breaking and entering, may tend to have less interaction with people therefore, decreasing eyewitness assistance.

The non-violent crime cases had a greater percentage of cases that never analyzed the data collected, 6% compared to 3% of the violent crime cases. Of the violent crime cases, 11% had impression evidence analyzed and 9% of the non-violent crime cases analyzed it. This might be explained because it has been asserted in other literature that evidence technicians sometimes

Table 8 Impression Evidence and Type of Crime

Impression Evidence	Type of Crime			total
	Violent against a person (%) n=205	Non-Violent/Property (%) n=490	Other (%) n=210	
analyzed	22 (11%)	44 (9%)	9 (4%)	75
not analyzed	7 (3%)	27 (6%)	0	34
Total	29	71	9	109
Chi Square: $X^2=6.298$, Level of Significance: $p=.0429$, Degree of Freedom: $df=2$ and Cramer's V: $V=0.24$				

collect evidence because the victim is expecting it. There may never be any intentions of analyzing the evidence, but to appease the victim the evidence technicians collect it anyway.

The chi square (X^2) test of independence was calculated. It was decided that a level of significance (p) greater than .05 would be unacceptable. This means the null hypothesis implying there is no relationship between the two independent variables was not rejected. If, however, the level of significance calculates to be less than .05, then the null hypothesis was rejected and a relationship between the variables was inferred.

The correlation coefficients used in the analysis were contingency coefficient and Cramer's V. The contingency coefficient (c) was used to measure the degree of association between the variables of tables with even columns and rows. The Cramer's V (V) was used to measure the degree of association between the variables of tables with uneven columns and rows. This correlation coefficient is not dependent on the size of the table as is the contingency coefficient. The closer Cramer's V and the contingency coefficient are to 1 means a greater association between the variables. It is designated in this study that a c or $V < .30$ has a weak relationship. If c or $V > .60$, the relationship is considered to be great and a contingency coefficient or a Cramer's V less than .60 but greater than .30 has a moderate degree of association (Levin, 1983).

Impression evidence calculated with type of crime produced a $X^2=6.298$ at 2 degrees of freedom (df) with $p=.0429$ and a Cramer's $V=0.24$. The V of 0.24 indicates a slight association between type of crime and impression evidence.

Table 9 Trace Evidence and Type of Crime

Trace Evidence	Type of Crime			total
	Violent against a person (%) n=205	Non-Violent/Property (%) n=490	Other (%) n=210	
analyzed	8 (4%)	7 (1.4%)	0	15
not analyzed	8 (4%)	8 (1.6%)	1 (0.5%)	17
Total	16	15	1	32
$X^2=0.945$ $p=.6233$, $df=2$, and $V=0.172$				

The null hypothesis of there being no relationship between impression evidence and type of crime was rejected. Therefore, it is concluded that impression evidence and type of crime are not independent of each other.

Table 9 identifies the rate of trace evidence compared with type of crime. Violent crime cases had the greatest percentage of trace evidence analyzed and not analyzed at a rate of 4% each. Non-violent crime cases used forensic evidence at the rate of 1.4% analyzed and 1.6% not analyzed. Other crime cases again had low rates of evidence with none analyzed. And, less than 1% of the cases had it not analyzed.

The analysis of trace evidence's association with type of crime shows $X^2=0.945$, $p=.6233$, $df=2$, and $V=0.172$. The level of significance was greater than the accepted value of 0.5 indicating that trace evidence and type of crime are independent of each other.

The next evidence type to be compared with type of crime is serology. Table 10 shows that serology evidence was analyzed in 7% and not analyzed in 3% of the violent crime cases. Non-violent crime cases had the smallest percent

Table 10 Serology Evidence and Type of Crime

<i>Serology Evidence</i>	<i>Type of Crime</i>			total
	Violent against a person (%) n=205	Non-Violent/Property (%) n=490	Other (%) n=210	
analyzed	14 (7%)	2 (0.4%)	1 (0.5%)	17
not analyzed	7 (3%)	3 (0.6%)	1 (0.5%)	11
Total	21	5	2	28
$X^2=1.308$ $p=.52$, $df=2$, and $V=0.216$				

with <1% analyzed and <1% not analyzed. Less than 1 percent of the 'other' crimes cases analyzed serology evidence.

The calculation of relationship between serology evidence and type of crime produced a $X^2=1.308$ at a $p=.52$, $df=2$, and $V=0.216$. The relationship is not considered statistically significant because the level of significance exceeded the accepted value. Therefore, there is no relationship between serology evidence and type of crime.

Table 11 shows the relationship between toxicology evidence and type of crime. Toxicology evidence was most prevalent in the OUIL cases where 94% had toxicology analysis. Toxicology evidence was most analyzed in the violent

Table 11 Toxicology Evidence and Type of Crime

<i>Toxicology Evidence</i>	<i>Type of Crime</i>			total
	Violent against a person (%) n=205	Non-Violent/Property (%) n=490	Other (%) n=210	
analyzed	9 (4%)	3 (1%)	9 (4%)	68
not analyzed	0	0	0	0
No statistical calculations available due to zero values in 'not analyzed' row.				

Table 12 Questioned Document Evidence and Type of Crime

Questioned document Evidence	Type of Crime			total
	Violent against a person (%) n=205	Non-Violent/Property (%) n=490	Other (%) n=210	
analyzed	0	8 (2%)	6 (3%)	14
not analyzed	0	24 (5%)	9 (4%)	33
No statistical calculations available due to no values in violent crimes.				

crimes and other crimes where each had 4% of the cases analyzing it. Non-violent crimes had toxicology evidence analysis the least with only 1% of those cases analyzing it. The statistical calculations could not be performed for this contingency table due to the lack of data.

The next forensic evidence type to be described is questioned documents seen in Table 12. It was never collected in any of the violent crime cases. It was analyzed in 2% and not analyzed in 5% of the non-violent crime cases. The other crimes cases had 3% of the cases with analyzed questioned document evidence and 4% of the cases did not analyze the collected questioned documents. This contingency table could not have statistical analysis due to lack of data in the violent crime category.

Physical Evidence and the Disposition of Felony Cases

One way to determine the importance of physical evidence is to identify its association with the disposition of a case. Charge results identify how the charge was resolved. The variable of charge results has the categories of plea

Table 13 Total Number of Charges for the Primary Defendant of a Case

<i>Number of charges</i>	<i>Number of Cases (percentage)</i>
one charge	361 (39.8%)
two charges	363 (40.1%)
three charges	98 (10.8%)
four charges	48 (5.3%)
five charges	17 (1.8%)
six charges	5 (0.6%)
7 to 20 charges	13 (1.4%)
total	905

bargain, nolle prosequi, dismissed or trial. For the analysis of statistical association, the categories of nolle prosequi and dismissed were consolidated. They both represent charges that were not prosecuted.

Each defendant had at least one charge filed. Table 13 displays the frequency of the total number of charges for defendant 1. The majority of the cases (79.9%) had only one or two charges. Therefore, the analysis of the association of physical evidence with the disposition of cases will deal only with the results of charge 1 and charge 2.

Table 14 identifies the characteristics of charge 1 results. The rate of charge results is distributed in cases with forensic evidence and cases with non-forensic evidence. Forensic evidence was present in 20% of the plea bargain cases, 24% of the cases where the charge was a nolle prosequi/dismissed and 20% of the cases that went to trial. Non-forensic evidence was found in 59% of the cases that resulted in a plea bargain, 55% of those that were nolle prosequi/dismissed and 45% of the trial cases.

Table 14 Physical Evidence and Charge 1 Results

Physical Evidence	Charge 1 Results			total
	Plea Bargain (%) n=361	Nolle Prosequi/ Dismissed (%) n=478	Trial* (%) n=60	
forensic evidence	70 (20%)	115 (24%)	12 (20%)	194
non-forensic evidence	214 (59%)	264 (55%)	27 (45%)	505
no physical evidence	77 (21%)	99 (21%)	21 (35%)	197
total	361	478	60	899**

$X^2=9.242$, $df=4$ $p=.0553$, and Contingency Coefficient: $c=0.101$

*Trial results are shown in table 15.

**The total is not equal to 905 because there were six cases with unknown results.

The criteria for statistical significance of the preceding analysis holds true for this analysis. As a result, forensic evidence appears to have no statistical significance with the disposition of charge 1 where, $p=.0553$ and $X^2=9.242$ at $df=4$ and $c=0.101$. The null hypothesis cannot be rejected therefore, physical evidence and the result of charge 1 are independent of each other.

The category of trial has additional results that need to be identified. Table 15 describes the relationship between physical evidence and the trial results of charge one. Of the trials that resulted in a not guilty verdict, 21% had forensic evidence, 29% had non-forensic evidence and 50% had no physical evidence collected. The cases with a guilty verdict had forensic evidence in 32%, non-forensic evidence in 42% and no physical evidence in only 26% of the cases.

Table 15 Physical Evidence and Charge 1 Trial Results

Physical Evidence	Charge 1 Trial Results				total
	Not Guilty (%)	Guilty (%)	Plea Bargain (%)	Nolle Prosequi/Dismissed (%)	
forensic evidence	3 (21%)	6 (32%)	0	2 (11%)	11
non-forensic evidence	4 (29%)	8 (42%)	6 (86%)	9 (47%)	27
no physical evidence	7 (50%)	5 (26%)	1 (14%)	8 (42%)	21
total	14	19	7	19	59
$X^2=9.547$, $df=6$, $p=.1451$, and $V=0.284$					

The category of plea bargain was added to identify those cases that started a trial but did not complete it due to a plea bargain. The majority of these cases had non-forensic evidence (86%). No physical evidence was in 14% of the trials with a plea bargain. Forensic evidence was not collected in any of the plea bargain trial cases.

Some of the charge 1 trials were dismissed or resulted in a nolle prosequi. Non-forensic evidence was present in 47% of those cases, 42% of those cases had no physical evidence and 11% had forensic evidence. The disposition of the charge one trials also had no relationship with physical evidence. The chi square was 9.547 at a level of significance of 0.1451.

Charge 2 results are tabulated by physical evidence in Table 16. Forensic evidence was present in 22% of the cases that resulted in a plea bargain, 25% of the nolle prosequi/dismissed cases and 37% of the cases that had charge 2 at trial. For charge 2, non-forensic evidence was in 59% of the

Table 16 Physical Evidence and Charge 2 Results

Physical Evidence	Charge 2 Results			total
	Plea Bargain (%) n=268	Nolle Prosequi/Dismissed (%) n=241	Trial* (%) n=30	
forensic evidence	59 (22%)	60 (25%)	11 (37%)	130
non-forensic evidence	159 (59%)	135 (56%)	8 (26%)	302
no physical evidence	50 (19%)	46 (19%)	11 (37%)	107
total	268	241	30	539**

$X^2=12.184$, $df=4$, $p=.016$ and Contingency Coefficient: $c=0.149$

*Trial results are shown in Table 17.

**The total is not equal to 905 because there were five cases with unknown results and 361 without a second charge.

plea bargained cases, 56% of the nolle prosequi/dismissed cases and 26% of the trial cases. No physical evidence was collected in 19% of the plea bargain cases, 19% of the dismissed cases and 37% of the cases where charge 2 went to trial.

Physical evidence appears to have a greater association on the results of charge 2 than it did on charge 1. This is evident in the measure of statistical significance where the level of significance is .016 and chi square is 12.184 at $df=4$ and $c=0.149$. Therefore, physical evidence and charge 2 results are not independent of each other but they only have a weak degree of association.

The results of the trials for charge 2 are presented in Table 17. In the cases with a not guilty verdict, 44% had forensic evidence, 22% had non-forensic evidence and 33% had no physical evidence. The majority of the guilty verdict cases had forensic evidence (67%), with non-forensic evidence and no physical

Table 17 Physical Evidence and Charge 2 Trial Results

Physical Evidence	Charge 2 Trial Results				total
	Not Guilty (%)	Guilty (%)	Plea Bargain (%)	Nolle Prosequi/Dismissed (%)	
forensic evidence	4 (44.4%)	4 (67%)	0	2 (20%)	11
non-forensic evidence	2 (22.2%)	1 (16.6%)	2 (50%)	3 (30%)	8
no physical evidence	3 (33.3%)	1 (16.6%)	2 (50%)	5 (50%)	11
total	9	6	4	10	29
$X^2=6.455$, $df=6$, $p=.3742$, and $V=0.334$					

evidence cases both comprising 16.6% of the guilty verdict cases. There was no forensic evidence in the plea bargain cases. Non-forensic evidence and no physical evidence cases were split evenly at 50% each of the plea bargain cases. The dismissed trial cases had 50% with no physical evidence, 30% with non-forensic evidence and 20% forensic evidence cases. The chi square test of independence indicates that trial outcomes of charge two are independent of physical evidence with $X^2=6.455$ at 6 degrees of freedom and $p=.3742$.

Summary

Physical evidence was collected in 78% of the cases with the evidence of non-forensic types being collected more than forensic evidence at a rate of 2 to 1. Non-violent/property crimes were the crimes most prosecuted, followed by violent crimes then 'other' crimes. Non-forensic evidence was collected the most in all crime types. Forensic evidence was collected in about ¼ of each type of crime.

The type of forensic evidence most analyzed (besides drug cases) was impression evidence followed by toxicology, serology, trace and finally questioned documents. Of the individual forensic evidence types, latent prints was most analyzed followed by alcohol, blood and signatures on questioned documents.

Statistical analysis revealed that impression evidence was the only forensic evidence with a relationship with type of crime. The rest of the forensic evidence types had no statistical relationship.

Non-forensic evidence was found the most in all charge 1 and charge 2 results. In the trial results for charge 1, the guilty verdict was most common followed by dismissals, then not guilty verdicts and lastly plea bargains. Forensic evidence and non-forensic evidence were equally present in the guilty verdict cases for charge 1. No physical evidence was the dominant evidence characteristic of the trials with a not guilty verdict for charge 1.

The observed results for charge 2 trials were dismissals followed by not guilty, guilty and lastly, plea bargains cases. Forensic evidence was the physical evidence most found in the guilty verdict cases of charge 2 trials. No physical evidence was collected in the cases with charge 2 trials being dismissed. There was no statistical relationships of either charge 1 or charge 2 results with physical evidence.

Chapter 4

DISCUSSION

Physical evidence has great potential for assisting in the identification of criminals. A great deal of time and money is spent in the collection of physical evidence and in the analysis of forensic evidence. With the potential that forensic science has, it is worthwhile to identify the impact it has on the prosecution of criminal cases. By determining which forensic evidence types play a greater role in a case, investigators and technicians can be instructed to be more mindful of collecting and analyzing such forensic evidence. Also, identifying forensic evidence types that are analyzed more often, allows laboratories the opportunity to expand man-power and request funding to accommodate the influx. For example, drug cases and drunk driving cases were such a tremendous portion of the cases that including them in the analysis skewed the amount of forensic evidence. It is clear that drug and alcohol analysis takes up a large portion of a forensic laboratory's time and space.

The study set out to discover how much physical evidence is present in felony prosecution cases and what effect that evidence might have on the outcome. It confirmed Peterson's conclusion that drug cases rely on forensic evidence and its analysis. They comprise a large portion of cases that are prosecuted. Peterson reported that one-quarter to one-third of the cases had

lab reports. His study included drug cases. This study has similar findings. With the drug cases included, forensic evidence was found in almost half of the cases. Without the drug cases, it was used in only one-quarter of the cases.

Non-forensic evidence was collected more often than forensic evidence. It was present in almost three-fourths of the cases. Non-forensic evidence consists of objects like a stolen stereo, a gun, an article of clothing or a screw driver. No special process is needed to collect or analyze these objects. Police officers may routinely come across non-forensic evidence in the course of the investigation, whereas, forensic evidence requires special techniques for its collection and identification. For example, the crime of 'carrying a concealed weapon' most likely has the weapon confiscated as evidence at the time of arrest, whereas, discovering the gun which was used to shoot a victim requires police investigation to locate a weapon. A gun may be recovered, but then, analysis of the gun and comparison of bullets are scientific analysis requirements. More work may be necessary to reveal the relationship of the evidence to the crime.

The cases most prosecuted in this study were non-violent/property crimes. The type of crimes with the lowest rate were those of a violent nature. This correlates with Peterson's findings. Most of the cases prosecuted in that study were non-violent crimes.

The rates of physical evidence distributed by type of crime revealed that non-forensic evidence appeared the most often in non-violent crimes. Violent crimes had the least amount of non-forensic evidence. Two-thirds of non-violent crime cases had some form of non-forensic evidence. This may be due to the

fact that non-violent/property crimes usually involve objects like tools and/or property that were stolen or damaged. This creates a greater potential for non-forensic evidence to be collected. Crimes against a person tend to not involve property or tools. There are exceptions of course (i.e. robberies and felonious assault) where an assailant uses a weapon or steals. More than half of the non-violent crime cases had non-forensic evidence.

Peterson reported that the violent crimes of homicide and rape have more forensic evidence than burglary and robbery crimes. The present study produced similar results. It was found that violent crimes have more forensic evidence than cases of non-violent crimes. It could be concluded that violent crimes are considered more serious than non-violent crimes therefore, sparking the resolve of the investigators to collect as much evidence as possible.

The type of crimes which had forensic evidence in the majority of the cases were drug cases and drunk driving cases. Drunk driving cases rely on forensic analysis to determine a crime has actually been committed.

In this study, latent prints were the forensic evidence most analyzed. This result corresponds with the findings in Peterson's study where fingerprint evidence was second only to drug evidence. In the present study, the second most frequent forensic evidence was alcohol analysis followed by blood evidence. These results differ from Peterson's study which found firearm analysis to be the third most frequent evidence type followed by blood evidence. In the present study, firearms analysis was rated the sixth most frequent forensic

evidence preceded by questioned documents evidence. Peterson's study did not include any drunk driving nor questioned document type cases¹.

The next forensic evidence types to be most collected were hair, shoe-print, glass, then semen. This result is in contrast to Peterson's study where semen was found to be more common than the forensic evidence types of hair, shoe-prints or glass. In the present study, the forensic evidence types least collected were (in descending order) fibers, arson, toolmarks, paint, tire tracks, soil, and serial number restoration.

When the forensic evidence types were classified, impression evidence was most collected followed very closely by serology evidence. The least common forensic evidence types analyzed were trace evidence followed by questioned documents. This concurs with Peterson's suggestion that evidence that has the potential to conclusively link a suspect to a crime (e.g. fingerprints) are more likely to be analyzed. The more definitive the results of the forensic evidence analysis in incriminating a defendant the more power it can have towards assisting in a conviction. The forensic evidence types that only produce results which indicate a probable relation to a crime or criminal may not even be searched for by the investigation team. The more the evidence can link a defendant to the crime the better. Trace evidence and serology evidence cannot conclusively identify a person or object as can fingerprints, firearms or toolmarks. There are exceptions such as paint or glass fragments fitting like puzzle pieces. But, those instances do not happen often.

¹ **Note:** Questioned document evidence is most commonly found in forgery, counterfeit, and uttering and publishing crimes.

Tests of statistical significance indicated the relationship crime type has on forensic evidence was not statistically significant except for impression evidence. Impression evidence had a weak degree of association to the type of crime being prosecuted. Peterson's study also showed no statistical significance in any of the study sites between type of crime and forensic evidence. The only exception was in Peoria where serology evidence was shown to have a statistical relationship with crime type.

In the present study, serology evidence was used more in violent crimes than in the non-violent ones. This could be explained by realizing that violent crimes produce more physical interaction between assailant and the victim. Blood and semen are more likely to be present in crimes where the victim and assailant have physical interaction such as rape and assault cases. This is in opposition to property crimes, where the criminal interacts with the environment more than a human. When a burglar commits a crime in a closed store at one o'clock in the morning, there is not likely to be human interaction. Therefore, evidence collected may tend to be impression evidence, fingerprints on the cash register or the tool mark on the door.

The 'other' types of crime rarely had impression or trace evidence collected. These crimes include criminal weapon charges, perjury, gambling, and false pretenses (just to name a few.) Many of the crimes are 'victimless', where there is no victim against whom the crime has been committed. Therefore, there is little need for blood or fingerprint or hair analysis.

The last characteristic of physical evidence looked at in this study was the association it had with the outcome of the case. The results of this study concur

with the literature where plea bargains were a very common occurrence (40% of charge one and 49% of charge two.)

Physical evidence was found to have no statistical relationship to the disposition of charge one. Forensic evidence was nearly equally distributed in charge one outcomes. It was present in 27% of the plea bargain cases, 25% of the nolle prosequi cases and 24% of the trials for charge one. Non-forensic evidence was present in more than two-thirds of plea outcomes, three-fourths of the nolle prosequi cases and almost two-thirds of charge one trials.

There was a statistical relationship between charge two results and physical evidence. There was a weak degree of association. Forensic evidence comprised 23% of the plea bargain cases, 34% of the nolle prosequi cases and 41% of the cases that charge two went to trial. Charge two outcomes had non-forensic evidence present in an average of 69% of the cases.

In the present study, trial results were also analyzed. No statistical relationship was found between charge one and physical evidence nor charge two and physical evidence.

The comparison with Peterson's study is difficult because physical evidence was not compared as forensic and non-forensic evidence combined. In that study, non-forensic and forensic evidence were analyzed separately. Also, the outcome of the cases was classified as a 'conviction' or 'no conviction', regardless of being a plea bargain conviction or a trial verdict. It was concluded that forensic evidence had no statistical significance on the conviction, except in one of the jurisdictions. There was only a slight association between forensic evidence and the outcome of the cases. Peterson also

calculated the significance of non-forensic evidence in the conviction of a case. The results were that non-forensic evidence has a "sizeable and statistically significant relationship" in all but one of the study sites.

This study has shown that physical evidence was collected in the majority of the prosecuted cases with forensic evidence being present in one-quarter of them. In the pursuit of justice, physical evidence is collected with the intentions that it will assist the process of prosecuting a crime. It is only one component of the system. There are many other factors which can affect the prosecution of a crime. Those factors are discussed in the last section of this report in hopes that future studies will uncover more of the characteristics of criminal case prosecutions.

RECOMMENDATIONS FOR FUTURE STUDIES

The data base collected on the 1303 cases has great potential for continued research studies. This study conducted a minor fraction of the possible analyses that could be done. Many factors play a role in the course of prosecuting a case. With this data, it is possible to ascertain the association of the numerous variables that comprise a criminal case.

A future study could focus on the factors which influence charge reductions. The data was set up to indicate the characteristics of each charge. Therefore, it is possible to identify the characteristics of charge reduction. For example, suppose charge 1 was criminal sexual conduct (CSC) 1st degree with an outcome of nolle prosequi. If charge 2 was CSC 2nd degree resulting in a plea bargain, one would wonder what situations caused this reduction in charge. It is possible the forensic evidence identified the defendant as the assailant or it could be the number of eyewitnesses. The relationship physical evidence has with reductions of charges could be determined through various statistical analyses.

What impact does the defendant's prior history play in the prosecution of the case? Maybe the defendant realized it was easier to plead guilty to a lesser charge knowing that the 2 prior convictions of assault may hinder his chances of acquittal. Identifying those defendant who had prior arrests and convictions might reveal a greater rate of plea bargain or stiffer sentences.

Upon conviction of a crime, the factors that may influence sentencing could be studied. Do the cases that have guilty pleas vary in sentence length compared to those convicted by a trial? How does forensic evidence analysis effect the sentencing of a defendant compared to those defendants whose cases had no physical evidence? Does having physical evidence affect the harshness of the sentence?

The effect the defendant's age, race, or gender might play in sentencing or charge outcome could be explored. Also, the relationship the defendant has with the victim might have an impact on charge outcome or sentencing.

Another future study could be to describe the characteristics of cases that went to trial. How many cases were there? The type of crime could be a factor for cases resolving in a trial. Expert witness testimony may have an impact in the outcome of a trial. Or does the presence or absence of forensic evidence and/or non-forensic have a bearing on the sentencing of guilty verdicts?

The questions are endless. There is so much potential to uncover the myriad of characteristics that may effect the prosecution of a crime. I hope that the scientific exploration for the answers to the effects evidence has in a prosecution of a criminal case continue. This study only uncovered a small portion of the answers that could be revealed.

APPENDICES

APPENDIX A

APPENDIX A

CODEBOOK FOR PROSECUTOR CASE FILES

Reference #-

ITEM

Case # _____

V1 Number of defendants in case _____

V2 Number of victims in case _____

V3 Location of crime _____
 0 unknown
 1 city
 2 village
 3 township
 4 university
 5 Lansing community college

V4 Name of crime location _____
 0 unknown
 1 East Lansing 13 Onongada
 2 Lansing 15 Delhi
 3 Lansing community college 16 Haslett
 4 Lansing Township 17 Vevay
 5 Leslie 18 Wheatfield
 6 Mason 19 Bunkerhill
 7 Meridian Township 24 Stockbridge
 8 M.S.U 25 Aurelius
 9 Williamston 26 Locke Twp
 10 Webberville 28 Leroy Twp
 11 Other unknown 33 Alaiedon Twp
 12 Holt 36 Dansville

V5 Date of crime
 Month _____
 Day _____
 Year _____

APPENDIX A

- V6 Time crime occurred _____
 0 unknown
 1 0000-0800
 2 0801-1800
 3 1801-2400
 8 multiple
- V7 Day crime occurred _____
 0 unknown
 1 Monday 5 Friday
 2 Tuesday 6 Saturday
 3 Wednesday 7 Sunday
 4 Thursday 8 Multiple days
- V8 Submitting Agent _____
 0 unknown
 1 MSP 11 Meridian Township
 2 MSP Lansing Post 12 Lansing Community College
 3 Ingham County Sheriff (ICSD) 13 M.S.U. DPS
 4 East Lansing P.D. 14 Tri County Metro (TCM)
 5 Lansing P.D. 15 MSP Dice
 6 Leslie P.D. 16 MESC (Michigan
 7 Mason P.D. Employment Security
 8 Webberville P.D. Commission)
 9 Williamston P.D. 17 PACT (Meridian and MSU
 10 Lansing Township DPS)
- V9 Statements/Testimony given by co-defendants _____
 0 unknown
 1 Yes
 2 No
- V10 If yes, how many co-def's testimony? _____
- V11 Eyewitness(es) testimony _____
 0 unknown
 1 Yes
 2 No
- V12 If yes, how many eyewitnesses? _____

APPENDIX A**EVIDENCE COLLECTED**

V13 Non-Forensic evidence

0 unknown

1 Yes

2 No

IF YES:

V14 Personal effects (clothes, wallet, etc.)

1 Yes

2 No

V15 Fruits of crime (things taken in crime)

1 Yes

2 No

V16 Prima Facie evidence (evidence sufficient to establish
a fact of a case unless disproved)

0 unknown

1 Yes

2 No

V17 Weapon

0 unknown

1 Yes

2 No

V18 Tools

0 unknown

1 Yes

2 No

APPENDIX A**FORENSIC EVIDENCE**

V19 Was evidence collected that needed to be analyzed. _____
0 unknown
1 Yes
2 No

If No, go to Defendant Info V-79

If Yes, continue: (NOTE: For v20-v73 0=unknown and 9=none.)

V20 Latent prints _____
1 Yes
2 No
3 Yes, collected but not analyzed

V21 if yes, were they related to the crime _____
1 yes, related
2 no, not related
3 inconclusive

V22 Firearms _____
1 Yes
2 No
3 yes, collected but not analyzed

V23 If yes, shell/bullet comparisons _____
1 Yes
2 No

V24 If yes, it is _____
1 crime related
2 not crime related
3 inconclusive

V25 Toolmarks _____
1 Yes
2 No
3 yes, collected but not analyzed

V26 If yes, it is _____
1 crime related
2 not crime related
3 inconclusive

APPENDIX A

- V27 Serial number restoration _____
1 yes
2 no
3 yes, collected but not analyzed
- V28 If yes: _____
1 whole number restored
2 partial number restored
- V29 If yes, it is _____
1 crime related
2 not crime related
3 inconclusive
- V30 Questioned Documents Analysis _____
1 yes
2 no
- If yes,
V31 Check signature _____
1 yes
2 no
3 yes, collected but not analyzed
- V32 Document was: _____
1 related to crime
2 unrelated to crime
3 inconclusive
- V33 Other documents _____
1 yes
2 no
3 yes, collected but not analyzed
- V34 Documents were: _____
1 related to crime
2 unrelated to crime
3 inconclusive
- V35 Arson _____
1 yes
2 no
3 yes, collected but not analyzed

APPENDIX A

- V36 If yes, was accelerant present _____
1 yes
2 no
3 inconclusive
- V37 If present, type of accelerant: _____
1 gasoline
2 kerosene
3 fuel oil
4 other
- V38 Glass _____
1 yes
2 no
3 yes, collected but not analyzed
- V39 If yes, it was _____
1 crime related
2 not crime related
3 inconclusive
- V40 Fiber _____
1 yes
2 no
3 collected but not analyzed
- V41 if yes, it was _____
1 crime related
2 not crime related
3 inconclusive
- V42 Paint _____
1 yes
2 no
3 collected, not analyzed
- V43 if yes, it was _____
1 crime related
2 not crime related
3 inconclusive
- V44 Soils _____
1 yes
2 no
3 collected, not analyzed

APPENDIX A

- V45 if yes, it was _____
1 crime related
2 not crime related
3 inconclusive
- V46 Shoe-print _____
1 yes
2 no
3 collected, not analyzed
- V47 if yes, it was _____
1 crime related
2 not crime related
3 inconclusive
- V48 Tire tracks _____
1 yes
2 no
3 collected, not analyzed
- V49 if yes, it was _____
1 crime related
2 not crime related
3 inconclusive
- V50 Hair _____
1 yes
2 no
3 collected, not analyzed
- V51 if yes, is it _____
1 crime related
2 not crime related
3 inconclusive
- V52 if analyzed, type of hair _____
1 human head
2 human body
3 human pubic
4 combination of 1-3
5 non-human

APPENDIX A

- V53 Semen _____
 1 yes
 2 no
 3 collected, not analyzed
- V54 If yes, results, semen is: _____
 1 related to crime (matches def., etc)
 2 not crime related
 3 inconclusive
- V55 Blood _____
 1 yes
 2 no
 3 collected, not analyzed
- V56 If analyzed, was it blood _____
 1 yes
 2 no
 3 inconclusive
- V57 If blood, is it human _____
 1 yes
 2 no
 3 inconclusive
- V58 If blood, was it typed _____
 1 yes
 2 no
 3 inconclusive
- V59 Were other tests done on blood _____
 1 yes, BAC 5 Le a-,be b+
 2 no Le a-,be b-
 3 toxicology 6 4 & 5
 4 PGM
- V60 Result, blood is _____
 1 related to crime (matches def., etc)
 2 not related to crime
 3 inconclusive
- V61 Toxicological exam (including BAC) _____
 1 yes
 2 no

APPENDIX A

If yes, did it test for:

V62 Poison

1 yes

2 no

V63 Drugs

1 yes

2 no

V64 Alcohol

1 yes breath 4 urine

2 no 5 breath and blood

3 blood

V65 Post Mortem

1 yes

2 no

V66 if yes, manner of death

1 natural

2 homicide

3 suicide

4 accident

5 inconclusive

V67 Drugs (Controlled substances = C.S.)

1 yes

2 no

3 collected, not analyzed

If Yes, substance found to be:

V68 Heroin

1 yes

2 no

V69 Cocaine

1 yes

2 no

V70 Marijuana

1 yes

2 no

APPENDIX A

V71 PCP

1 yes

2 no

V72 LSD

1 yes

2 no

V73 Other

1. non C.S.

2. no

3. diazepam

4. yes but unk

5. valium

6. chlordiazepoxide

7. Lidocaine and

Phenobarbital

8. urea

9 none

10. plant (non MJ)

11. unk pharmaceutical

12. Tylenol w/codeine

13. methamphetamine

APPENDIX A**EXPERT WITNESS INFORMATION**

Case # _____

- V74 Was there an expert witness called to testify _____
 0 unknown
 1 yes
 2 no
- V75 If yes, how many? _____
- V76 Did any experts testify at trial? _____
 0 unknown
 1 yes
 2 no
 3 no trial for this case
- V77 If yes, how many? _____
- V78 Area of Expertise _____
- 1 yes
 2 no
- A. Drugs 0 Unk _____
 1 yes
 2 no
- B. Latent prints 0 unk _____
 1 yes
 2 no
- C. Firearms, toolmarks 0 unk _____
 1 yes
 2 no
- D. Serology 0 unk _____
 1 yes
 2 no
- E. Toxicology 0 unk _____
 1 yes
 2 no

- F. Pathology 0 unk _____
1 yes
2 no
- G. Trace 0 unk _____
1 yes
2 no
- H. Medical 0 unk _____
1 yes
2 no
- I. BAC Analyzer 0 unk _____
1 yes
2 no
- J. Dog tracker 0 unk _____
1 yes
2 no
- K. Business/ insurance 0 unk _____
investigator 1 yes
2 no
- L. Arson/electrical 0 unk _____
inspectors 1 yes
2 no
- M. Question Doc. 0 unk _____
1 yes
2 no

APPENDIX A**DEFENDANT 1 INFORMATION**

	Case #	Reference #-
V79 Race	_____	_____
0 unknown	5 African	
1 White	6 Cuban	
2 Black American		
3 Hispanic American		
4 Asian American		
V80 Age		_____
V81 Date of Birth		_____
Month		_____
Day		_____
Year		_____
V82 Gender		_____
0 unknown		
1 Male		
2 Female		
V83 Occupation*		_____
0 unknown		
1 Unemployed	6 Sales person	
2 Blue collar	7 police officer	
3 Professional	8 other	
4 Business owner/self-employed	12 entertainer	
5 Student	13 retired	
V84 Place of Residence		_____
0 unknown		
1 Ingham County		
2 Outside Ingham Co.		
3 Non-resident of Michigan		

APPENDIX A

V85	If Resident of Michigan:	_____	_____
	0 unknown		
	1 East Lansing	13 Onondaga	25 Aurelius
	2 Lansing	14 Coral	26 Locke Twp
	3 Lansing community college	15 Delhi	27 Dewitt
	4 Lansing Township	16 Haslett	28 Leroy Twp
	5 Leslie	17 Vevay	29 Grand Ledge
	6 Mason	18 Wheatfield	30 Flint
	7 Meridian Township	19 Bunkerhill	31 Alto
	8 Michigan State University	20 Eaton Co.	32 Taylor
	9 Williamston	21 White Oak Twp	33 Alaiedon Twp
	10 Webberville	22 Walker	34 Fowlerville
	11 Other unknown	23 Grand Rapids	35 St. John
	12 Holt	24 Stockbridge	36 Dansville

HISTORY OF DEFENDANT'S PRIORS

V86	Total Number of Arrests	_____	_____
V87	# of misdemeanor convictions	_____	_____
V88	# of felony convictions	_____	_____
V89	Total # of prior convictions	_____	_____
V90	Habitual Criminal		_____
	0 unknown		
	1 Yes		
	2 No		

PRESENT CRIMINAL ARREST

V91	Arrest status	_____
	0 unknown	
	1 arrested at scene	
	2 arrested leaving scene	
	3 arrested elsewhere subsequent to crime	
V92	Did defendant make admission?	_____
	0 unknown	
	1 Yes	
	2 No	

APPENDIX A

- V93 Did defendant confess? _____
0 unknown
1 Yes
2 No
- V94 Was Psychological examination given? _____
0 unknown
1 Yes
2 No
- V95 If yes, was it for competency to stand trial? _____
0 unknown
1 Yes
2 No
- V96 If not, specify: _____
1 Sanity defense
2 Criminal Responsibility
- V97 Was defendant given polygraph examination? _____
0 unknown
1 Yes
2 No
- V98 If yes, outcome of polygraph exam: _____
0 unknown
1 deceptive, no confession
2 deceptive, confession
3 truthful
4 inconclusive
- V99 Total number of charges for defendant: _____

APPENDIX A**DEFENDANT 1**

Indicate Charge #

Case # _____

V100 Type of crime _____

- 0 unknown
- 1 Crime against person
- 2 Property crime
- 3 Attempt (Inchoate)
- 4 Vice crime (drug)
- 5 other

V101 Actual charge _____

SEE PAGE 83 FOR THE INDIVIDUAL CHARGE CODES

V102 If delivery or possession, specify drug _____

- | | |
|--------------------------|---------------------------|
| 0 unknown | |
| 1 cocaine | 8 valium |
| 2 marijuana | 9 NONE |
| 3 heroin | 10 chlordiazepoxide |
| 4 imitation cont. subst. | 11 Fironol |
| 5 PCP | 12 Hydrocodone Bitartrate |
| 6 LSD | 13 coke and heroin |
| 7 diazepam | |

V103 Charge type _____

- 1 felony
- 2 misdemeanor
- 3 supplemental

V104 Outcome of charge _____

- | | |
|---|--|
| 0 Unknown | |
| 1 Plea of a lesser charge | 8 Nolo Contendere |
| 2 Plea to charge before trial | 9 none |
| 3 Nolle Prosequi (Nolle Pro) | 10 nolle pro--double jeopardy |
| 4 Dismissed | 11 nolle pro--cannot sustain burden of proof |
| 5 Plea to attempt (Inchoate) | 12 nolle pro--victim recants |
| 6 Trial | |
| 7 Nolle Pro--in the interest of justice | |

APPENDIX A

V105 If trial

1 Bench

2 Jury

V106 If trial, outcome

0 Unknown

1 Not guilty

2 Guilty as charged

3 Plea during trial

4 Mistrial

5 dismissed

6 Not guilty by
reason of insanity

7 Nolle Pro

8 Guilty of other

9 none

10 Incompetent
(Nolle Pro)

11 plea to lesser

12 nolle pro--witness
fails to appear

PRETRIAL INFORMATION

V142 Preliminary Hearing

0 unknown

1 Yes

2 No

V143 If yes, outcome:

0 unknown

1 dismissed

2 bound over

V144 Grand Jury

0 unknown

1 Yes

2 No

V145 If yes, outcome:

0 unknown

1 no indictment

2 indicted

APPENDIX A**SENTENCE**

V146 Jail _____
 0 unknown
 1 Yes
 2 No
 3 yes, but suspended

V147 If yes, how long?* _____
 Specify* _____month

V148 Prison _____
 0 unknown
 1 Yes
 2 No
 3 Yes, but suspended on stipulation

V149 If yes, how long?* Min_____ Max _____
 Specify* Min Max mon

V150 Probation _____
 0 unknown
 1 Yes
 2 No
 3 HYTP (Holmes Youth Training Program)

V151 If yes, length of time for probation.* _____
 Time _____ month

Probation terms 0 unk _____
 1 yes
 2 no

APPENDIX A

a. Sentry	0 unk 1 yes 2 no	_____	g. tether	0 unk 1 yes 2 no	_____
b. community service	0 unk 1 yes 2 no	_____	h. drug program	0 unk 1 yes 2 no	_____
c. LASER	0 unk 1 yes 2 no	_____	i. AA	0 unk 1 yes 2 no	_____
d. counseling	0 unk 1 yes 2 no	_____	j. CATS	0 unk 1 yes 2 no	_____
e. work/school	0 unk 1 yes 2 no	_____	k. revoke license	0 unk 1 yes 2 no	_____
f. urine drops	0 unk 1 yes 2 no	_____	l. boot camp	0 unk 1 yes 2 no	_____
V152 Restitution	0 unknown 1 Yes 2 No	_____			
V153 If yes, how much?		_____			
V154 Fine	0 unknown 1 Yes 2 No	_____			
V155 If yes, how much?		_____			

APPENDIX A**VICTIM INFORMATION**

Victim # _____

Reference #-

Case # _____

ITEM

V156 Nature of victim _____

0 unknown

1 person

2 retail establishment _____

3 warehouse (name)

4 other business

5 school

6 government building

7 automobile or other vehicle

8 place of residence

9 victimless crime

10 Hospital or church

If Person, continue:

V157 Race _____

0 unknown

1 white

2 black

3 Hispanic

4 other

V158 Age _____

V159 Gender _____

0 unknown

1 male

2 female

APPENDIX A

V160	Place of Residence*	_____	_____
	0 unknown		
	1 East Lansing	13 Onondaga	25 Aurelius
	2 Lansing	14 Coral	26 Locke Twp
	3 Lansing community college	15 Delhi	27 Dewitt
	4 Lansing Township	16 Haslett	28 Leroy Twp
	5 Leslie	17 Vevay	29 Grand Ledge
	6 Mason	18 Wheatfield	30 Flint
	7 Meridian Township	19 Bunkerhill	31 Alto
	8 Michigan State University	20 Eaton Co.	32 Taylor
	9 Williamston	21 White Oak Twp	33 Alaiedon Twp
	10 Webberville	22 Walker	34 Fowlerville
	11 Other unknown	23 Grand Rapids	35 St. John
	12 Holt	24 Stockbridge	36 Dansville
V161	Occupation*	_____	
	0 unknown		
	1 Unemployed	6 Sales person	
	2 Blue collar	7 police officer	
	3 Professional	8 other	
	4 Business owner/self-employed	12 entertainer	
	5 Student	13 retired	
V162	Did victim know defendant prior to incident	_____	
	0 unknown		
	1 yes		
	2 no		
V163	If yes,	_____	
	0 unknown relation		
	1 acquaintance		
	2 relative		

APPENDIX A

- V164 If relative, victim is _____
- | | |
|---------------|------------------|
| 0 unknown | |
| 1 wife | 10 step-daughter |
| 2 husband | 11 cousin |
| 3 mother | 12 ex wife |
| 4 father | 13 step sister |
| 5 daughter | 14 niece |
| 6 son | 15 step mother |
| 7 brother | 16 step daughter |
| 8 sister | 17 in laws |
| 9 grandmother | 99 none |
-
- V165 If acquaintance, victim is _____
- | |
|--------------|
| 0 unknown |
| 1 friend |
| 2 girlfriend |
| 3 boyfriend |
| 4 other |
-
- V166 Damages to victim _____
- | |
|---------------------------------|
| 0 unknown |
| 1 killed |
| 2 taken to hospital |
| 3 treated at scene only |
| 4 no treatment for injuries |
| 5 non-physical/property damages |
| 6 no injuries |

If there is more than one VICTIM, collect data for each.

IF MULTIPLE DEFENDANT CASE, Set codebook aside until information on all defendants has been collected. Attach data for each defendant and use same code number. Reference number may be different.

APPENDIX A**CATEGORIES FOR THE VARIABLE OF ACTUAL CHARGE**

V101 **Actual Charge** (pertains to ALL charges and defendants)

- | | |
|--|------------------------------------|
| 0 unknown | 39 obtain by fraud |
| 1 arson | 40 supplemental/ Habitual |
| 2 assault &/or battery | 41 negligent homicide |
| 3 auto theft/UDAA | 42 possess switchblade |
| 4 breaking &/or entering | 43 possess brace knuckles |
| 5 assault W/I GBH | 44 disorderly person |
| 6 counterfeit | 45 Non Sufficient Funds (NSF) |
| 7 criminal sexual conduct (unk deg) | 46 Obstruct justice |
| CSC | 47 child abuse |
| 8 delivery of controlled substance | 48 joyride |
| 9 felonious assault | 49 open alcohol auto |
| 10 larceny | 50 assault W/I CSC |
| 11 murder 1st | 51 open intoxicant |
| 12 uttering & publishing | 52 weapon auto |
| 13 use Cs device (mace) | 53 expired plates |
| 14 armed robbery | 54 B&E W/I felonious assault |
| 15 unarmed robbery | 55 indecent exposure |
| 16 OUIL/ UBAL | 56 assault W/I murder |
| 17 forgery | 57 manufacturing Cont. Subst. |
| 18 possession of controlled substance | 58 leaving scene accident |
| 19 retail fraud | 59 kidnapping |
| 20 carrying concealed weapon | 60 abscond on bond |
| (CCW) | 61 reckless driving |
| 21 possession w/ intent to deliver | 62 carrying dangerous weapon |
| 22 conspiracy (misdemeanor) | 63 carry pistol W/O license |
| 23 <u>Malicious Destruction Of Prop.</u> | 64 maintain gamble room |
| 24 use of controlled substance | 65 poss. short-barreled shotgun |
| 25 R & C > 100 | 66 assault w/Intent maim |
| 26 Supplemental | 67 resisting/opposing officer |
| 27 embezzlement | 68 poss. Firearm on school prop. |
| 28 felonious firearm | 69 discharge firearm |
| 29 escape prison | 70 fail to present for inspection |
| 30 no account check | 71 CSC 1 |
| 31 financial transaction device | 72 CSC 2 |
| 32 suspended/ revoked license | 73 CSC 3 |
| 33 R & C < 100 | 74 CSC 4 |
| 34 assault W/I rob unarmed | 75 careless discharge-prop. damage |
| 35 Assault W/I rob armed | 76 altering operator license |
| 36 murder 2 nd | 77 poss. Firearm |
| 37 remove body | 78 aggravated assault |
| 38 false pretense | 79 ATM fraud |

APPENDIX A

- | | |
|--|---|
| 80 incite minor to commit crime | 106 conspiracy-false pretense |
| 81 flee/elude police | 107 conspiracy-A & B |
| 82 operating unlicensed daycare | 108 conspiracy-B & E |
| 83 false information to obtain | 109 conspiracy-larceny |
| 84 purchase pistol w/o license | 110 conspiracy-MDOP |
| 85 simple assault | 111 aiming firearm w/
malice |
| 86 no license | 112 conspiracy. possess.
bomb w/o permit |
| 87 perjury | 113 poss. bomb |
| 88 failure to return rented prop. | 114 furnish false info. |
| 89 attend dog fight | 115 disturbing the peace |
| 90 use of canceled FTD | 116 impaired driving |
| 91 poss. burglary tools | 117 maliciously killing a dog |
| 92 poss. weapon w/ unlawful
intent | 118 safe breaking |
| 93 willfully annoy | 119 altering operator's
license (ops) |
| 94 false police report | 120 using other person's ops |
| 95 computer damage >100 | 121 felony driving |
| 96 arson-prepare to burn | 122 obscene conduct |
| 97 poss. unlocking device | 123 possess an automatic
weapon |
| 98 bank robbery | 124 transporting a pistol |
| 99 NONE | |
| 100 involuntary
manslaughter | |
| 101 poss. counterfeiting tools | |
| 102 trespassing | |
| 103 indecency between
male & female | |
| 104 parental kidnapping | |
| 105 conspiracy-del. cont.
substance | |

APPENDIX B

APPENDIX B

CATEGORIES OF TYPES OF CRIMES

A Violent Crimes against a person

2* assault &/or battery	41 negligent homicide	73 CSC 3
5 assault W/I GBH	47 child abuse	74 CSC 4
7 criminal sexual conduct(unk deg)CSC	50 assault W/I CSC	78 aggravated assault
9 felonious assault	56 assault W/I murder	85 simple assault
11 murder 1st	59 kidnapping	93 willfully annoy
14 armed robbery	66 assault w/Intent maim	100 involuntary manslaughter
15 unarmed robbery	71 CSC 1	104 parental kidnapping
34 assault W/I rob unarmed	72 CSC 2	107 conspiracy-A & B
35 Assault W/I rob armed		121 felony driving
36 murder 2 nd		

B. Non-Violent/ Property Crimes

1 arson	27 embezzlement	96 arson-prepare to burn
3 auto theft/UDAA	33 R & C < 100	98 bank robbery
4 breaking &/or entering	48 joyride	102 trespassing
10 larceny	79 ATM fraud	108 conspiracy-B & E
12 uttering & publishing	88 failure to return rented prop.	109 conspiracy-larceny
19 retail fraud	95 computer damage >100	110 conspiracy-MDOP
23 <u>Malicious Destruction Of Prop.</u> (MDOP)		118 safe breaking
25 R & C > 100		

C. 'Other' Types of Crimes

6 counterfeiting	60 abscond on bond	92 poss. weapon w/ unlawful intent
13 use Cs device (mace)	61 reckless driving	94 false police report
16 OUIL/ UBAL	62 carrying dangerous weapon	97 poss. unlocking device (MSU ord.)
17 forgery	63 carry pistol W/O license	101 poss. counterfeiting tools
20 carrying concealed weapon (CCW)	64 maintain gamble room	103 indecency between male & female
22 conspiracy (misdemeanor)	65 poss. short-barreled shotgun	
26 Supplemental		
28 felonious firearm		

APPENDIX B**C. 'Other' Types of Crimes Cont'd**

29 escape prison	67 resisting/opposing officer	106 conspiracy-false pretense
30 no account check	68 poss. Firearm on school prop.	111 aiming firearm w/ malice
31 financial transaction device	69 discharge firearm	112 consp. poss. bomb w/o permit
32 suspended/ revoked license	70 fail to present for inspection	113 poss. bomb
37 remove body	76 altering operator license	114 furnish false info.
38 false pretense	77 poss. Firearm	115 disturbing the peace
39 obtain by fraud	80 incite minor to commit crime	116 impaired driving
40 supplemental/ Habitual	81 flee/elude police	117 maliciously killing a dog
42 possess switchblade	82 operating unlicensed daycare	119 altering operator's lic. (ops)
43 possess brace knuckles	83 false info to obtain	120 using other person's ops
44 disorderly person	84 purchase pistol w/o license	122 obscene conduct
45 Non Sufficient Funds (NSF)	86 no license	123 possession of an automatic weapon
46 Obstruct justice	87 perjury	124 transporting a pistol
49 open alcohol auto	89 attend dog fight	
51 open intoxicant	90 use of canceled FTD	
52 weapon auto	91 poss. burglary tools	
53 expired plates		
55 indecent exposure		
58 leaving scene accident		

APPENDIX C

APPENDIX C

UNIFORM CRIME REPORT: INDEX AND NON-INDEX CRIMES

A. Index Crimes

- Murder
- Rape
- Robbery
- Aggravated Assault
- Burglary
- Larceny
- Motor Vehicle Theft
- Arson

B. Non-Index Crimes

- Negligent Manslaughter
- Other Assaults
- Forgery and Counterfeiting
- Fraud
- Embezzlement
- Stolen Property
- Vandalism
- Weapons
- Prostitution and Commercialized Vice
- Sex Offenses (not rape or prostitution)
- Drug Laws
- Gambling
- Offenses Against Family and Children
- Driving Under the Influence (OUIL)
- Liquor Laws
- Drunkenness
- Disorderly Conduct
- Vagrancy
- All Other Offenses

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