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A STRUCTURAL ANALYSIS OF LAW ENFORCEMENT
OFFICER DEATHS: 1995-1999

by

Kasey A. Tucker

A Dissertation
Submitted to the
Faculty of The Graduate College
in partial fulfillment of the
requirements for the
Degree of Doctor of Philosophy
Department of Sociology
Dr. Charles Crawford

Western Michigan University
Kalamazoo, Michigan
June 2005

UMI Number: 3183599

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ACKNOWLEDGEMENTS

As with any research project one undertakes, there are always several individuals who must be acknowledged both at the professional and personal level. First, I must thank my committee members: Dr. Charles Crawford (chair), Dr. David Hartmann, Dr. Barry Goetz, and Dr. Rhonda DeLong for their outstanding effort, wisdom and encouragement throughout the entire process. Specifically, to Dr. Crawford for his unerring wisdom and guidance, and for taking on a project so close to my heart. To Drs. Hartmann and Goetz for asking all the right questions, and to Dr. DeLong for her continued support of my goals and her personal belief in my ability to succeed over the years, and with this project.

Special thanks to Dr. Thomas VanValey for his guidance, support and mentorship during my time at Western Michigan University, and for always addressing my numerous questions and 'situations'. To Dr. Nancy Hogan for supporting my graduate progression and her encouragement to attain a Ph.D. Thanks are more than due to Craig, for his genius in every aspect of scholarly activity, and to Kristen for her unwavering support and patience; friends like both of you are irreplaceable.

Personally I would like to thank Professor James R. Kobolt for his continued mentorship throughout my academic development, and for his belief in my ability to succeed in my graduate career, even from its very early stages. Your support and straightforward advice are and will always be appreciated.

To my colleagues at the University of Toledo in the Criminal Justice Department, thank you for your support, belief in my ability to contribute to your program and for being wonderful people not only to work with, but your friendships are invaluable.

To my Uncle Paul and Aunt Liz for supporting me in a way no one else could, words can not express my gratitude, I trust I have demonstrated the value of your investment. Also thanks to the rest of my extended family and friends for their letters from Canada, words of support and complete faith in my aptitude to be successful. Now that this process is coming to a close - I promise to be at more family events :).

To my parents and my brother, words cannot express the gratitude I have for each of you as my closest friends and my own personal support group. You have always encouraged me to chase my goals, held my hand through struggles and supported my academic endeavors – even when I wasn't sure what they really were. I love you all and can never thank you enough!

Kasey A. Tucker

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CHAPTER I

INTRODUCTION

Every year several officers die while serving the general public, protecting society from the chaos and disorder of crime. Much conjecture surrounds the discussion of why law enforcement officers die in the line of duty, ranging from bad timing, to bad people, to mistakes of procedure, policy, training practices, and to the characteristics of both officers and offenders. Several questions are linked to the causes of law enforcement officer homicides, with no clear answer as to what factors contribute to these events. Several studies have been conducted looking at different aspects of law enforcement officer deaths, from the macro-social level and the social psychological perspective to the different characteristics of officers and the offenders who murder them. While law enforcement officer deaths have declined in the last decade or so, there are still several incidents that occur – resulting in the loss of life of individuals sworn to protect us. It is an issue for everyone, including sociologists and criminologists. The death of an officer reaches beyond the family and fellow law enforcement officers at the police department.

This study examines the structural factors that precipitate law enforcement officer's deaths between the years of 1995 and 1999 in the United States. Further, this study speaks to the need for research in the area of law enforcement officer deaths, specifically at the structural level. As well, this project will be used in its preliminary nature to assess the soundness of structural approach to exploring law enforcement officer deaths since the literature surrounding law enforcement officer deaths is so limited. This study will explore the validity of the structural approach to explore law

enforcement officer deaths from a threat hypothesis perspective, testing the approach used in previous studies conducted in different time periods, where attempts to assess both the racial and economic threat hypotheses have been conducted. It is important to stress that very little research has been conducted on law enforcement officer deaths from a structural approach, which suggests the importance of this preliminary study and the need to evaluate some of the previous approaches used to explore these types of deaths.

The framework used in this study is more encompassing than that used in previous research; it applies a theoretical framework, based on the conflict theory perspective with the nationally collected data from the FBI on feloniously murdered law enforcement officers. The theoretical framework is based on the economic and racial threat hypotheses put forth by Chamlin (1989), who explored the linkages between structural characteristics and law enforcement officer killings. Until recently, the review of law enforcement officer deaths has been a theoretical. The purpose of this study is to merge a theoretical approach with a study of law enforcement officer deaths in a five-year period. In the five years between 1995 and 1999, over 291 law enforcement officers were murdered in the continental United States. It is important from the start to make a distinction between accidental and felonious deaths. While there are a significant number of accidental deaths of law enforcement officers, for the purpose of this study only those deaths of law enforcement officers committed in a felonious or intentional manner will be explored.

Extent of the Problem

The rate of law enforcement officer deaths has decreased in the last twenty years. The rate of law enforcement officer deaths per 10, 000 “fell approximately from 3.4 in 1973,

to 1.6 in 1983, to approximately 1.1 in 1993” (Fridell & Pate, 2001: 637). According to the data collected by the Uniform Crime Reporting Program, “ the number of law enforcement officers who were feloniously killed fell from a high of 134 in 1973 to below 100 per year in the early 1980’s, and then fell again in the late 1980’s” (Fridell & Pate, 2001: 637). During the 1990’s, law enforcement officer deaths fluctuated “between 66 (1990) and 76 (1994), representing a decline of about 50 percent since the 1970’s” (Fridell & Pate, 2001: 637). This decrease is even more significant because of the increasing number of law enforcement officers who have been hired and placed on the street in the past two decades. While no one explanation clearly identifies the reason for this dramatic drop, several “contributing factors can be identified [such as]... the introduction of soft body armor, ...the adoption of sophisticated training procedures, ...and revised policies and procedures” (Fridell & Pate, 2001: 637).

While the number of law enforcement officer deaths has decreased in the past two decades, there is still a need to study the macro-social structural approaches that are related to law enforcement officer deaths; based on the atheoretical nature of this past line of research. According to the National Law Enforcement Officers Memorial Fund, more than 12,500 law enforcement officers have been killed in the line of duty in the history of the United States (Fridell & Pate, 2001: 636). In addition, “3,280 law enforcement officers were killed between 1973 and 1994”; 60 percent of these law enforcement officers were killed feloniously, while 40 percent were killed accidentally (Fridell & Pate, 2001: 636). This would indicate that approximately a law enforcement officer is killed “once every three days” in the United States (Fridell & Pate, 2001: 636). The use of the macro-social approach has been limited in the literature. Two of the primary studies

conducted, assessing law enforcement officer deaths from this perspective explore these deaths using the economic and racial threat hypotheses. This study will assess law enforcement officer deaths from this perspective, testing the threat hypotheses using the 1995-1999 officer death data across the United States.

Law enforcement officers are much more likely to become victims of homicide. Peterson and Bailey (1988) indicate that police officers are more likely to become victims of homicide or criminal acts than the average American citizen, due to the very nature of their job. In addition, “sheriff/bailiff” and “police and detective – public service” are ranked as second and third in terms of the rates of workplace homicides by the National Institute for Occupational Safety and Health (NIOSH, 1996), following taxi cab drivers (Fridell & Pate, 2001). In a work published by Lester in 1980, law enforcement officers in the United States were found to have a higher rate of homicide than officers in 6teen selected industrial nations. Finally, a preliminary report by the Bureau of Labor Statistics (2004) revealed that 287 law enforcement officers were killed (both accidental & felonious) in 2004, compared to 56 firefighters and 85 military officers, indicating a much higher number of law enforcement officer deaths than other public service jobs.

The Need for the Current Study

Although there has been a dramatic decrease in the number of felony related law enforcement officer deaths since the 1970’s, there are still a number of officers lost due to criminal homicides (Fridell & Pate, 2001). Between 1983 and 1992 on average in the United States 71 law enforcement officers were murdered in the line of duty (King & Sanders, 1995). In the early 1990’s officers were still being lost at a rate of 60-75 per

year (Fridell & Pate, 2001). This study will explore the structural approach to assessing law enforcement officer deaths relating to these officers' deaths between the years of 1995 and 1999. It is apparent that much of the research conducted on law enforcement officer deaths is lacking in some form or another (King & Sanders, 1997).

While it has been clearly established that situational factors and circumstances have contributed to law enforcement officer deaths, this type of work has one main criticism - lacking a theoretical framework. This study will explore causation of law enforcement officer deaths from a structural approach, based on previous studies conducted. The analysis from a structural standpoint has been chosen to assess deaths, as it will allow for a more deductive (or theoretical) understanding of these deaths from a social/structural approach, before more inductive (or data driven) perspectives of law enforcement officer deaths from a circumstantial perspective can be explored. This framework will follow a structural model previously employed by Chamlin (1989) in his review of law enforcement officer deaths from a structural perspective. Chamlin used a framework that is based on the broader conflict theory perspective, more directly the economic threat hypothesis and the racial threat hypothesis. These two hypotheses have been adopted as the primary focus of the study based on previous studies conducted using the structural approach, suggesting that if there are higher levels of poverty and members of minority groups that greater social conflict exists. Thus with increased levels of poverty and minority groups there could be an increase in the negative interactions between law enforcement officers and citizens, with the end result showing an increase in the number of law enforcement officer deaths across the United States.

Since 1945, the FBI has been looking at line of duty deaths of law enforcement officers. They have consistently gathered information and expanded their collection of data on officer's deaths, resulting in the publication of annual reports on Law Enforcement Officers Killed and Assaulted. These reports continue to assess a number of dynamics, factors and circumstances, and reasons for the death of law enforcement officers across the United States.

In essence, the FBI attempts on a yearly basis, in their Law Enforcement Officers Killed and Assaulted Reports, to look at what is referred to as a 'deadly mix'¹ (Henry, 2004). In exploring this "deadly mix" a 1992 study was conducted by the FBI entitled *Killed in the Line of Duty: A Study of Selected Felonious Killings of Law Enforcement Officers*. This particular study looked at the circumstances, such as officer personality types and characteristics of offenders, all attempt to make an assessment of reasons for law enforcement officer deaths.

In the literature there are four major categories of studies conducted on law enforcement officer death. Macro-social studies, which explore the social and theoretical aspects of law enforcement officer death, related to community and structural foundations. Second, studies conducted on the characteristics of slain officers, looking at the activities they were involved with at the time of their death. Third, the characteristics of the offenders who have committed these police homicides (King & Sanders, 1997). Fourth, research conducted on the social-psychological aspects of law enforcement officer death. These studies attempt to measure the impact on officers who have survived

¹ A deadly mix is the combination of situational factors, and circumstances, coupled with two or more individual's involvement that subsequently leads to the death of an officer(s).

death encounters, and the psychological ramifications that it has on the victim officer's families and co-workers.

In identifying these different types of studies, it is also important to understand the limitations present with each unique approach. First, we see that the findings at this aggregate level are rarely tied to a theoretical framework (Chamlin, 1989). There are only a few exceptions to this rule with regards to studies conducted on law enforcement officer homicides. Lester conducted research on law enforcement officer deaths, and his findings are useful in support of the subculture of violence theory (specifically in the American South). Chamlin (1989), Bailey and Peterson (1987), and Peterson and Bailey (1988) all suggest that their findings show support for conflict theory and its explanation of variation in police homicide rates. Second, there is sometimes difficulty establishing causation due to the lack of advanced statistical methods, however significant correlations of the data can provide some interesting results and provide a guide for advancing study of law enforcement officer deaths in more directed areas (King & Sanders, 1997). Finally, with any approach, which does not employ advanced statistical methods, it must be noted that there is little predictable power associated with the analyses (King & Sanders, 1997). While this is true of any type of analysis which omits predictable power, in any field, it is important to note that for the purposes of this study, this can be overcome by using population data when studying law enforcement officer deaths from the structural perspective (King & Sanders, 1997).

When looking at most of the research related to the characteristics of slain officers, two patterns emerge. One is an effort to look at individual officer characteristics – in an attempt to predict a personality type or trait of victim officers; the second is to

identify specific circumstances under which the officer was murdered. An example of this is the annual reports produced by the FBI on Law Enforcement Officers Killed and Assaulted (King & Sanders, 1997). Further examples of studies that used descriptive statistics to “isolate a ‘typical’ victim officer” (King & Sanders, 1997: 395) are those conducted by the likes of Cardarelli (1968), Chapman (1976; 1986), and Wilbanks (1994). The results of these studies support the same findings. The victim law enforcement officers are younger, white males (King & Sanders, 1997). Margarita (1980) indicates in her critique of these studies that they fail to include groups of comparison between law enforcement officers that are murdered and officers that are not victims of homicide. As well, she claims that “superficial individual measures, such as age and race” will likely not separate the traits of non-murdered officers with victim officers (King & Sanders, 1997: 396). In essence without a comparison between victim officers and non-victim officers on these demographic issues, how do we know if there is something significant being measured? The answer is we don’t. The value of these studies in their entirety is to provide agencies and society with an assessment of law enforcement officer deaths, and potentially identify trends or patterns in the data collected to aid or make recommendations for policy and training practices, only if those patterns become present. In addition to the individual characteristics of the officers, there are a number of studies that try to assess the circumstances and tasks each victim officer was performing when murdered. The problem with these types of studies is comparison, however no study has been conducted that explores such comparisons, beyond looking at individual departments or cities; and again the focus of these studies is mainly assessment driven (King & Sanders, 1997). How are we to know if the activities are not just typical

activities that police officers conduct on a daily basis? “Without rates showing what all officers do and the types of calls they regularly respond to, it is not possible to tell if some incidents are more deadly” or dangerous (King & Sanders, 1997: 396). Again by not comparing data to daily activities like calls for service, or interactions (accounting for all police-citizen interactions), we are left with appealing but inconclusive findings. While the critique of these studies may be valid to some, the existence of literature and studies surrounding these issues has never been completed. The call then is for more research in this area, addressing the limitations of the literature that presently exists. The data has been collected and compiled but no researcher has attempted to design a study that would yield more profound results.

Third, when reviewing studies conducted on line of duty deaths, we see a trend to study characteristics of offenders. Like the studies conducted on individual officer characteristics, the data generated from these studies is descriptive in nature and focuses on what a ‘typical’ offender is like (King & Sanders, 1997). How is it known if offenders who murder police are different from offenders who don’t? The answer is simply we don’t. We do not know because no one has assessed the data from an approach to gain a stronger level of knowledge about this subject. As with individual law enforcement officer characteristic based research, these studies in existence on offender characteristics form only assessments, looking for patterns or trends in the data. Other studies attempt to look at what motivates offenders. Margarita (1980) suggests that offenders who murder officers are not motivated to kill, but rather to escape their captors for fear of injury or arrest, with similar findings by Cardarelli (1968) and Chapman (1976). What is not known, Margarita (1980) points out, is whether officers are murdered in most cases,

because an assault on a police officer escalated out of control or whether there is indeed intent to kill on the part of the offender. Until a study is conducted to explore this issue – we are left only with speculation (King & Sanders, 1997).

Finally, the last portion of studies is conducted on the social-psychological aspect of law enforcement officer death. These studies and memoirs of surviving officers offer a unique perspective on what each individual officer faced at the time of their own incident or what the victims family faced following the death of their loved one. They are merely paradigms that explore human behavior and the factors that contribute to that behavior (Henry, 2004). While they offer much insight into individual encounters, as a whole they do not provide decisive theoretical frameworks, or offer solutions to the general population of law enforcement officers and trainers, or suggest policies that can reduce law enforcement officer deaths. The benefit to these studies is that they provide valuable experiential knowledge. This knowledge can be potentially applied to the field, and the information serves as training or learning tools for law enforcement officers in the field and on the street.

It is also imperative to note that studies have been conducted on individual officer characteristics; comparing different types of occupations to that of law enforcement, the type of weapon used in the murder and assault of police personnel, the nature of the call, the type of officer (state troopers), the geographic region, and many more. The gaps or limitations of this work are not so much a critique as a form of identifying the lack of research conducted in this area of study. Again a more deductive approach will be used for this study, assessing law enforcement officer deaths from a structural perspective,

which has been determined as a body of research on law enforcement officer deaths that is understudied and lacking in the literature.

This study will attempt to explore law enforcement officer deaths in an attempt to close some of the gap of research in this area. Using the conflict model perspective as previously stated, a structural analysis of law enforcement officer deaths will be completed. While the conflict and structural approach has been used in previous studies, no studies have sought to assess law enforcement officer deaths in the late 1990's – specifically between the years of 1995-1999. A correlation and regression analysis of law enforcement officer deaths between the years of 1995 and 1999 will be conducted, comparing the relationship of law enforcement officer deaths (at the state level), to that of the designated variables associated as measures of social conflict. The unit of analysis will be states in the United States, because individual law enforcement officer deaths will not be explored, but rather the variation of law enforcement officer deaths between states. Preliminary assessment of the number of law enforcement officer deaths has indicated that several states have few to no officer deaths across all five years.²

Therefore an assessment of all states that have law enforcement officer deaths in each of the years, 1995 –1999 and an average of all years combined will be the focus of analysis. The structural variables used will include measures of social conflict as outlined in the previous study of Chamlin's (1989) work. Those structural variables include threat variables, and crime related variables. The threat variables will include the percent poverty for each state per year, and the percent minority for each state per year. The crime related variable of number of index crimes per state per year, and the arrest

rate per state per year (Chamlin, 1989; Peterson & Bailey, 1988). All are identifiable measures of threatening groups in the literature.

This study will combine the methods of macro-social exploration, with a study of data collected by the FBI from 1995 to 1999 at a national level. While it is virtually impossible to correct all of the methodological issues already present in previous studies, it is desired that many of the methodological issues be addressed, (the limitations of this study will be explored in detail in Chapter 6). With the merging of theory and an analysis of law enforcement officer deaths, and the inclusion of all cases (entire population) of law enforcement officer deaths between the years of 1995 and 1999; it is anticipated that an assessment of the threat hypotheses compared to the officer death rate will yield relationships. As well, it will suggest future directions for research of law enforcement officer deaths. The use of multivariate analysis is especially important because it allows for the measure of sociodemographic variables with regards to law enforcement officer deaths (Chamlin, 1989). The theoretical approach to be used as a guiding framework will come from conflict theory – but more specifically the based on the work of Chamlin (1989). Chamlin (1989) used this approach to explore law enforcement officer deaths in the early 1980's, specifically looking at an economic and racial threat hypotheses and their relationship to law enforcement officer death rate.

² Because the end result is to measure the variation between states, a preliminary assessment of the data (Table 1), makes it clear that there are states with very few law enforcement officer deaths. Across all five years, it is apparent that there are many states with few and or no officer deaths in one or more years.

CHAPTER II

RESEARCH ON LAW ENFORCEMENT OFFICER DEATHS

The choices of perspectives from which to view this study are based on the four main categories reviewed in chapter 1. To reiterate, the macro-social approach is constructed of theoretical perspectives looking to explain law enforcement officer deaths. There are also studies that focus on the individual characteristics of officers and offenders respectively. This research attempts to determine what the 'typical' officer victim and the 'typical' offender. Finally there is a general literature base on the social psychological perspectives of law enforcement officer deaths. This body of knowledge explores the survival standpoint of law enforcement officers who have survived a death encounter, law enforcement officers who have known victim officers, and the families of law enforcement officer victims; most of which use a symbolic interactionist perspective.

Some of the limitations with these three perspectives are that (with the exception of the macro approach) they tend to be atheoretical in nature. The research on law enforcement officer deaths have primarily focused on the situational aspects of officers killed in the line of duty (Chapman, 1986; Geller, 1981; Margarita, 1980). This research has focused primarily on the on the descriptive nature of these acts – omitting the use of a theoretical model for analysis of law enforcement officer homicides. For the purpose of this study, a more encompassing approach using a structural model based on social conflict theory, specifically the economic and racial threat hypotheses will be used. This approach will attempt merge the macro-social approach with nationally collected population data on law enforcement officer deaths at the state level, between 1995 and

1999, to explore a more theoretical foundation to explaining law enforcement officer deaths. Thus it is intended that this study will contribute to the small literature base initiated in the studies conducted by Bailey and Peterson (1987), Peterson and Bailey (1988), and Chamlin (1989), moving beyond the narrow scope of literature that currently exists on law enforcement officer deaths, and exploring these deaths from a structural perspective.

A Brief History of Research on Law Enforcement Officer Deaths

Since the late 1960's, with increasing social change, the movement towards a more "professional" style of policing has been considered. In 1967, the President's Commission on Law Enforcement and Administration of Justice released a report that dealt with the issue of requirements in officer training. The Commission articulated that increased education and skills should substantially improve the effectiveness of officers in the field and lower their risks of being injured or killed in commission of their job. This recommendation was based on the difficulty and increasing number of tasks and risks that law enforcement officers must perform in their occupation. The Commission on Law Enforcement and Administration of Justice, (a product of the reform era of law enforcement), mainly identified the need for officers to invoke the "pyramid of control... [in which] police officers enforced the law" (Kelling et al., 1988: 6).

The Police Executive Research Forum (PERF) reiterated many of the President's Commission's findings in a 1988 study of law enforcement. It placed a high emphasis on education for law enforcement officers and reviewed numerous concerns of many police

executives. This is where the formation of new circumstances and risks associated with social control were first identified, however no specific suggestions were given.

In 1992, the FBI conducted a study, *Killed in the Line of Duty*, to look more specifically at law enforcement officer deaths, recognizing the limitations of their previous annual reports of *Law Enforcement Officers Killed and Assaulted*. In this three-year study they explored 50 distinct cases of law enforcement officer death, looking at specific circumstances, which had led to these officers' demise in what has been termed a "deadly mix" (Pinizzotto & Davis: 1995, 9).

What is clear in these examples is that while much of the literature explores what has happened in policing, with recommendations for reform, very little research done by these persons and entities reflects the deeper sociological and criminological ramifications of law enforcement officer deaths. What the risks and affects are of working in law enforcement, and what results from working in a death-work occupation, and most importantly why officers are killed. The focus of these studies instead has been to provide an assessment of what is actually happening, accounting for law enforcement officer deaths, and recording the situations under which they occur.

In a study entitled "Killing the police: Myths and motives," Margarita (1980) identifies that police officers (in New York City) are killed in situations contrary to public opinion.

Contrary to popular opinion, police are not often killed during domestic disturbances nor are they the seemingly senseless victims of madmen or lunatics. Rather, police are more likely to be killed by rational robbers fleeing the scene of a crime, who routinely use potentially lethal weapons as "tools of the trade" (63).

"Each year a number of law enforcement officers lose their lives while safeguarding our society from violence and disorder" (Department of Justice, 1992: 1).

Although there has been a decline in the number of law enforcement officer deaths in recent years, each individual that dies while protecting their community leaves behind devastation (Department of Justice, 1992). While the victim's families are the most directly affected, there are also "those fellow officers who are made starkly aware of the extremely hazardous nature of their profession and their vulnerability as they go about their daily duties" (Department of Justice, 1992: 1).

"The police occupation is commonly portrayed by the media and police fiction as being dangerous, where officers are constantly confronted with the real threat of assault and murder" (Brandl, 1996: 255). While Kappeler et al. (1993) are among those who have questioned the portrayal of policing as dangerous; others have concluded that law enforcement as an occupation is filled with risks (Fridell & Pate, 1993: 589). Lester (1984) among others has assessed certain "job tasks" as dangerous.

The studies that draw conclusions about the dangers of the occupation have most often analyzed police assaults (Meyer et al., 1981; Uchida, Brooks, and Kopers, 1987; Hirschel, Dean, and Lumb, 1994) and homicides (e.g., Konstantin, 1984; Lester, 1984; Cardarelli, 1968) (Brandl, 1996: 255, cited in Shewbart, 1997: 4)

These studies have found that law enforcement officers are at lower risk than those employed in other types of occupations; and these studies have determined that there are certain tasks such as investigating a suspicious person that contain a higher risk than other tasks such as transporting suspects (FBI, 1992). Policing as an occupation of danger is not the only occupation that has been studied in terms of risk and danger. "Studies have examined the dangers of construction work (Sorock et al., 1993), coal mining (Goodman & Garber, 1988), nursing (Feldstein et al., 1993), industrial work (Zohar, 1980), and firefighting (Woodruff et al., 1993) among others" (Brandl, 1996: 255, cited in Shewbart, 1997:3). These studies however have often looked at the

dangers/risks associated with accidents on the job. In defining law enforcement as dangerous with respect to homicides, and omitting accidental deaths, there is a separation between law enforcement from other occupations. While there is a small literature base covering accidental deaths of officers, for the purposes of this study only feloniously killed law enforcement officer deaths will be explored, so the discussion of accidental law enforcement officer deaths will end here.

Approaches to Studying Law Enforcement Officer Deaths

As previously stated there are four main approaches to studying law enforcement officer deaths. The issue is that in very few studies or researchers attempted to combine theory and deaths, and of those, even fewer have even attempted research in looking at law enforcement officer deaths from a macro-social (structural) perspective. Still beyond that, no one study has been conducted to look at combining a theoretical perspective with situational data at a national level. The purpose of this preliminary study is to begin to fill this gap in the literature by assessing the use of the macro-social approach inclusive of both the threat hypotheses in the analysis.

Studies Using the Social Psychological Approach

Another body of literature exists on law enforcement officer deaths at the macro-social level. Although it is not fundamentally used to explore the causation of law enforcement officer deaths, but rather the effects of a law enforcement officer's death on other officers, the department, their family and society as a whole. The social psychological approach is used in this literature of law enforcement officer deaths and it draws mainly

from the formative symbolic paradigm. There is a distinct representation in the literature that looks at law enforcement officer deaths from the survival or survivor's perspective (whether it is the own officers' survival, other surviving officers or the slain officers' family and friends). It is suggested, "paradigms influence thinking in the social sciences, providing a general point of view about human nature and the factors that shape human behavior" from this perspective (Henry, 2004: 46).

When exploring felonious law enforcement officer deaths it is apparent that there are several individual and situational variables that exist in each deadly encounter when using this perspective (Henry, 2004). In reviewing the literature of law enforcement officer deaths from the social psychological approach, we are led to the symbolic interactionist perspective, including the "shared themes approach" derived from the work of Robert Jay Lifton.³ Furthermore, "Paradigms (in this research) provide the conceptual and operational tools social scientists use to excavate and make sense of knowledge," specifically from this survivor perspective in the literature of law enforcement officers deaths (Henry, 2004: 46).

The need for paradigms in this type of research is clearly outlined in Lifton's work. Robert Jay Lifton is known in the literature for his studies conducted on the "psychology of survival." In using his formative symbolic paradigm, Lifton (1967) developed this "paradigm and perspective in his studies of survivors – individuals and groups that have had profound encounters with death in some physical or psychological way" (Henry, 2004: 479). It has been used to explore the holocausts, events experienced by individuals, to explore the psycho-historical significance of these events, and more

recently applied to law enforcement officer deaths. This paradigm is supported by the work of Kuhn, who “used the term to describe how a specific set of organizing principles, concepts, definitions, ideas, and assumptions about physical phenomena shape the way scientists make sense of the world” (Henry, 2004: 46).

The psychology of survival is an appropriate model to use to explore and inform the basic principles of law enforcement officer death from a survival perspective, in that it has already been used to successfully explore death in other occupations (Lesy, 1987). The fact that “studies of human responses to death exposures have historically been stifled by a kind of orthodoxy or denial, practically demands that we break free of these paradigmatic bonds,” that is necessary to look freshly at the meaning of death in law enforcement (Henry, 2004: 47).

Henry (2004) has conducted a study on law enforcement officer deaths and survivors of death experiences, which uses Lifton’s survival perspective. In his most recent book, *Death Work*, Henry discusses the overall social psychological effects of being a survivor of a death experience. He looks specifically at law enforcement officers who have survived a ‘deadly mix’ situation, the effects of an officer death on fellow officers and the impact of an officers death on the family of a fallen officer; focusing specifically on law enforcement officers deaths.

Klinger (2004) has conducted similar work from the symbolic paradigm in his text entitled *Into the Kill Zone*. He discusses at length the effects of surviving a “deadly mix” situation, drawing conclusions about his own experiences as a law enforcement officer. Specifically, Klinger addresses what it is like to use lethal force against another

³ The shared themes approach is “A number of paradigms operating in the social sciences provide useful insights into human death, but only Lifton’s is organized around the principles of death and the continuity

individual. (See Appendix A for additional information regarding the social psychological approach to law enforcement officer deaths.)

Studies of Individual Characteristics of Officers

In moving beyond the macro-social and social psychological approaches, another body of research that addresses law enforcement officer deaths can be identified. This literature focuses on the individual characteristics of law enforcement officers who have been killed in the line of duty, with the primary source of this data stemming from studies and reports conducted by the FBI. This type of research is generally descriptive in nature and normally explores the “typical” victim officer’s characteristics – gender, ethnicity, and age (King & Sanders, 1997).

In assessing the reports conducted by the FBI, it is clear that few significant findings have been drawn with varying results. Some of these reports indicate law enforcement officer deaths may have been a product of “job satisfaction” or even the product of a “mistake” on the part of the officer (King & Sanders, 1997).

One of the more practically applied studies has been the study that has looked at particular calls for service linked with law enforcement officer deaths. For example, in 1986, Garner and Clemmer explored officer death in relationship to domestic violence. Until this study, the danger to police in domestic disturbances had been overstated (Shewbart, 1997). A more in-depth analysis of the “disturbance” category of the Uniform Crime Reports data indicated that prior to 1982, a majority of the calls for service by police fell into this disturbance category. While the disturbance category included family members fighting and intimate violence, it also included bar fights, a gang related class

of life” (Henry, 2004, p.47)

and persons with weapons (Shewbart, 1997). As a result, the FBI reclassified the “disturbance” category in 1982, to separate calls for service into two categories – domestic disturbances and general disturbances (Garner & Clemmer, 1986).

As stated one of the primary sources of these types of studies is the data collected and research conducted by FBI. The FBI annually compiles descriptive statistics in their *Law Enforcement Officers Killed and Assaulted* reports, in which they identify victim officer characteristics and situational factors (such as calls for service and circumstances under which law enforcement officers were killed), all relating to law enforcement officer deaths. These reports describe the events of each law enforcement officer’s death, and are used to report general national findings. They also are well known for their 1992 study – *Killed in the Line of Duty*.

A Review of the *Killed in the Line of Duty* Study

The 1992 study conducted by the FBI entitled *Killed in the Line of Duty* has been recognized as one of the most defining studies conducted on law enforcement death in the 1990’s. This study is widely cited in recent literature exploring law enforcement officer deaths. Numerous studies that have recognized the importance of this 1992 report by the FBI because of its uniqueness and attempt to draw more pertinent conclusions about law enforcement officer death, but most do this without identifying the limitations that were present in the study. The *Killed in the Line of Duty* study offers research and a literature base of law enforcement officer deaths. It is for this reason that the following critique is offered to the study as a way to provide context for the reader.

In completing the 1992 study, the FBI challenged the mainstream efforts of law enforcement research, and tried to move beyond the basic demographic and inventory research conducted about law enforcement officer deaths. In looking at the data between 1975 and 1983 the FBI sought to review the deaths of 54 officers, in 51 incidents, involving 50 offenders. The actual sample used 51 officers out of the numerous officers actually murdered. The FBI attempted to look at three main factors relating to officer homicide through interviews with the 50 offenders who had been involved with the officer's deaths in an attempt to measure a personality type of those offenders. The FBI also interviewed the offenders and other officers who knew the victim officers, about the incident in which the homicides occurred. And finally, interviews with co-workers of the fallen law enforcement officers were conducted to better understand the personality traits or behavior of the officers who were murdered (King & Sanders, 1995).

What the FBI found was that the offenders, who were interviewed, exhibited antisocial and dependent behavior. Further, the interview conducted on fellow co-workers and the offenders indicated that the slain officers exhibited similar forms of behavior – that they had similar personality traits. It was suggested in the study that the victim officers were easy-going, community oriented, and reluctant to follow the rules. The FBI also claimed that the fallen officers exhibited decreased work performance prior to their murder. Finally, the FBI found that of the 54 officers murdered, only two had preformed their duties without mistakes of procedure (King & Sanders, 1995).

The end results of 1992 study by the FBI had mixed results with methodological issues and appealing results, but with little evidence according to King and Sanders (1997). They discovered that there were significant results regarding the offenders,

victims and situations in each death encounter. The identified problems with the *1992 Killed in the Line of Duty* study included sampling selection bias, sampling frame issues, and inconclusive results about law enforcement officer personality traits, law enforcement officer work performance, and offender characteristics. This study did however offer insightful information about the specific cases reviewed, and this could provide an approach or preliminary study for researchers wishing to explore law enforcement officer deaths from this type of perspective.

The use of the FBI's data on law enforcement officer deaths is clear in the literature. Several studies have been conducted looking at issues from domestic violence, to accidental deaths of officers, to assessing situations of potential risk to the law enforcement officers in the field. It was clear that until the 1992 FBI study, no attempt had been made to integrate the officers and offenders characteristics with the factors that led to the "deadly mix" scenarios resulting in each officer's death. Even beyond this, no attempt has been made even yet, to assess nationally and more completely these same factors or link them with a theoretical explanation.

Other studies have been conducted that explore law enforcement officer deaths using individual characteristics of officers beyond the FBI's research. These studies try to isolate, in a descriptive nature, the 'typical' victim officer's characteristics (Cardarelli, 1968; Chapman, 1976; Wilbanks, 1994). These studies all indicate similar results, and the findings across the board specify, "that younger, white male officers are most often victims of murder in the line of duty" (King & Sanders, 1997: 396).

This research then begins to identify a trend in law enforcement officer deaths, but it does little to offer concrete explanations for law enforcement officer deaths, or

make recommendations for reforms to protect law enforcement officers in the line of duty. From a positive perspective, these types of studies have indicated some areas (such as domestic violence and arrest situations) where law enforcement officers should use more caution, identifying possible trend situations under which law enforcement officers have a potentially higher level of risk. Using the 1992 FBI study as an example while the studies on individual officer characteristics suggest potential indicators for law enforcement officers at risk, minimal conclusions can be drawn over time as to how and why officers are killed.

Similar to these types of studies are studies conducted on situational factors relating to law enforcement officer deaths. Labeling and distinguishing the types of activities, calls for service, time of day, agency type, and type of murder weapon, have all been explored descriptively to tabulate and analyze situations in which officers have been murdered. (This is often used in conjunction with studies conducted on victim law enforcement officer characteristics) (Cardarelli, 1968; Chapman, 1976, 1986; Creamer and Robin, 1968; FBI, 1992; Konstantin, 1984; Wilbanks, 1994).

Again all of these studies have similar conclusions, indicating situations that are more likely to correlate with a law enforcement officer's death. Fridell and Pate (1993) criticize these studies for failing to base their results on baseline rates. They indicate that without rates showing what activities officers regularly participate in and what calls officers regularly respond to, it is difficult to indicate whether certain incidents are more deadly because of their frequency or because they are inherently dangerous (see also King & Sanders, 1997). While this is a valid critique it reiterates the need for more studies in this area and calls for more longitudinal or more complete studies of law

enforcement officer deaths from this perspective. Konstantin (1984) found that law enforcement officers are killed more frequently in encounters with civilians that the officer's initiate as opposed to civilian initiated interactions. What is interesting about this finding is that most interactions are citizen initiated according to Reiss (1971), which indicates that there is something inherently dangerous about police initiated interactions (King & Sanders, 1997).

Studies on Offender Characteristics

Based on a similar philosophy are the studies conducted on individual officer characteristics, studies have been conducted to attempt to distinguish characteristics of a "cop-killer." Much like to studies of officer's characteristics, these studies of offenders use descriptive statistics to typify individuals most likely to assault and murder police officers (Cardarelli, 1968; Chapman, 1976; FBI, 1992). The same limitations exist with these offender studies as with the studies conducted on officers. The lack of a comparison group in the analysis of these studies, which would distinguish between those who kill law enforcement officers and those who don't, under similar circumstances, fails to exist (King & Sanders, 1997). As with individual officer characteristics studies, there is indeed a gap in the literature indicating that research needs to be conducted to address these aforementioned concerns; however boldly critiquing the current material is fruitless if no attempts to measure the data with regards to these limitations has been conducted.

Aside from the basic characteristics of offenders and offender typologies, other studies have been conducted to attempt to delineate motivations of offenders who kill law enforcement officers. In a study conducted in New York City on law enforcement

officers killed between 1844 and 1978, Margarita (1980) discovered that most offenders killed law enforcement officers to avoid arrest or injury. In 63 percent of the cases, Margarita (1980) concluded, “most offenders who kill law enforcement officers are rational people who are attempting to avoid capture” (63; see also King & Sanders, 1997). These results were also found in studies conducted by Chapman (1976) and Cardarelli (1968). Studies conducted by Lester (1987), Chapman (1979), and Toch (1969) look at the motives of individuals who assault law enforcement officers. Both Margarita (1980) and King and Sanders (1997) note that no research has been conducted to distinguish between individuals who assault law enforcement officers and those who kill law enforcement officers, indicating that they cannot be lumped together as having the same motives without further research.

While the motivation of the offenders who kill law enforcement officers is important, again little consensus over time has been made as to why individuals kill law enforcement officers. An analysis of these studies by King and Sanders (1997) indicates that it is difficult to appraise the motivations of offenders in relation to law enforcement officer deaths because no assessment and comparison (or study) has been made between offenders who escalate to murder, and those who assault and do not murder law enforcement officers (see also Margarita, 1980). This study will attempt to look at motivation on a broader scope in assessing the validity of the threat hypotheses, indicating if there is a relationship between law enforcement officer death rate and the economic and racial threat hypotheses.

Macro-Social Studies of Law Enforcement Officer Deaths

Even fewer researchers have attempted to find an explanation for law enforcement officer deaths by looking at the community and structural factors that have impacted law enforcement officer deaths. This literature attempts to draw a correlation between aggregate social characteristics of a geographic region and the death rate of law enforcement officers (King & Sanders, 1997). These studies include works by Cardarelli (1968), Hackler and Janssen (1985), Lester (1978a, 1978b, 1984, 1985, 1987), Lester and Zunno (1980), and Young (1990).

Cardarelli (1968) explored law enforcement officer deaths between the years of 1961 and 1963. He looked at whether or not law enforcement officer's deaths related to the general homicide rate in four different regions of the country, and the population density. Cardarelli found that there was a positive correlation between law enforcement officer deaths in 1961 and 1963 and the general homicide rate and population density in that time frame.

Lester's (1978, 1980, 1984) work has found several correlations between structural factors and law enforcement officer deaths in the United States. Lester looked at:

the southern location of a state on the continent, the percent of states residents who voted for Nixon in 1970, percent black residents, number of civilians killed by police, and the general homicide rate (King & Sanders, 1997: 394).

Lester's studies that focused on larger U.S. cities, explored linkages between law enforcement officer deaths and the black population, the poverty rate, the southern location of the city, the gun density, the murder rate, and the crime index. What others have questioned in Lester's work is the relevance of some of his findings, relating it

directly to a theoretical context. Some have noted his lack of a theoretical framework for the selection of his structural factors in social theory, but he is addressed here for his pioneering of an area of study virtually left unexplored.

More common in the past two decades is research that attempts to examine law enforcement officer deaths at a more structural level and apply them to a theoretical framework (Bailey & Peterson, 1987; Chamlin, 1989). “This research indicates that social factors and measure of conflict theory, such as percent poor and percent non-white were significant predictors of police homicides” (King & Sanders, 1997: 395). Peterson and Bailey (1988) attempted to draw more significant comparisons between law enforcement officer homicides, structural influences, and general homicide models. This study moves beyond King and Sanders’ 1987 study, which used states as a unit of analysis, but failed to ground their selection of structural predictors in social theory, rather selecting their predictors from previous studies conducted by Lester.

In their 1988 study, Peterson and Bailey looked specifically at how cultural, economic, and sociodemographic forces and factors within these general homicide models link to law enforcement officer deaths. They examined 50 states annually for the period between 1977 and 1984, and found partial support for the thesis of structural similarities between lethal assaults against police and general homicide. This study attempted to shed light on the structural determinants of law enforcement officer killings by examining yearly state-level officer homicide rates in relationship to social and economic factors indicated by the general homicide literature. The goal of this research was to determine if law enforcement officer deaths had similar influencing factors associated with them, as those of general homicide. They explored the sociocultural and

demographics forces and factors associated with general homicide, comparing those deaths to law enforcement officer deaths. They tied much of this work to levels of deprivation (percent poverty) and social integration or disorganization (divorce rate), assessing the hypothesis of whether or not law enforcement homicide rates were parallel with the larger homicide problem. To accomplish this, Peterson and Bailey (1988) used indicators often associated with general homicide including:

divorce rate (a known indicator of social integration or social disorganization), percent black population, region of the country, percentage of families below the poverty line, the general level of income inequality, the level of racial income inequality between whites and blacks, and the percent metropolitan population (218).

Peterson and Bailey (1988) found, using bivariate and regression analysis, that general homicides of civilians are associated significantly with economic and race indicators, but not law enforcement officer deaths. Further, they suggest findings that indicate that “neither civilian nor police homicides are influenced significantly by racial income inequality or region” (Peterson & Bailey, 1988: 207). They did however suggest that despite the overall variation in the two different types of homicide that support exists for a hypothesis of law enforcement officer deaths at a structural level.

Chamlin (1989) asserts that there is a foundation for constructing a hypothesis of law enforcement officer deaths from a conflict theoretical approach. He uses this perspective, citing one of the weaknesses of previous studies conducted on law enforcement officer deaths as a theoretical approach. “Until recently the selection of structural variables for inclusion into a number of analyses of the killing of police officers have been a theoretical” (Chamlin, 1989: 353). Chamlin cites the work of Lester (1978a) and an earlier study conducted by Bailey and Peterson (1987), but again these studies have omitted the use of a theoretical application. He further states that “[t]o date I have

been able to locate two multivariate analyses of police killings,” indicating the two studies conducted by Bailey and Peterson (1987; 1988), (Chamlin, 1989: 354). Chamlin also asserted the need for this type of research in his work.

In his 1989 study, Chamlin sought to draw on the conflict theory of crime control. He indicates that this conflict theory approach identifies additional social conditions that are likely to heighten conflict between civilians and law enforcement personnel.

Drawing on the concepts outlined in general conflict theory (Blalock, 1967; Quinney, 1970; Turk, 1969), Chamlin contended that racial and economic minorities are perceived as threatening to dominant groups and strata. “Presumably, powerful groups and strata are able to translate their perceptions of threat into public policy and thereby affect the size and administration of the crime control apparatuses” (Chamlin, 1989: 355). Chamlin refers to these as the economic and racial threat hypotheses. He further hypothesized that when increases in the population of these two “threat” groups occurs then the level of conflict between crime control agents and civilians will increase. “Increased levels of antagonism are predicted to make police-citizen encounters more volatile and thereby increase the rate of police killings” (Chamlin, 1989: 357).

Chamlin conducted his study using indicators to assess law enforcement officer death across all 50 states (which had considerable variation in the number of incidents per state). His variables included the:

police killing rate (averaged over 3 years at a rate per 1000), threat variables (percent below the poverty rate, economic inequality, the percentage of blacks, and the percentage of those with Hispanic surnames, crime related variables (total arrest rate and total index crime rate) and an additional control variable (divorce rate) (Chamlin, 1989: 357).

Using bivariate and OLS regression analysis, Chamlin concluded that his predictions regarding the two ‘threat hypotheses’ were correct, and that economic and

racial predictors show a significant correlation with law enforcement officer deaths.

Subsequently he found that the composite measure of the racial and economic variables has a direct effect on the police-killing rate. Chamlin's theoretical framework will be discussed further in Chapter 3.

Much of the literature surrounding the application of macro-social approaches to the phenomenon of law enforcement officer deaths has been explored pertaining to structural factors. However, with very few exceptions, this work is primarily exploratory. In most cases these studies lack guiding theoretical approach, and are complicated by the rarity of police homicides. Also noted is the general lack of research in this area of study, and the repetition in which the few studies that do exist, are recognized in the literature.

CHAPTER III

CONFLICT THEORY AND LAW ENFORCEMENT OFFICER DEATHS FROM A STRUCTURAL PERSPECTIVE

A Brief Historical Review of Structural Crime Research

The structural factors of crime rates in general have a varied history. Much of what has been studied with regards to the structural forces of general homicide and crime rates has been based to some degree on the work of Shaw and McKay and their Chicago School approach. Initially Shaw and McKay (1931) looked at structure (ecological variables) and crime rates as they related to the evolution and growth of communities. Furthering their work in 1942, Shaw and McKay laid the groundwork for their theory of social disorganization. They argued that delinquency is transmitted socially in areas of disorganization in communities, with the focus mainly on economic status. This argument was supported in the 1970's by the work of Kornhauser (1978) who explored a similar relationship between economic variables and delinquency crime rates (Shewbart, 1997).

A pattern in the literature suggests that many individuals have used structural level theories to explain relationships among members of society and the crime rate. Baldwin (1979) and Kornhauser (1978) are among several of these theorists, with Kornhauser suggesting that the two greatest indicators of crime are poverty and racial composition. "Among the most frequently used ecological indicators are percent nonwhite, proportion of youthful offenders, crowded housing, mobility, and structural density" (Shewbart, 1997: 4). The ecological fallacy will be discussed in Chapter 6.

In Lester's (1978a) work, these economic predictors have been applied to study general homicide rates using a structural approach. Lester (1978a) explored structural factors such as violent crime rate, higher proportion of African Americans, and the number of citizens living below the poverty line and the political climate. Drawing on his conclusions, Lester suggested that structural factors he used are strong predictors of the general homicide rate (Shewbart, 1997).

Merton's (1938) work is also an example of how general crime has been studied with structural theory. Merton suggested that society blocks legitimate avenues to success for minorities. Most macro level theories are used to explain the causal process that motivates members of certain strata in society to disproportionately engage in crime (Chamlin & Cochran, 1997; Shewbart, 1997). Rosenfeld (1989) examined crime as a product of social disorganization as well. Shewbart (1997) argues that researchers should use the measures of urban crime rates, levels of racial inequality, and dependency on welfare to attempt to explain crime for the social level.

This study will draw on the work of Chamlin (1989) that conducted one of only two studies on law enforcement officer deaths based on this conflict perspective. Chamlin's model was chosen, as it is the only study to date that uses the structural perspective; examining both the economic and racial threat hypotheses. This study will examine the structural factors that precipitate a law enforcement officer being killed in a line of duty event. Chamlin's study was only the second study on law enforcement officer deaths to use the conflict approach, and has demonstrated the strongest theoretical approach thus far (limitations of this approach will be discussed in Chapter 6). Shewbart (1997) also identifies two main categories or structural factors in her New York study of

law enforcement officer deaths, which will be adopted as part of this study. She suggests that the first category focus on society at the economic level, including the percent living below the poverty level, and the percent minority (nationwide). The second category of factors includes arrest rates for index crimes. When looked at in conjunction with one another, it is anticipated that these structural factors explain the larger phenomenon of law enforcement officer deaths – with similar results to that of Shewbart (1997) and Chamlin (1989).

Conflict Theory

In viewing law enforcement officer deaths from this conflict perspective, it is clear that law enforcement officers are deemed to hold power in society as representatives of those in power from this standpoint. The conflict perspective indicates that, as representatives of the social elite, law enforcement officers are given power, the power to control members of society. Assaults on police are the result of their power, authority and control that the police have over minorities⁴ as representatives of the elite of society (Shewbart, 1997).

Marx (1969) believed that the upper strata of society impede social change because it has a negative influence on the labor force, and that the direct result of being unproductive in the labor force is the development of criminals (see also Shewbart, 1997). Also directly related to this is the size of the police forces and number of officers. “High crime rates increase the size of the police force and increases the power given to the police by the elite in society” (Shewbart, 1997: 16). In turn this power is then shifted

⁴ Minorities in this instance indicate all of those individuals who are under the authority of the law enforcement in society, but for the purpose of this study were are looking specifically at racial minorites.

against the minorities (or poor) and used to attempt to maintain the status quo. Sherman et al. (1989) suggests that on average there is 1 officer for every 500 Americans in the United States.

According to the work of Hirschi and Gottfredson (1990), increasing the number of visible law enforcement officers in fact does not decrease crime, but rather increases the amount of crime. Shewbart (1997) states that by increasing the number of officers in their police forces, both San Diego and Washington D.C (as examples) saw an increase in the overall crime rate in their respective cities.

Conflict occurs, drawing again on Merton's work, when two groups (undesirables and elites) in society have incompatible goals and compete for resources (Shewbart, 1997). Fisher (1993) indicated that when minority groups are competitive, they pose a threat to the social elite – even through the means of crime. Inherent in this interpretation is the struggle for power and authority, where the majority then strives for more social control, turning to law enforcement to maintain social control and enforce social order (Shewbart, 1997). These ideas have been critiqued for their tautological nature.

Liska (1993) defines social control as any structure, process, relationship or act that contributes to the social order – defining police as a bureaucracy of control. Chamlin and Cochran (1994) further Liska's work by defining the police as agents of the majority. Shewbart (1997) states, "[the] police are there to control the minority and protect the interests of the majority" (17). Chamlin and Cochran (1994) conclude that this control mechanism (the police) result in the physical assaults on law enforcement officers.

Margarita (1980) identifies one impetus for assaults on law enforcement officers as autonomy. She identifies that the offender resents the represented authority and power

of the officer and takes action against it (see also Shewbart, 1997). Fisher (1993) and Deutsch (1973) define an action such as this as “escalation”. These researchers indicate that conflict occurs when the majority or its representatives come into conflict with the activities and actions of the minority, and they become incompatible (see Shewbart, 1997). In these situations, when the minorities’ actions and activities are repressed or closed off by law enforcement officers (as representatives of the majority) escalation occurs. Escalation is the result and intergroup conflict occurs (Fisher, 1993). “High levels of destructive interaction take the form of riots and protests, while low levels can take the form of attacks on police and street crime” (Shewbart, 1997: 18). This type of escalation is known as “protracted social conflict.” Azar (1983) defines protracted social conflict as entrenched detestation and aggressive interaction between racial, religious, cultural or ethnic groups that extends over a period of time with erratic outbreaks of violence (e.g. street crime), focusing upon the majority power structure (see also Shewbart, 1997).

Drawing from this ideology, Taylor and McKirnan (1984) created the “Five Stage Model of Intergroup Relations,” which suggests a pattern for intergroup relations and conflict (see Table 1). It assumes that there are two distinct groups in society- a majority with influence, power and authority, and the minority that lacks influence, power and authority. When these two groups’ desires are incompatible, the minority group tries to implement a movement to enact change (e.g. street crime). When the minority group’s movement for change fails an individual or group of individuals may choose to act out against the majority’s establishment (i.e. reform, revolution, subculture). The application to this study would suggest that the action is taken against a representative of the majority – law enforcement.

Table 1: Taylor and McKirnan's Five-Stage Model of Intergroup Relations

Stage	Description
One	Stratified intergroup relations are based on inherent (e.g. race) or ascribed (e.g. religion) characteristics and are not questioned by members of either group.
Two	Group membership comes to be seen as a matter of individual achievement rather than group characteristics.
Three	Comes about as a direct result of stage 2. Social mobility attempts by members of disadvantaged group to pass in the advantaged group are made.
Four	When stage 3 is unsuccessful, this leads to consciousness raising activities within the disadvantaged group.
Five	Members of the disadvantaged group, dissatisfied with their place in the social strata, engage in collective action to improve their position. Members of the group acting singly outside of the collective will act out. This leads to open conflict.

Source: Shewbart, 1997: 18-19.

Fisher (1993) concurs that this model can be used to explain open conflict, and that the fifth stage can take the form of street crime. The literature states that the most dangerous actions for law enforcement officers are stopping crimes in progress or making arrests (Geller and Karales, 1981; Margarita, 1980); law enforcement officers are in direct conflict with the individuals (identified in stage 5) as those who act out. By interfering with the "offenders" protests (usually in the form of a crime –street crime) and attempting to stop the protest by arresting the individual, the officer is asserting themselves as an agent of the majority power structure (Shewbart, 1997).

Kruglanski et al. (1993) indicates that the behavior of an individual in a conflict situation depends on two types of knowledge. They assert that the offender must have a general working knowledge of what conflict is, and then they must be able to interpret the situation they are in as a conflict situation.

The potential offender must have general knowledge of what the term conflict means and specific knowledge of whether a particular situation does in fact represent a conflict. A situational conflict is based on the individuals' knowledge of whether any given social relationship is conflictual. General knowledge, logically, should be labeled as more important than situational (Shewbart, 1997: 20).

According to Kruglanski et al. (1993), this labeling of general knowledge does not always occur since it is the individual of the minority group that must identify and react to the strain placed on them.

Chamlin and Cochran (1997) concur, identifying social conflict as motivational in nature. They indicate that members of the minority group are motivated to commit or engage in crime based on the strata, both cultural and structural that is created by the majority group.

Conventional society provides minorities with no legitimate avenues to become successful or to better their status in the community. It is phenomenon within their culture that condones violence and crime as a substitute or suitable avenue for reaction (Shewbart, 1997, p.20).

So according to Chamlin and Cochran's (1997) perspective, crime is inherently an act of protest even if they minority members fail to recognize it as such.

In previous work, Chamlin (1989) asserts that much of the work on law enforcement officer deaths is atheoretical and exploratory in nature and attempts to look at the role structural factors have in incidents of law enforcement officer deaths. Chamlin's work was a further extension of a study conducted by Peterson and Bailey (1988). They explored the structural influences on the killing of law enforcement officers with a comparison to general homicides.

Chamlin's (1989) study focused on "the effects of structural variables on police killings across macro-social units" (353). In his study Chamlin evaluated hypotheses derived from the conflict perspective of crime control. His work was initiated by the apparent lack of literature on officer deaths from a theoretical perspective, employing a systematic analysis of law enforcement officer deaths. Chamlin found that there were considerable variations among law enforcement officer deaths across all 50 states in the

early 1980's. He also found that the threat hypotheses indicate, "the presence of threatening populations is expected to increase levels of antagonism among crime control agents and civilians (especially racial minorities and the poor), and thereby increase the rate of police killings" (Chamlin, 1989: 361). His results support the existence of a relationship between both the economic and racial threat hypotheses. Further, Chamlin found that the divorce rate exerts some influence on the number of law enforcement officer deaths overall, although no clear interpretation of the relationship between the divorce rate and law enforcement officer deaths can be supported in the literature. Similar findings have been explored regarding the divorce rate and the general homicide rate. Chamlin's findings are consistent with results of the study conducted by Peterson and Bailey in 1988. This study by Chamlin is one of the first conducted in the area of a structural analysis of law enforcement officer deaths employing a conflict perspective, so its contribution to the literature is of great significance.

Chamlin identifies conflict theory, based on the works of Blalock (1967), Turk (1969), and Quinney (1970), as involving racial and economic minorities. He further asserts that these minorities are perceived as threatening to the dominant groups and strata.

Presumably, powerful groups and strata are able to translate their perceptions of threat into public policy and thereby affect the size and administration of crime control apparatuses (the racial and economic threat hypotheses)" (Chamlin, 1989: 355).

In looking at most of the macro-social research from the conflict perspective, it is clear that the focus is on threatening populations (like racial minorities and those low on the socioeconomic strata) and their effects, subsequently, on a number of law enforcement resources, general police behavior and thus across macro-social units.

In particular, there have been a set of studies conducted by the likes of Greenberg et al. (1985), Jackson (1986), Jackson and Carroll (1981), Jacobs (1979), and Liska et al. (1981) that have all explored the effects of the racial and economic composition of ecologically based units on policing resources. “Consistent with the racial threat hypothesis, all five report that racial heterogeneity (the percentage of blacks or nonwhites) is positively related to the capacity to provide crime controls” (Chamlin, 1989: 355). Beyond that, the studies and support for the economic threat hypothesis is mixed.

Jacobs (1979) argues that inequality across economic status directly relates to number of law enforcement officers employed per capita; while Jackson and Carroll (1981) report that this economic inequality is related directly to expenditures by policing agencies. Greenburg et al. (1985) report the opposite findings, stating that economic inequality has no effect on police size. In a similar vein, Jackson and Carroll (1981) and Jackson (1985) indicate that the percent poor has a negative affect on police expenditures, while the findings of Jacobs (1979) and Liska et al. (1981) indicate that this same variable of percent poor has no significant affect on law enforcement resources.

Beyond these studies, Chamlin (1989) indicates that there are some analyses of police use of deadly force that have also attempted to apply conflict theory in assessing their hypothesis of police citizen interactions. Using states as a unit of analysis, Jacobs and Britt (1979) evaluated hypotheses derived from conflict theory across 49 states. They “argue that economic inequality is an unnatural condition which must be maintained by force” (Chamlin, 1989: 355). Based on the premise that law enforcement officers are social agents of control for the elites in society (empowered to use force if necessary to

control the lower strata), Jacobs and Britt (1979) emphasize that law enforcement officers are there to assert the interest of the dominant group. This power structure in society, they further, “is an inherently fabricated structure which must be maintained by the agents of social control with force when necessary” (Chamlin, 1989: 355). Thus, in the maintenance of this structure, law enforcement officers will innately have violent and fatal interactions. While Jacobs and Britt find support for the economic threat hypothesis (positively affects police use of force), they find that there is no support for the racial threat hypothesis.

Linked to these studies is a later work by Liska and Yu (1987). In their study, Liska and Yu also tested the economic and racial threat hypotheses. Using cities as a unit of analysis, they attempted to assess the efficacy of the threat hypotheses. The basis for the study was to discover if the dominant (majority) group was threatened by the presence of economic and racial minorities, again asserting an increase in police use of force from this perspective. The support for conflict theory in their findings was varied. While they found little support for the economic threat hypothesis, they found significant support for the racial threat hypothesis in the states analyzed.

Inherent in these studies is the foundation for linking law enforcement deaths to conflict theory, and thus the structural approach. If there is a positive link to police use of force on the minority group (both racial and economic), then there are implications for citizen use of force against law enforcement officers. Chamlin (1989) states

If, as the extant research seems to indicate, the presence of threatening populations (especially racial minorities) tends to increase the level of policing resources and violence, then it seems reasonable to explore the possibility that the racial and economic composition of communities may also affect the use of deadly force by civilians against police (356).

If citizens view law enforcement as agents of social control who work for the elite, then it makes sense that these citizens, (especially the racial minorities and those with lower economic status), are more likely to have violent and negative interactions with law enforcement officers. A number of studies (Kieselhorst, 1974; Marx, 1969; Wilson, 1975) have also shown that these minority groups have negative attitudes towards law enforcement officers. Kieselhorst (1974) suggests, based on the subculture of violence thesis, “that there are cultural themes which emphasize violence as an acceptable and noble form of displaying ones prestige, authority, maturity, and superiority” (Peterson & Bailey, 1988: 212). These cultural ideas when present then support the atmosphere for violent police citizen encounters (Kieselhorst, 1974; Peterson & Bailey, 1988).

For a number of individuals in the minority groups, law enforcement officers are viewed as:

a symbol of oppression by the legal system and thereby “becomes the tangible target for grievances against shortcomings throughout that system...against the basic inequities imposed by the system on the poor” (The National Advisory Commission on Civil Disorders, 1968: 299, cited in Chamlin, 1989:356).

In conclusion, it is clear that in the literature on law enforcement officer deaths, rooted in conflict theory, there is support for the economic and racial threat hypotheses. Based on the literature, it is then plausible that there will be a measurable effect on the number of law enforcement officer deaths by the two threat hypotheses. To reiterate, the hypotheses are derived from the conflict perspective, which suggests that there are two distinct groups in society, the dominant or majority group, known as the elites who empower law enforcement officers as agents of social control, to invoke their power and authority over the minority group. The threat to the dominant group is controlled by

increasing the number of law enforcement officers, their resources, and their ability to use force as a necessary means of control against the minority group.

I therefore will hypothesize that the number of law enforcement officer deaths will increase as minority groups (both economic and racial groups) comprise a larger proportion of the population in each of the 50 states over the each of the five years analyzed. As previously stated, the two main areas of study and concern in this preliminary study will be to examine the relationship between the number of law enforcement officers deaths in each state, to the variables representing the economic and racial threat hypotheses.

CHAPTER IV

METHODOLOGY – THE PRESENT STUDY

Past research has utilized various methods and numerous variables in the attempt to explain law enforcement officer deaths. With the exception of Peterson and Bailey (1988) and Chamlin's (1989) work, there are few studies that exist using a structural theoretical approach to explain law enforcement officer deaths. This study will serve to add to the very small body of literature that exists on law enforcement officer deaths from the structural perspective, and will review law enforcement officer deaths in the years between 1995 and 1999, not previously studied. The main goals of this current research are to assess law enforcement officer deaths using a structural approach between 1995 and 1999, and to specifically assess the validity of the economic and racial threat hypotheses. In the next sections, the analytical and theoretical strategies will be discussed.

Theoretical Framework

As noted in Chapters II and III, most of the research on law enforcement officer deaths has explored individual and situational characteristics of law enforcement officers, the offenders who commit police homicides and more recently the social psychological perspectives or survival of officer death encounters. The present study will be conducted using an analysis of structural variables commonly identified in past literature.

Earlier chapters have identified, through the research of Chamlin (1989) and Peterson and Bailey (1988), a foundation for studying law enforcement officer deaths

from a structural theoretical framework. Specifically, the literature indicates that the social conflict perspective is able to address measures of conflict that result when minority groups (the poor and racial minorities) have increased conflict with social control agents (law enforcement officers the representatives of the elite) resulting in law enforcement officer deaths. Even more distinctively, this past research has indicated a conflict regarding a relationship between law enforcement officer deaths and the economic threat and the racial threat hypotheses.

Data and Variables

For this study, four variables will be used to assess the validity of the relationship between law enforcement officer deaths and the economic and racial threat hypotheses. The variables to be used have been documented as measures of structural factors impacting social conflict and include four categories: law enforcement officer death rate, threat variables, and crime related variables.

Dependent Variable

Law Enforcement Officer Death Rate. The actual counts for law enforcement officer deaths came from the *Uniform Crime Reports: Law Enforcement Officers Killed and Assaulted Reports 1995-1999*. This data has been collected and compiled by the FBI since 1945. The data was compiled at the individual incident level, showing the state and year in which the incident occurred (see Table 2). This data was then condensed into variables showing the actual rate for each of the 50 states, in each of the 5 years to be analyzed. This data was also totaled for each of the 50 states, as well as averaged for a

comparison across all states, in all years. A population of 131 cases was analyzed – each case represents a given state, in a given year in which at least one law enforcement officer death occurred.

The determination has been made to use the average rate for each year, per the 50 states analyzed to allow for standardization of the rates and comparison in the analysis. There is some dissensus in the literature as to the proper measurement of law enforcement officer deaths (Chamlin, 1989). Some studies conducted have used actual counts in their analysis, though Lester (1978) employs 6-year averages, Bailey and Peterson (1987) use annual rates over a 10-year period, and Peterson and Bailey (1988) use annual rates over a four-year period. “Given the likelihood that of finding sizable years fluctuations in the occurrence of rare events, such as police killings, these analyses may need to focus on an average killing rate,” per year to measure the average rate of officer deaths across all of the states, in all years (Chamlin, 1989: 357). This is in conjunction with much of the literature on homicides (e.g. Messner, 1983), where the officer death rate is calculated at a rate per 1,000 FTE police and averaged over a yearly time frame. Each annual rate in this study is calculated in the same way.

Table 2: Law Enforcement Officer Deaths by State and Year

State	1995	1996	1997	1998	1999	Total
AK	0	1	1	1	1	4
AL	2	1	2	2	0	7
AR	3	1	3	1	0	8
AZ	5	1	1	1	3	11
CA	11	4	7	7	4	33
CO	3	0	1	1	0	5
CT	0	0	0	0	1	1
FL	2	4	1	5	0	12
GA	2	3	2	2	5	14
HI	0	0	0	0	1	1
ID	0	0	1	1	0	2
IL	2	2	1	1	2	8
IN	0	0	4	2	1	7
KS	2	1	1	1	1	6
KY	0	0	1	2	1	4
LA	3	4	1	0	0	8
MA	1	0	0	0	1	2
MD	2	0	1	0	0	3
MI	1	1	0	2	1	5
MN	0	2	1	0	0	3
MO	0	1	0	1	1	3
MS	1	0	5	3	1	10
MT	1	0	0	0	0	1
NC	2	2	5	2	3	14
ND	0	1	0	0	0	1
NE	1	0	0	0	0	1
NH	0	0	3	0	0	3
NJ	3	0	2	0	2	7
NM	0	0	1	0	1	2
NV	2	0	1	1	0	4
NY	2	6	3	3	0	14
OH	1	5	4	1	0	11
OK	8	1	0	0	2	11
OR	0	0	1	1	0	2
PA	2	4	0	0	1	7
SC	0	2	2	1	1	6
TN	3	2	3	0	1	9
TX	2	4	3	5	5	19
VA	0	0	0	3	1	4
WA	1	0	1	1	1	4
WI	1	2	0	2	0	5
WV	0	0	0	1	0	1
WY	1	0	0	0	0	1
Total	70	55	63	54	42	284

Independent Variables

Threat Variables. The threat variables are intended to measure the presence of both of the identified threatening groups in a given state. These two groups include the extreme poor (the economic threat hypothesis) and those in racial minority groups (the racial threat hypothesis).

The extreme poor (Bonger, 1916; Merton, 1938; Quinney, 1977) and racial minorities...(Turk, 1969; Blauner, 1972; Greenberg and Kessler, 1982) have often been identified as a criminal and political threat (Chamlin, 1989:357).

Given the findings in the literature, particularly Chamlin's (1989) work, it is reasonable to assume that there will be a positive relationship between these threat variables and law enforcement officer deaths.

The economic threat variable will come from the poverty estimates calculated by the U.S. Census Bureau (www.census.gov). The *percentage of people in all age groups in poverty* will be used for each of the 50 states to be analyzed, for each of the years between 1995 and 1999.

The racial threat variable will come from the racial estimates (including ethnic categories) calculated by the U.S. Census Bureau (www.census.gov). The percent of racial and ethnic minorities will be calculated from the population estimates for states by race and Hispanic origin. This data includes four race categories (White, Black, American Indian and Alaskan Native, and Asian and Pacific Islander) and two ethnic categories (Hispanic and non-Hispanic). In previous studies, the percent black and the percentage of individuals with Spanish surnames has been used to measure the racial threat variable (Chamlin, 1989). In an attempt to measure the racial threat variable in its

entirety, it is deemed necessary to use a variable that measures all racial and ethnic categories. This is based on the identification in the data that populations represented in racial and ethnic categories outside of the black and Hispanic populations have grown since the previous studies. A change has also been implemented by the U.S Census Bureau as indicated with their addition of categories to measure additional race and ethnic groups since the 1980's (www.census.gov). Since the U.S. Census Bureau has deemed these additional racial and ethnic groups important and included them in the population estimates by race statistics, I have elected to use them here. This is also supported in the literature base of conflict theory and it's application to law enforcement officer deaths, where they draw no distinction between race and ethnicity and simply place all minorities in the same category.

Crime Related Variables. Crime related variables are included in the present study as a measure of control. The crime related variables include the arrest rate for index crimes and the index crime rate for each state, in each year. All of these variables were collected from the Uniform Crime Reports for each of the 5 years of the study. The Uniform Crime Reports are compiled and calculated annually by the Federal Bureau of Investigation. The arrest rate is measured as the total number of index crimes (excluding arson) reported to the Federal Bureau of Investigation in each year 1995 – 1999 per 1,000 population.

The arrest rate for index crimes is used as a control variable because “the convergence of motivated offenders and suitable targets increases the likelihood that a criminal offense will occur” (Cohen & Felson, 1979, cited in Chamlin, 1989: 358). The Federal Bureau of Investigation (1985) has indicated that nearly forty-two percent of all

law enforcement officer deaths occur in an arrest situation, and additional literature supports the assertion that many officers are placed in life threatening situations while in an arrest situation (Cardarelli, 1968; Margarita, 1980). The inclusion of this variable is supported in the two previous studies conducted on law enforcement officer deaths, as well as studies conducted on the general homicide rates.

The index crime rate per state, per year is also included to account for general opportunity. This rate is collected and compiled by the Federal Bureau of Investigation and reported in the Uniform Crime Report for each of the 5 years included in the study. The literature indicates that the index crime rate is positively related to police killings (Chamlin, 1989; Lester, 1978). These findings could be interpreted to mean that as the rate of index crime increases so to does the opportunity for death encounters to exist for law enforcement officers. For these reasons this variable is included as a crime related control variable.

Unit of Analysis

The unit of analysis for this study will be the state rates of law enforcement officer deaths. States tend to be more heterogeneous in nature than individual cities or jurisdictions, and they might not be considered the best unit of analysis in macro-social units. Using states as a unit of analysis does present a methodological issue, namely that of the ecological fallacy (Johnson, 2000: 174-175). This is the spurious inference of individual characteristics from group-level characteristics, which can lead to inconsistencies between correlations at differing levels of aggregation. It is important to understand that while an association may be found between two factors in aggregate data,

it cannot be taken as evidence of a relationship at the individual level. This is important because it is often tempting to make generalizations about one level of data and apply it to another or different levels of data. There are, however, two concerns that recommend the selection of states as a unit of analysis. Based on the work of Lester (1978a), it is found that smaller aggregations than states tend to be incomplete. Further, the use of states facilitates comparisons to the extant multivariate research (Peterson & Bailey, 1988; Chamlin, 1989). Drawing on the previous research of law enforcement officer deaths from the conflict perspective (and in the interest of assessing this approach), the determination has been made to use states as a unit of analysis. The interpretations of this data will be conducted at the appropriate level of analysis, while understanding of the limitations of this approach.

Analysis Plan

Correlation Analyses

Correlations have been run on all of the data, comparing the law enforcement officer death rate to the threat variables and the crime related variables. This was done to measure the relationship between each of the variables and to determine the direction of these relationships. (Scatterplots of each of the independent variables and law enforcement officer death rate for all years are included in Appendix B but will not be discussed.) The absolute size of the unstandardized correlation coefficients indicates the strength of the relationship between the variables. The closer the value is to 1, the better the data falls to a straight line relationship, and the more accurately the data can be

described by the straight line. Since this study is dealing with population data and no inferences will be made beyond the five years of the study, and inferential statistics therefore will not be analyzed.

Regression Analyses

The analysis of the data also consisted of ordinary least squares (OLS) regression using SPSS. The assumptions of OLS regression could not be tested in this case because of the small number of cases in the population (N=131). The rule of thumb is that there is a minimum of 5 cases for each of the independent variables (Chatterjee et al, 2000). This is a limitation of this data set, but the regression analysis is reported and discussed to show some of the relationships that exist. As with the correlation coefficients, these results will be interpreted in the appropriate manner; they offer guidance for future research since they are based on population data.

The interpretation of these analyses will focus on the unstandardized and standardized regression coefficients. The unstandardized coefficients indicate the change in the dependent variable given a one-unit increase in a specific independent variable, holding all other independent variables constant. Similarly, the standardized coefficients show that the number of standard deviation units in the dependent variable for a standard deviation change in an independent variable holding all of other independent variables constant. The standardized coefficients are in the same standard deviation units, so they can be used to compare the relative importance of the variables in explaining Y. The standardized coefficients are imperfect measures of the relevance or importance of the independent variables. In addition, the adjusted R^2 square of the models were so low (see

the next chapter for details). As a result, the standardized coefficients will be reported but will not be discussed.

There were six separate models analyzed in this study. Each model included the dependent variable, which was the rate of law enforcement officer deaths for each of the states analyzed. The independent variables will be the percent minority per state and the percent of people below the poverty rate for each state. The control variables will be the crime rate of index crime rate per state and the arrest rate for each state.

The year is another potential source of variation in the model. Therefore, one model was run for each of the five years (1995, 1996, 1997, 1998, and 1999), and then a comprehensive model, which included the average rates and percentages for every year in which there was a law enforcement officer death in a given state, was run. Since some of the previous studies on law enforcement officer deaths have elected to use averaged year models (either 3, 4 or 6 years averaged together) in the analysis, the design of the final model was selected for comparison purposes.

CHAPTER V

DATA ANALYSIS RESULTS

The results of the analyses of all states having law enforcement officer deaths in a given year will be discussed in this chapter. Six analyses were conducted. Five addressed the data for each of the five years separately, and the sixth contained the averaged values for the law enforcement officer death rate and all of the independent variables for each state for each year in which there was a law enforcement officer death. The data for each year were analyzed separately to account for any variation in the variables that could be hidden when the data are averaged.

The conclusions of this investigation will serve as guides for future research on law enforcement officer deaths, as will be discussed in Chapter 6. Since several limitations have been discovered regarding the use of such a small number of cases, the conclusions will be treated as preliminary in nature and inferences will not be drawn outside the five years studied. Since this data comes from the population of all law enforcement officers killed in the United States between 1995 and 1999, significance testing is not required. However significant findings will be reported for information purposes.

Results for the 1995 Data

The first analysis was preformed using the data for the states in which a law enforcement officer death occurred in 1995. Table 3 contains the Pearson Correlation coefficients for each of the variables with the dependent variable: the law enforcement officer death rate.

It should be stated that, throughout the analyses, one-tailed significance tests were used with an alpha level of 0.05. This approach was because of the small number of cases used in the analysis (n=131).

Table 3: Pearson Correlation Coefficients for the 1995 Data

	% Minority 1995	% Poverty 1995	Index Crime Rate 1995	Arrest Rate 1995
Officer Death Rate 1995				
Pearson Correlation	-.130	.023	.025	.250
Sig.(1-tailed)	.256	.453	.450	.114

Percent minority has a weak negative correlation of .130 with the law enforcement officer death rate. Percent poverty has a weak positive correlation of .023 with the law enforcement officer death rate. The index crime rate has a weak positive correlation of .025 with the law enforcement officer death rate. The correlation between the law enforcement officer death rate and the arrest rate .250 is a weak positive correlation. None of the correlations for the year 1995 are significant. This is contrary to the previous work of Cardarelli (1968) who asserts that the arrest situation is potentially the most volatile encounter under which law enforcement officers are assaulted and subsequently murdered. As indicated in Table 3, no strong correlation exists between law enforcement officer death rate and arrest rate.

The regression coefficients for 1995, which are presented in Table 4, were also analyzed using a 1-tailed significance test with an alpha level of 0.05. For ease of interpretation, the law enforcement officer death rate was recoded from the number of

deaths per 1,000 law enforcement officers' full time employed by each state to the number of deaths per 100,000. This provided measurable unstandardized slope coefficients. When the unstandardized slope coefficients were estimated using the number of officer deaths per 1,000, the slopes was so small that they registered at 0.

Table 4: Regression Coefficients for the 1995 Data

	Unstandardized Slope Coefficients	Standardized Slope Coefficients	Standard Error	Significance
% Minority	-.034	-.451	.019	.043
% Poverty	.015	.268	.014	.151
Index Crime Rate	0	-.078	0	.357
Arrest Rate	0	.299	0	.080

Dependent Variable: The law enforcement officer death rate per 100,000 for 1995

According to these results, as the percent of the population that belongs to a racial or ethnic minority increases by 1, the officer death rate decreases by .034. As the percent of the population living in poverty increases by 1, the law enforcement officer death rate increases by .015. The law enforcement officer death rate does not have a linear relationship with the index crime rate or the arrest rate. Only the slope coefficients for the percent minority are significant.

The slope coefficients for percent minority are significant however they are inversely related to the racial threat hypothesis, indicating that in 1995 percent minority had a significant negative relationship with law enforcement officer deaths. This result asserts a failure of support for the racial threat hypothesis. The findings also do not coincide with previous work done by Lester (1978), who indicates that there is a positive relationship between law enforcement officer deaths and the index crime rate. Similarly, the coefficient findings do not indicate a similar result to the work of Cardarelli (1968), who reported a significant finding between that law enforcement officer deaths are

related to the arrest situation (arrest rate). Margarita (1980) also has findings supporting the relationship between officer deaths and arrest situations. She states that officers are at greater risk in an arrest situation, because of the very nature of the interaction between the law enforcement officer and the citizen(s) involved.

The adjusted R^2 of this regression is .039 (see Table 5). This means that 3.9% of the variation in the law enforcement officer death rate between states is explained by the independent variables. The adjusted R^2 is used because the R^2 is inflated because there are multiple independent variables.

Table 5: Adjusted R^2 for the 1995 Data

R	R^2	Adjusted R^2	Std. Error of the Estimate
.446	.199	.039	.211

Results for the 1996 Data

The second analysis was preformed using the data for the states in which there was a law enforcement officer death in 1996. Table 6 contains the Pearson Correlation coefficients for each of the variables. There were no significant relationships in the correlation coefficients for 1996.

Table 6: Pearson Correlation Coefficients for the 1996 Data

	% Minority 1996	% Poverty 1996	Index Crime Rate 1996	Arrest Rate 1996
Officer Death Rate 1996				
Pearson Correlation	-.048	-.262	-.309	-.151
Sig.(1-tailed)	.413	.114	.076	.257

Percent minority has a weak negative correlation of $-.048$ with the law enforcement officer death rate. This weak negative correlation does not support the findings of Chamlin (1989), who indicated found a positive relationship in the late 1980's. When correlated with percent poverty, the law enforcement officer death rate has a weak negative correlation ($-.262$), and this correlation coefficient is not statistically significant. A moderate negative relationship of $-.309$ exists between the index crime rate with the law enforcement officer death rate, while arrest rate has a weak negative correlation with law enforcement officer death rate ($-.151$).

The regression results for the 1996 model appear in Table 7. As the percent of the population that belongs to a minority group increases by 1, the officer death rate increases by $.023$. The officer death rate decreases by $.02$ as the percent poverty increases by 1. There appears to be no relationship between law enforcement officer death rate and the index crime rate and the arrest rate. None of the slope coefficients for 1996 indicate support for either the racial or economic threat hypotheses in 1996. This finding is unsupportive of Chamlin (1989) and the reported findings of his 1989 study, where he claimed support for the racial (minority) threat hypothesis.

Table 7: Regression Coefficients for the 1996 Data

	Unstandardized Slope Coefficients	Standardized Slope Coefficients	Standard Error	Significance
% Minority	.023	.239	.029	.216
% Poverty	-.020	-.261	.023	.196
Index Crime Rate	0	-.285	0	.185
Arrest Rate	0	-.133	0	.290

Dependent Variable: The law enforcement officer death rate per 100,000 for 1996.

The adjusted R^2 for this equation is 0.0 (see Table 8), which indicates that none of the variation in officer death rate is explained by the variables.

Table 8: Adjusted R^2 for the 1996 Data

R	R^2	Adjusted R^2	Std. Error of the Estimate
.408	.166	0	.253

Results for the 1997 Data

The third analysis was performed using the data for the states that had at least one law enforcement officer death in 1997. Table 9 contains the Pearson Correlation coefficients. Only one of the correlation coefficients is statistically significant; index crime rate has a significant correlation of -.426 with the law enforcement officer death rate. The correlation between the law enforcement officer death rate and percent poverty is weak negative correlation (-.114). The percent minority has a weak positive correlation to law enforcement officer death rate (.012); while the arrest rate has a moderate positive correlation with officer death rate (.310). Again no support is found for the racial or economic threat hypotheses. According to the previous literature, there should be a relationship between percent minority and the officer death rate.

Table 9: Pearson Correlation Coefficients for the 1997 Data

	% Minority 1997	% Poverty 1997	Index Crime Rate 1997	Arrest Rate 1997
Officer Death Rate 1997				
Pearson Correlation	.012	-.114	-.426	.310
Sig.(1-tailed)	.475	.278	.011	.062

Table 10 contains the regression results for the 1997 model. The slope coefficients between the independent variables and officer death rate are all not significant. The presence of these significant findings makes this analysis different from those of the other years analyzed so far. 1997 is the only year that indicates a significant finding for all of the independent variables, and the unstandardized coefficients lend support to all of the hypotheses identified in the study. Support for the threat hypotheses (both economic and racial) is found in 1997 for the states sampled. As the percent minority increases by 1, the officer death rate decreases by 9.361. The officer death rate increases by 7.700 as the percent poverty increases by 1. The previous literature indicates that both of these variables would have a positive relationship with the law enforcement officer death rate. As the index crime rate increases by 1, the law enforcement officer death rate decreases by .047, while the law enforcement officer death rate increases by .014 as the arrest rate increases by 1.

Table 10: Regression Coefficients for the 1997 Data

	Unstandardized Slope Coefficients	Standardized Slope Coefficients	Standard Error	Significance
% Minority	.015	.185	.018	.203
% Poverty	.004	.049	.017	.413
Index Crime Rate	0	-.307	0	.078
Arrest Rate	0	.342	0	.068

Dependent Variable: The law enforcement officer death rate per 100,000 for 1997

The adjusted R^2 for is equation (.055) indicates that 5.5% of the variation in the officer death rate between the states is explained by the independent variables (see Table 11).

Table 11: Adjusted R^2 for the 1997 Data

R	R^2	Adjusted R^2	Std. Error of the Estimate
.454	.206	.055	.245

Results for the 1998 Data

The fourth analysis was preformed using the data for the states that had at least one law enforcement officer death in 1998. Table 12 displays the Pearson correlation coefficients for each of the variables. None of these coefficients were found to be statistically significant. All of the variables have a weak positive correlation with law enforcement officer death rate, with the exception of the index crime rate. As a result, these findings do not support the results of previous studies exploring multiple years of law enforcement officer deaths (Chamlin, 1989; Peterson & Bailey, 1988).

Table 11: Pearson Correlation Coefficients for the 1998 Data

	% Minority 1998	% Poverty 1998	Index Crime Rate 1998	Arrest Rate 1998
Officer Death Rate 1998				
Pearson Correlation	.059	.096	-.194	.085
Sig.(1-tailed)	.386	.316	.166	.343

The regression coefficients are presented in Table 13. The slope coefficient for percent minority indicates that for every 1% increase in the minority population, the officer death rate increases by .008. For every 1% increase in the population living in poverty, the officer death rate decreases by .001. It appears that the index crime rate and the arrest rate have no relationship to law enforcement officer death rate. Again, the lack

of significant slope coefficients for any of the independent variables in the model disputes some of the findings in previous studies with similar approaches. The direction of the slope of percent poverty also calls the economic threat hypothesis into question, while the direction of the slope for the percent minority indicates weak support for the racial threat hypothesis.

Table 13: Regression Coefficients for the 1998 Data

	Unstandardized Slope Coefficients	Standardized Slope Coefficients	Standard Error	Significance
% Minority	.008	.152	.014	.298
% Poverty	-.001	-.017	.021	.474
Index Crime Rate	0	-.284	0	.142
Arrest Rate	0	.088	0	.350

Dependent Variable: The law enforcement officer death rate per 100,000 for 1998.

The adjusted R^2 (-.054) indicates that none of the between-state variation in the officer death rate is explained by the independent variables in the 1998 model (see Table 14).

Table 14: Adjusted R^2 for the 1998 Data

R	R^2	Adjusted R^2	Std. Error of the Estimate
.269	.072	0	.208

Results for the 1999 Data

The fifth analysis was preformed using the data for 1999. Table 15 contains the Pearson Correlation coefficients for each of the variables. None of the correlation coefficients has a significant relationship in 1999. All of the variables have weak positive correlations with the law enforcement officer death rate. This again is not supportive of the literature

surrounding Lester's (1978) analysis of officer death rates compared to specifically the index crime rate. Lester (1978) found a positive relationship between law enforcement officer death rate and the index crime rate; it does not support Chamlin's 1989 study results as previously stated in prior years analyzed.

Table 15: Pearson Correlation Coefficients for the 1999 Data

	% Minority 1999	% Poverty 1999	Index Crime Rate 1999	Arrest Rate 1999
Officer Death Rate 1999				
Pearson Correlation	.204	.016	.290	.145
Sig.(1-tailed)	.169	.471	.085	.260

Table 16 displays the regression results for the final analysis. The coefficient for percent minority indicates that for every increase of 1% in the minority population, there is an increase in the officer death rate of .012. For every 1% increase in the population living in poverty, the officer death rate decreases by .018. The slope coefficients for the index crime rate and the arrest rate are 0 indicating no relationship between these two variables and law enforcement officer death rate. There is therefore no support for the economic threat hypotheses in 1999, though there is mild support for the racial threat hypothesis, although it is not significant. The similarity between the analyses of the 1998 and 1999 data, as well as their differences from the previous analyses, demonstrate the variation that exists across all the years analyzed in the present study.

Table 16: Regression Coefficients for the 1999 Data

	Unstandardized Slope Coefficients	Standardized Slope coefficients	Standard Error	Significance
% Minority	.012	.168	.018	.258
% Poverty	-.018	-.280	.017	.163
Index Crime Rate	0	.343	0	.092
Arrest Rate	0	.134	0	.311

Dependent Variable: The law enforcement officer death rate per 100,000 for 1999.

The adjusted R^2 of 0 indicates that none of the variation in the law enforcement officer death rate is explained by the independent variables (see Table 17).

Table 17: Adjusted R^2 for the 1999 Data

R	R^2	Adjusted R^2	Std. Error of the Estimate
.392	.154	0	.190

Results for the Data for All Years Averaged

The final analysis was preformed using the averaged data for all five years for the states that had at least one law enforcement officer death between 1995 and 1999. Table 18 contains the Pearson correlation coefficients. All of the variables have weak negative correlations with the law enforcement officer death rate, with the exception of the arrest rate. Only the crime rate has a significant relationship. As a result, the findings for all years of law enforcement officer death rates averaged together do not indicate support for either of the threat hypotheses.

Table 18: Pearson Correlation Coefficients for the Data All Years Averaged

	% Minority Average	% Poverty Average	Index Crime Rate Average	Arrest Rate Average
Officer Death Rate Average				
Pearson Correlation	-.151	-.140	-.306	.064
Sig.(1-tailed)	.168	.185	.023	.349

Table 19 displays the regression coefficients. As the average percent of the population that belongs to a racial or ethnic minority increases by 1, the officer death rate increases by .007. As the percent of the population living in poverty increases by 1, the law enforcement officer death rate decreases by .007. Neither the average index crime rate nor the average arrest rates have a relationship with the average law enforcement officer rate. None of these coefficients are statistically significant for all of the years averaged together.

Table 19: Regression Coefficients for the Data for All Years Averaged

	Unstandardized Slope Coefficients	Standardized Slope Coefficients	Standard Error	Significance
% Minority Average	-.007	-.091	.016	.321
% Poverty Average	.007	.106	.013	.283
Index Crime Rate Average	0	-.274	0	.068
Arrest Rate Average	0	.136	0	.214

Dependent Variable: The law enforcement officer death rate per 100,000 for year average.

The adjusted R^2 (0) indicates that none of the variation in the average officer death rates between the states is explained by the independent variables (see Table 20).

Table 20: Adjusted R^2 for the Data for All Years Averaged

R	R^2	Adjusted R^2	Std. Error of the Estimate
.297	.088	0	.225

In the following chapter a discussion of the data findings will be conducted. This will be followed by an assessment and conclusion of the results as well as the tested hypotheses; both the economic and racial threat hypotheses. Also, it will include a section discussing the limitations of the study and the future research approaches and analyses.

CHAPTER IV

DISCUSSION AND CONCLUSION

This chapter will explore the analysis of the data on law enforcement officer deaths between 1995 and 1999 in all the states with law enforcement officer deaths. A review of the data will be conducted followed by a discussion of the analysis in relation to the literature and hypotheses. Additionally, a dialogue pertaining to the results of the analysis and its representation in the theoretical framework used will also be addressed. After the discussion, a section covering the limitations of the study, a dialogue concerning future research and a conclusion will also be concentrated on.

Discussion

Even though there has been a substantial interest by researchers (i.e. Bailey and Peterson, 1988), there has been very little analysis of the structural variable effects on law enforcement officer deaths across macro-social units. Chamlin attempted to explore the macro-social perspective of law enforcement officer deaths in 1989. To reiterate, the use of a model similar to Chamlin's was necessary to approach this preliminary look at the data of law enforcement officer deaths between 1995 and 1999, since he is the only researcher identified in the literature who has applied conflict theory to this type of death. Specifically, Chamlin looked at the efficacy of the threat hypotheses that are used in the present study. Chamlin explored law enforcement officer deaths from a conflict perspective, looking at conditions under which conflict among law enforcement officers and civilians arises. The specific focus of Chamlin's (1989) study was to measure the

impact of the racial and economic composition of states on the average rate of law enforcement officer deaths. This study explores a similar approach to that of Chamlin's work, in assessing the validity of the (racial and economic) threat hypotheses across the United States with law enforcement officer deaths.

To restate, "the threat hypothesis contends that the presence of economically disadvantaged strata and racial minorities produce an emergent property of social structure, threat to dominant groups and strata" (Chamlin, 1989: 363). Since the literature indicates from a conflict perspective, that as the population of minority members of society and the poor increases so to does the number of law enforcement resources. It is also likely that this increase in the number of law enforcement officer is due to a perceived threat by the elite (as outlined in the literature), so it then translates to negative interactions between citizens and law enforcement officers, based on this approach. In exploring the data collected on law enforcement officer deaths, it is clear that there is variation across all of the years 1995-1999 of law enforcement officer death rate and its relationship to the independent variables Table 21.

Table 21: Correlation Values For All Years

	1995	1996	1997	1998	1999	Average
% Minority	-.130	-.048	.012	.059	.204	-.151
% Poverty	.023	-.262	-.114	.096	.016	-.140
Index Crime Rate	.025	-.309	-.426	-.194	.290	-.306
Arrest Rate	.250	-.151	.310	.085	.145	.064

It is notable that for every year, that there are some variables that showed a stronger relationship with the law enforcement officer death rate than others. What is also noticeable is the overall weak relationship between percent poverty and percent minority with the officer death rate for every individual year. While this analysis has looked at all

of the states with law enforcement officer deaths, at this preliminary stage, we see only a moderate relationship between officer death rate and index crime rate when all of the years are averaged together, and this relationship is negative. Overall this analysis would indicate a rejection of part of the threat hypotheses, suggesting at this preliminary stage that the percent poverty and percent minority have a limited relationship to law enforcement officer death rate if any at all.

The first hypothesis that was analyzed was that of the racial (minority) threat hypothesis. The variable percent minority was correlated to law enforcement officer death rate across all six models. The first two years 1995 and 1996, and the 6th model of all years-averaged category, indicate a negative weak relationship with percent minority. This is a clear indication that there is no support for the minority (racial) threat hypothesis in 3 out of the six models, and only weak positive relationships in two models for years 1998 and 1999. In 1997 a negative significant relationship was found between law enforcement officer death and percent minority, indicating not only no support for the racial threat hypothesis, but more specifically an inverse relationship. These findings suggest that while limited support of the racial threat hypothesis was found in Chamlin's (1989) study in the early 1980's, variations are found in the six models of this study, which explored the racial threat hypothesis. While weak positive relationships are seen in 1998 through 1999, negative relationships in 1995, 1996 and all years averaged indicated that the variable of percent minority has no impact on law enforcement officer death rate. In 1997 a significant negative relationship asserts more strongly the lack of relationship between law enforcement officer deaths and percent minority. This would suggest that in 1995 to 1999, when exploring law enforcement officer death rates per

state (states with recorded law enforcement officer deaths) that at the aggregate level, there was very limited to no structural impact of percent minority on the rate of law enforcement officer death.

The second component of the threat hypotheses is that of economic threat. This portion of the hypothesis was supported selectively as well across all six models. In three of the models representing the years 1995, 1998 and 1999 a weak positive relationship between the percent poverty and the law enforcement officer death rate was found. This would indicate that as the population of those in poverty in society increases, (in 1995, 1998 and 1999) that the threat hypothesis is only minimally supported, if at all in the years 1995, 1998 and 1999. However in the other 3 models, representing the years 1996, 1997 and all years averaged, a negative relationship was found. In the 1996 model, a moderate negative relationship was indicated, and the 1997 and all years averaged the models showed a weak negative correlation. Again with the variation in the results, support for the economic threat hypothesis is limited or nonexistent. Chamlin's 1989 study found considerable support for the economic threat hypothesis, in conjunction with the theoretical perspective, that if states have a much higher percent of individuals in poverty they are more likely to have greater opportunity for a law enforcement officer to be killed. These findings in the 1980's are not supported by this study exploring law enforcement officer deaths in the late 1990's. This study suggests that in 1995 to 1999, when exploring law enforcement officer death rates per state (states with recorded law enforcement officer deaths) that at the aggregate level, there was very limited to no structural impact of percent poverty on the rate of law enforcement officer death.

The regression results indicate that there is a linear relationship between law enforcement officer death rate and both the percent minority and percent poverty (see Table 22). When exploring the relationship between law enforcement officer death rate and percent minority, again we see mixed results across all of the models in the analysis. None of the regression coefficients indicated significance. In the 1995 and all years-averaged models, the percent minority showed a negative weak linear relationship with law enforcement officer death rate. In the remaining four models a weak positive relationship was found. This indicates very minimal support if any for the racial (minority) threat hypothesis across all states with law enforcement officer deaths between 1995 and 1999 (both individually and averaged), unlike the findings of the 1989 Chamlin's study who found support for the racial threat hypothesis.

Table 22: Unstandardized Regression Coefficients for All Years

	1995	1996	1997	1998	1999	Average
% Minority	-.035	.023	.015	.008	.012	-.007
% Poverty	.015	-.020	.004	-.001	-.018	.007
Index Crime Rate	.000	.000	.000	.000	.000	.000
Arrest Rate	.000	.000	.000	.000	.000	.000

The regression findings also indicate that there are linear relationship between law enforcement officer death rate and both the percent poverty. The relationship between law enforcement officer death rate and percent poverty fluctuated between positive and negative linear relationships across all of the models in the analysis. In the models representing the years 1995, 1997 and all years averaged, the percent poverty indicator showed a positive weak linear relationship with law enforcement officer death rate. In the remaining three models a weak negative linear relationship was found. This indicates very minimal support for the economic threat hypothesis in the three models on behalf of

the years 1995, 1997 and all years averaged, dissimilar to the findings again of the 1989 study by Chamlin who found considerable support for the economic hypothesis. When looking at all states with law enforcement officer deaths across all states, between the years of 1995 and 1999 (both individually and averaged). Again the findings of this study show some interesting results in relation to the literature supporting the use of the conflict perspective and the structural effects used to analyze them to support both of the threat hypotheses.

The findings of this study are not supported in the general literature of law enforcement officer death from the conflict perspective; specifically studies conducted on both of the threat hypotheses (racial and economic). Again, studies conducted by Jacobs (1979) and Greenberg et al. (1985) have found racial heterogeneity to be positively related to the ability to provide crime control. Chamlin (1989) has suggested that while there is significant support to believe that racial heterogeneity is positively related to the death of law enforcement officers, but there is less support for the economic threat hypothesis. The findings in this analysis would appear to counter the claims made by Chamlin (1989) when law enforcement officer death rates are used between 1995 and 1999.

When looking at the index crime rate, it clear that in three of the five models analyzed, there was a correlation with the law enforcement officer death rate. This result was anticipated, in the previous literature exploring law enforcement officer death rate, a positive relationship with the index crime rate has been found repeatedly and over time (Lester, 1978b; Chamlin, 1989). Again, the index crime rate was used to address general notions about law enforcement officer death and to address the potential opportunity for

law enforcement officer deaths. In 1978a, Lester concluded similar findings in his bivariate analysis of law enforcement officer deaths and its relationship to the index crime rate. What is surprising is the lack of relationship demonstrated between index crime rate and arrest rate, since in much of the literature links positively these two variables to law enforcement officer deaths concurrently. This unique finding may be a result of the small number of cases, or the operationalization of the variables themselves. The previous literature indicates, “increases in the relative populations size of racial minorities and the poor promote threat to the social elite’s ” (Chamlin, 1989: 363). These assertions in the literature predict that as a result of these threats (both economic and minority) to the social elite’s, an increase in law enforcement resources and the use of deadly force by law enforcement officers against citizens is likely to occur. Further, based on the assumptions of the conflict perspective, where law enforcement officers are seen as agents of the elite; the assertion that the level of civilian use of force against law enforcement officers will increase. The findings of this study at the state level, between 1995 and 1999 do not support the claims outlined in the literature. Whether or not the late 1990’s represent an anomaly and the support for the threat hypotheses generally exists over time, only future research can determine. With the limited number of previous studies conducted on law enforcement officer death and the variation in the findings between this study (representing the late 1990’s) and the study by Chamlin in the 1980’s leads me to conclude that a more in-depth analysis spanning a much larger time frame should be considered.

This analysis of law enforcement officer deaths (between 1995 and 1999) finds very little support to suggest the economic and minority composition of states (all with

deaths in the years studied) has an impact on the rate of law enforcement officer deaths occurring between 1995 and 1999. Failure to support either of these threat hypotheses leads to some interesting general conclusions and many unanswered questions.

Beyond the actual findings of this study and their comparison to other relative studies, we also see a lack of support for many of the assumptions outlined in the main theoretical framework. These assumptions were assumed to have a relationship with law enforcement officer death, and yet it is clear that many of these assumptions do not have foundation when tested or applied with the data of law enforcement officer deaths between 1995-1999. The conflict approach, with regards to this study, outlined the implications for law enforcement officers as representatives of social control for the majority of society or the powerful. It is hard to argue with the claim that law enforcement officers are indeed agents of social control and are deemed to hold power in society – as this is demonstrated in their daily activities while performing their duties. It is also hard not to agree with the claim that law enforcement officers are given and use this power to control members of society – it is merely the function and purpose for their existence (Shewbart, 1997). What has failed to come to fruition in this study, is support for the assumption that deadly assaults on law enforcement officers is a result of their power, authority and control over society, and the represented minority in the late 1990's (as conclusions can only be drawn pertaining to this particular study). No indication is reported in the analysis that can solidify the assumption that deadly assaults are caused as a function of the law enforcement officer's position.

Gottfredson and Hirschi (1990) asserted that the number of visible law enforcement officers in fact does not decrease crime, but rather increases the amount of

crime. While crime in these areas may or may not have increased, (which is outside the scope of this study), the current analysis does not support this claim as it pertains to law enforcement officer deaths. There was no increase seen in law enforcement officer deaths with relationship to population size. Further, Merton's asserts that conflict will occur when individuals in society have incompatible goals and compete for resources. Fisher (1993) furthers his assertion by indicating that when minority groups are competitive, they pose a threat to the social elite – and thus law enforcement officers as agents of social control for the social elite. Inherent in this interpretation is the struggle for power and authority, where the majority then strives for more social control, turning to law enforcement to maintain social control and enforce social order – thus increasing the officer's risk of being killed (Shewbart, 1997). Liska (1993) and Chamlin and Cochran (1994) make similar assertions about power control – using the phraseology of social order and police as bureaucracy of control. All of these assertions again are not supported by the findings of this analysis. There is no indication that as a struggle for power and authority escalates, more law enforcement officers are killed in the mid to late 1990's.

Margarita (1980) identifies that one of the greatest impetus for actions against law enforcement is based on the resentment of the offender. She indicates that the offender resents the represented authority and power of the law enforcement officer and takes action against it (see also Shewbart, 1997). As identified previously, no indication is given that actions are taken by the offender based on this premise, which results in law enforcement officer death, again pertaining to the years studied. This does not mean that at more specific level offenders might be motivated to act out against law enforcement officers or assault them, but the basis for their motivation is left unanswered. Studies on

the motivation of offenders who kill law enforcement officers are limited, so little is known beyond the broad scope of social conflict why individuals may or may not assault or murder police officers; a discussion of those factors must be left to future researchers.

Fisher (1993) and Deutsch (1973) refer to a similar action as motivation discussed by Margarita (1980), but classify the action against law enforcement officers as 'escalation' rather than motivation. These researchers indicate that conflict occurs when the majority or its representatives, come into conflict with the activities and actions of the minority, and they become incompatible (Shewbart, 1997). To reiterate, they suggest that in these situations, when the minorities' actions and activities are repressed or closed off by escalation between the minority group and law enforcement officer occurs. This escalation again, is known as protracted social conflict as identified by Azar (1983). Azar asserts that this protracted social conflict leads to detestation and aggressive interaction between racial (among others) groups that compounds over time and results in violence. Violence that is concentrated on the majority power structure, including law enforcement as representatives of the majority power structure. If this assertion is true, then the findings of this study represent an anomaly. The analysis performed in this study, does not indicate support for minority (or racial) escalation against law enforcement, across all 5 years – 1995-1999, in all 50 states in the United States.

Taylor and McKirnan (1994) recommend a pattern for intergroup relations and conflict (refer to Table 1). In summary, they assume that there are two distinct groups in society, again a majority and minority group. They further propose that these two groups are incompatible because of their desires and that the minority group try's to enact change against the majority or power structure. When the minority group's movement for

change fails, individuals or groups of individuals may choose to act out against the majority structure and thus law enforcement as their representatives. The findings presented in this study would imply that individuals and groups of individuals representing the minority group do not always act out against law enforcement officers in a manner that precipitates law enforcement officer deaths. While they may act out against the majority structure and law enforcement as their representatives in the form of street crime, the findings representing the death of law enforcement officer's indicates that the actions they take do not escalate to the homicide of law enforcement officers. In continuing to draw on Taylor and McKiernan's (1984), Fisher implies that this open conflict, as identified in Taylor and McKiernan's five-stage model, leads to more dangerous incidents for law enforcement officers when they are faced with this direct conflict from the minority individuals. These actions may or may not result in more assaults on law enforcement officers (again not measured by the present study), however there are no conclusions drawn in the analysis that would indicate that these actions by the minority result in law enforcement officer deaths between 1995 and 1999. Further there were no findings that would serve to indicate conclusively if at all, that the minority groups representing racial or economic minorities are responsible for the death of law enforcement officers in the mid to late 1990's. If these minority groups do protest against law enforcement officers, their protests do not escalate to the death of a law enforcement officer as reported in the present study.

Kruglanski et al. (1993) asserts that the behavior of an individual in a conflict situation depends on two different but linked forms of knowledge. Based on this assertion the offender or perpetrator must be conscious of what conflict is, and then they must be

able to interpret the situation they are in as a conflict situation. Once they have identified the conflict and conflict situation, they then must identify themselves and a member of the minority group and take action against the strain placed on them. As Chamlin and Cochran (1997) imply, this action implies motivation. That the minority group member, assuming they have the knowledge of the conflict situation, must then take action against the majority and law enforcement as their representative. In short, crime then is inherently an act of protest by minority group members. This assertion implies several assumptions about the minority group members, suggesting that they identify all of the steps required to act out against the majority structure, and that they are motivated to protest. What is apparent in the findings of this study, that the minority group members are not motivated to act out against law enforcement officers in the form of protest leading to the death of a law enforcement officer between 1995-1999. While the minority group members may have the knowledge of what conflict is, able to identify their situation as a conflict situation, and even be motivated to protest against the majority power structure; it would appear that they are not motivated to take action against law enforcement officers. Again, studies looking at motivation of offenders (minority group members in this case), and assaults on law enforcement officers may provide support for these assertions at a different level.

To restate, Chamlin (1989) focused his study on the structural effects of police killings. He evaluated hypotheses derived from the conflict perspective of crime control, using the economic and racial threat hypotheses. His findings indicated that there was considerable variation among law enforcement officer deaths in all of the 50 states in the early 1980's. He to asserted, "the presence of threatening populations is expected to

increase levels of antagonism among crime control agents and civilians (especially racial minorities and the poor), and thereby increase the rate of police killings” (Chamlin, 1989:361). However, Chamlin found support in his study for the existence of a relationship between both the economic and racial threat hypotheses, unlike the findings of the present study. Which leads to the question of why the results varied between the two studies? The answer is not easily deciphered, but rather leads to more questions. Is there a difference in the years studied – based on social developments, training of law enforcement officers, where their political or social based events that precipitated the different findings? Is it that one of these studies represents a phenomenological anomaly? The answer, only a new study could address, looking at perhaps the last 20-30 years worth of data to explore the issue more completely.

Chamlin (1989) used some different variables, which could account for the discrepancies in the findings. For example, Chamlin used the percent African American and percent surname Hispanic to represent the racial threat hypothesis, while this study employed percent minority. Perhaps looking at those two distinct groups, without accounting for the rest of the minority groups led Chamlin to his results. The call then is not only for a study that encompasses all of these variables, but a design that allows for the distinction in these two minority groups while at the same time measures the racial (minority) threat hypothesis accounting for all minority groups. Other studies conducted by Greenburg et al. (1985), Jackson (1986), Jackson and Carroll (1981), Jacobs (1979), and Liska et al. (1981) all explored the effects of the racial and economic composition of ecology based units on law enforcement. Their results were all consistent with the racial threat hypothesis, and again all found that racial heterogeneity is positively related to the

capacity to provide controls over these represented minorities (Chamlin, 1989). While there results are similar to Chamlin's results, they to used different variables to measure racial threat. They used the percentage of blacks or non-whites to represent the racial threat variables. Again this uniqueness could serve to offer some type of explanation for the variances in the study, and provide and new challenge for research. Then question then becomes, is the United States more diverse now or in the 1990's than it was at the time of most of these previous studies and theoretical assertions? Has the racial threat been lowered or accommodated for by changes in policing styles? Law enforcement has changed its practices through the implementation of community policing based programs and philosophies, and there have been many reforms brought about in the 1980's both legally and in law enforcement organizations themselves. There has also been an insurgence of research completed since the 1980's looking and very specific aspects of law enforcement, calling for changes in methods of police work. These are some of the issues that need to be considered in a more comprehensive study involved in testing the racial (minority) threat hypothesis.

In assessing law enforcement officer deaths from an economic threat perspective, some theorists have indicated assertions about this approach. Jacobs (1979) argues that inequality across economic status directly relates to the number of law enforcement officers employed per capita, while Jackson and Carroll (1981) report that economic inequality is related directly to expenditures by police agencies. To restate, these ideas built upon by Jacobs and Britt (1979), served to evaluate hypotheses derived from the conflict perspective. What they suggested was that economic inequality is an unnatural condition that has to be maintained by force. Drawing on the principle assumption that

law enforcement officers are agents of social control for the majority in society, Jacobs and Britt (1979) emphasized that law enforcement officer's duties are to assert the interest of the majority in society. This assertion, by law enforcement officer's leads to violent and fatal interactions between law enforcement and results therefore in their likelihood of being killed in the line of duty. What is interesting is that based on these assumptions, Jacobs and Britt found support for the economic threat hypothesis, but not the racial threat hypothesis when related to use of force by law enforcement officers. While not the same analysis as the present study, it is interesting to note the support for one threat hypothesis and not the other. With regards to the present study, support for the economic threat hypothesis was very limited if at all. For comparisons purposes, if it is assumed that use of force is linked to escalation (as previously discussed), and then the assumption could potentially be made that with greater use of force, comes greater escalation; which translates to a greater risk for death of law enforcement officers. If this holds true, then it should be assumed that the economic threat hypothesis would find greater support in the present study, when it actually had limited to no support across all six models of the analysis, in all 5 years of the analysis.

Turning then to a later approach of assessing economic threat, the work of Liska and Yu (1987) must be addressed. In their study, Liska and Yu asserted that individuals in the dominant or majority class were threatened by the presence of economic (and racial) minorities which resulted in great use of force by law enforcement officers. The results of their study indicated varied results finding little support for the economic threat hypothesis. If we assume as before, that use of force can be taken as an indication of escalation and thus an indicator for law enforcement officer death, then the findings

should support the economic threat hypothesis. It is clear though that support for the economic threat hypothesis was limited to nonexistent in both Liska and Yu's study and in the present study. If the foundation for these studies using the conflict perspective is that there is a link to police use of force on minority groups, then there are implications for citizen use of force against law enforcement officers; however the assertions of this approach do not seem to be upheld by the analysis and results of both studies.

An identifiable gap exists then, in the literature surrounding this issue of use of force with regards to studies identifying minority (both racial and economic minorities) attitudes towards law enforcement officers and these citizens, and the assumed actions that result from these negative attitudes. There are numerous studies (Kieselhorst, 1974; Marx, 1969; Wilson, 1975), which indicate that minority groups have negative attitudes towards law enforcement officers. For example, Kieselhorst (1974) indicates based on his subculture of violence thesis that there are several cultural themes that emphasize violence as an acceptable and noble way of displaying ones superiority. The themes in these cultures then support an atmosphere for violent police citizen encounters (Kieselhorst, 1974; Peterson & Bailey, 1988). The National Advisory Commission on Civil Disorders (1968) asserted this belief as well, suggesting that law enforcement officers are symbols of oppression for minority groups. Further, they assert that law enforcement becomes a 'tangible' target for dealing with their (the minorities) grievances against the dominant group in society, and the inequities imposed on the poor (The National Advisory Commission on Civil Disorders, 1968: 299 cited in Chamlin, 1989:356). If minority groups then view law enforcement officers as agents of social control who work for the elite, then it would make sense that these same citizens would

be more likely to have violent negative interactions with law enforcement officers. Then why does the analysis of this study and others find little support for the economic threat hypothesis? The most obvious observation is that while minorities representative of those in the lower economic strata appear to view law enforcement officers as a representative of their oppression by the dominant elite. The present study would indicate that they are not motivated to nor do they take action against those officers. One assumption made by this approach is that the minorities representing the economic threat act on their oppression by law enforcement officers, as representatives of the dominant group. Based on the present analysis of law enforcement officer deaths between 1995 and 1999, there is little support to suggest that these minorities take action against law enforcement officers, and if they do engage these officers, it does not seem to escalate to an action resulting in the death. What is also interesting to note is the use of force for many of the other studies. What has not been made clear is how they measured use of force, or how it is defined. How does one measure use of force when it is virtually impossible to account for all interactions between citizens and law enforcement officers? What type of force is measured – all methods on the force continuum, force resulting in an assault of an officer, or simply acts of aggression against law enforcement officers? This is another potential issue to resolve in future studies and an additional variable to consider.

In conclusion, it is reasonable to assume based on the literature that there would be support for both the racial and economic threat hypotheses. It is also plausible to assume at the outset that there would presumably be a measurable effect on the number of law enforcement officer deaths. To reiterate, the hypotheses are derived from the conflict perspective, which suggests that there are two distinct groups in society, the

dominant or majority group, known as the elites who empower law enforcement officers as agents of social control, to invoke their power and authority over the minority groups. This literature suggests that the threat to the dominant groups from the racial and economic minority groups can be controlled by increasing the number of law enforcement officers, their resources and their ability to use force as a necessary means of control against the minority group. This all sounds practical and very applicable when attempting to assess law enforcement officer deaths. However, there is limited to no support found for either the racial and economic threat hypotheses, in relationship to law enforcement officer deaths between 1995 and 1999, assessing all 50 states using the identified variables of percent minority or percent poor.

Limitations

As previously mentioned this study is exploratory in nature, and while there are a limited number of cases, it has led to some interesting findings that support further analysis and exploration. The future analysis and study will have to deal with many of the limitations of the present study. As indicated there are a very small number of cases in this study (N=131), looking at states with law enforcement officer deaths between 1995 and 1999.

While the initial idea was to then study the states with no law enforcement officer deaths, it has become apparent that to successfully assess the impact of threat hypotheses on the law enforcement officer deaths, a study inclusive of all of the states is required, over a much larger time frame. This is specifically required to measure the assumptions and

perform a true OLS regression analysis correctly, and potentially using a different form of regression that better assesses 'rare event' data.

Further, the use of states as a unit of analysis has been criticized for being too large or heterogeneous, particularly in relation to the study of crime or crime control from a macro-social perspective (Messner, 1982; Chamlin, 1989). Using states as a unit of analysis does present a problematic issue namely that of the ecological fallacy as addressed in Chapter 4. This is important because it is often tempting to make generalizations about one level of data and apply it to another or different levels of data (Johnson, 2000). There are however two concerns that recommend the selection of states as a unit of analysis. Based on the work of Lester (1978a) it is found that smaller aggregations than states tend to be incomplete. Further, the use of states facilitates comparisons to the extant multivariate research (Bailey & Peterson, 1988; Chamlin, 1989). Drawing on the previous research of law enforcement officer deaths from the conflict perspective, (and in the interest of assessing this approach), the determination was made to use states as a unit of analysis. The interpretations of this data were conducted at the appropriate level of analysis, with the understanding of the limitations of this approach.

Therefore, future efforts need to be made to address this issue of units of analysis and to perform an analysis that uses a more homogenous data set to further assess the relationship between law enforcement officer deaths and the structural effects of those deaths. Chamlin (1989) asserts that the use of cities could further elucidate the relationship between structural characteristics and law enforcement officer deaths.

Future Research

Given the findings of this study, which indicate variability and limited support for the independent variables used to assess law enforcement officer death, it is apparent that a study needs to be conducted to assess law enforcement officer deaths in all 50 states over a much longer time frame. This conclusion is drawn from the discrepancies between the present study and past research conducted on the same topic. While the results of this study indicate a lack of support for both the racial and economic threat hypotheses, a more longitudinal study of data of officer deaths may indicate support for the hypotheses. In other words, the years 1995-1999 may in and of themselves represent an anomaly with regards to the relationship between the threat hypotheses and law enforcement officer deaths; although no indication of this was present at the commencement of this study. This type of study, encompassing 20-30 years worth of data, would then give an assessment of the entire population of officer deaths in the United States, and a more accurate assessment could be made regarding the threat hypotheses and their relationship to law enforcement officer deaths.

To assess the threat hypotheses with greater accuracy, an analysis using the actual officer death counts could be performed. This could also address a more challenging approach to dealing with the unit of analysis limitation. For the purposes of this study, again states were used as a unit of analysis based on the previous studies conducted on law enforcement officer death, and to attempt to create consistency among the past studies and the present study. As discussed in chapter 4, there is some discensus regarding whether to use actual counts or officer death rate. If a future study was conducted using count data, a different regression technique could be used to analyze the

law enforcement officer death data. Not only could this technique allow for the actual counts to be used, but also this particular type of regression is more suited to data involving 'rare' events at the individual count level of analysis (Raudenbush & Bryk, 2002).

Additional deliberation must also be specified to the choice of variables used to assess law enforcement officer deaths. As previously mentioned, the racial threat variable has been different in most of the studies varying from percent black, percent with Hispanic surname, percent minority, and percent non-white. It is apparent that the data collected in different time periods (1970's, 1980's and 1990's) has varied, as well the number of individuals represented in these categories has also potentially changed. The call then is for a study that could combine all of the above categories; as well as allow for the separation of them in an analysis. This would help in measuring if the racial threat hypothesis is potentially supported in different minority or ethnic groups, and to account for the differences in all of the previous and current studies.

In the assessment of the economic threat hypothesis, this study looked at the percentage poverty, while other studies used different variables. Again, if a comprehensive study is to be conducted, consideration of all categories representing the economic threat variable must be explored. Allowing for an analysis inclusive of these variables could account for the discrepancies between past studies and the results of the present study. A more comprehensive analysis of inequality issues and cultural impacts must also be completed to determine if there are better measures of economic threat or additional variables that should be considered.

Other variables to bear in mind would include the divorce rate, as used in Chamlin's (1989) study. However the relevance or impact of the divorce rate on law enforcement officer deaths, while found significant in Chamlin's original study to law enforcement officer death; although divorce rate fails to have any concrete or applicable foundation to law enforcement officer death in the literature. Future studies could also include the unemployment rate as a method of assessing economic threat, and the use of force as identified in the previous discussion.

Most important is the theoretical approach used to assess law enforcement officer deaths. Future studies should look carefully at the definition of conflict theory and its underlying assumptions with relationship to law enforcement officer deaths. While it appears on the surface to provide a plausible approach for analyzing not only law enforcement officer deaths, but also both the economic and racial threat hypotheses as precipitators of those deaths. It is clear there is gaps in the literature and conflict theory its self. Specifically, suggestions could be made to assess more carefully how conflict is defined from research on the premise of minority group aggression. The literature is clear in saying that individuals in minority groups can identify law enforcement officers as representatives of the dominant or majority group in society, holding the power to assert controls over them. It also clearly establishes that minority group members have negative attitudes towards law enforcement officers. What is not clearly defined in this approach is the leap from recognition of law enforcement officers as these agents of social control, to the motivation and violent action taken against them as these representatives of the elite. Conflict theory in this study is not supported simply for the fact that there is limited to no implied acts of aggression found against law enforcement officers conclusively by

minority group members (as established by the variables in this study representing the threat hypotheses). There is no way to say based on the findings of the present study that law enforcement officers are killed in the line of duty, between 1995-1999, by minority group members who are acting out in protest against the majority – with the aggression taken out against law enforcement officers.

Chamlin's study was used as a foundation from which to base this research; this is again because it is one of only a few studies that explore law enforcement officer deaths. Further, because it is the only study looking at law enforcement officer deaths from a conflict perspective – specifically using the threat hypotheses. As previously discussed, a study using all of the variables representative of the racial and economic threat identified in both Chamlin's study and this study could serve to assess the validity of the threat hypotheses; and also may identify a distinction between different minority groups and their correlation with (or lack of relationship to) law enforcement officer death. Again the call for more research is not a critique of Chamlin's work or the present study, but to attempt to assess why the varying results between the two studies exist. Also to accommodate for the different time periods the studies were conducted in a study inclusive of multiple decades of data may be preferred and offer more insight than a smaller or limited number of years analyzed.

Consideration must also be given to the situational factors and circumstances that can potentially impact law enforcement officer death rates and identify areas of potential risk to law enforcement officers. This type of study is recommended not only to address the critique of other types of studies conducted on law enforcement officer deaths, but may prove to have more fruitful results and providing more impact to training, policy and

assessment of risks to law enforcement officers. Ideally, a study conducted to encompass both the structural and situational factors could be preformed. This could potentially assess not only the validity of the threat hypotheses but also has the potential to identify trends or patterns of circumstances under which law enforcement officers are killed. Similarly, a study could be conducted using offender data for comparison. A qualitative analysis of incident reports for each law enforcement officer's death could also be analyzed, exploring more richly the data available to determine factors that impact law enforcement officer death. Future research could also include a study comparing training standards or training practices with potential 'risk' situations, this could be conducted by state or department, and may address why some states have multiple deaths in multiple years and others have no deaths (in any of the years studied). Another potential study could explore those officers who survive a deadly mix situation and those who don't, attempting to draw a comparison study between the two distinct groups.

APPENDIX A

ADDITIONAL INFORMATION ON THE SOCIAL PSYCHOLOGICAL APPROACH TO LAW ENFORCEMENT OFFICER DEATHS

To better understand the social psychological approach the following information has been provided. Freud was one of the first people to explore issues of death in his psychoanalytic paradigm. Freud's paradigm looked at the "duality and the clash between instinctual drives and restraining forces whose resolution shapes human behavior in generally predictable ways" (Henry, 2004: 47). Due to the increased number of "absurd deaths and unlimited technological violence that exists" (Henry, 2004: 47), Lifton (1976) argues that "a paradigm organized around controlling images of death, the innate human sense of immortality and the continuity of life is more appropriate and meaningful"(26). Henry (2004) further asserts that:

Because concerns with death and expressions of man's sense of immortality are so much a part of contemporary human experience, we need to develop new ideas and new theories that will include them and lead us to a more comprehensive understanding of the behaviors ...of our times (47).

Since death encounters are such a profound part of contemporary police experiences, it is imperative and necessary to provide a better understanding of death encounters, "within a paradigm organized around these same issues, ideas, and theories" (Henry, 2004: 47). In exploring Lifton's formative-symbolic paradigm and the psychology of survival, it is clear that one of the most important factors is the human sense of immortality (Henry, 2004). "It is important to clarify that man's sense of immortality does not equate with a complete denial of death's reality or a firm belief in literal afterlife" (Henry, 2004: 47).

Lifton explores the sense of immortality in relation to the works of Freud, Jung, and Rank. Lifton suggests Freud outright ignored the concept of immortality, rejecting the reality of the literal afterlife. Jung in contrast to Freud "demonstrated less regard for the rational demands of scientific knowledge in the way he addressed psychological issues, including questions of death and immortality" (Henry, 2004: 48). Jung simply

concluded that in the absence of scientific proof there was no way of knowing about immortality's existence, but that individuals have culturally and spiritually felt the need to believe in the afterlife. Rank like Freud, felt that immortality was an irrational concept, however he believed that it served as an important component to human psychology (Henry, 2004).

In shaping his formative-symbolic paradigm, Lifton included concepts from both Freud and Jung's work, and incorporated observations from Rank's work; however Lifton focused more heavily on the symbolic formation in the fundamental process of immortality.

Rather than focusing on particular symbols as representations of equivalents for some other thing (a flag as symbolic of a nation...), Lifton's emphasis is on the continual psychic process of creating and re-creating experiences as viable inner images, forms and meanings (Henry, 2004: 49).

"Lifton says, in other words, the sensory stimuli we take in from the surrounding environment are perceived as mental images" (Henry, 2004, p.49). Lifton further asserts that:

the immediate images we experience at a given moment connect and activate similar preexisting images from past experiences, and the immediate and preexisting images combine...Because every new experience results in some subtle or overt alteration in our inner images and forms, our sense of self is constantly evolving and changing (Henry, 2004: 49-50).

In Lifton's model, there is an emphasis on a man's sense of immortality, where there is an idiom of continuity and connectedness, suggesting that individuals have only an unsure "middle knowledge" of the concept of death.

We know intellectually that we will die but also resist and fail to act upon this knowledge. No matter how profound our resistance to the idea of our death may be, we can never completely obscure or evade the fact that we will someday die, and man requires symbolizations of continuity and other imaginative forms of transcending death in order to continue functioning ...to avoid becoming completely overwhelmed and immobilized by the prospect of death (Henry, 2004: 50).

Lifton furthers his model by suggesting that there are five different modes of symbolic immortality, referring to the three that link directly to the topic of policing. The

biological mode refers to the biological succession of individuals in offspring and their forbearers, which “extends outward to encompass cultural and biosocial connections that include kinship groups, tribes, subcultures, people, races, and nations” (Lifton, 1976: 32). Linking this to policing, there are common biological modes in policing, what Henry expresses as “family traditions of policing.” Examples include situations where individuals have parents, children, and other family relations who are members of the same department or involved in other law enforcement agencies. The traditions of having offspring or family members follow in ones “footsteps.”

Second is the creative works mode of immortality. This mode refers to the idea of “living on” or being remembered for having “made a difference” (Henry, 2004). Law enforcement officers certainly have the opportunity to influence those around them; those they question, arrest, and assist as part of daily interactions within their communities.

Although some officers may be initially reticent to proclaim the value they place on altruism and unselfish public service, many or most were to some extent motivated to enter policing by a sense of idealism – the idea they could make a significant contribution to society by working to “do justice” (Henry, 2004: 52).

The last mode of immortality is the symbolic immortality. Symbolic immortality is the state of experiential transcendence, “an ecstasy or rapture so intense that ones sense of the material world, of time and place, of past and present, and of death and disintegration disappear” (Henry, 2004: 53). In law enforcement this can be referred to as the “thrill of the chase” or “the adrenaline of the moment.”

Many officers who find themselves engaged in mortal combat experience a kind of ecstasy, and many or most officers will at some point experience the exhilaration and the unique perceptual intensity that often accompanies other forms of physical combat (Henry, 2004: 53).

In discussing immortality, one must also explore the sense of mortality.

Lifton accounts for the sense of mortality by describing a process in which the psychic representation of death evolves from rudimentary and relatively unformed articulation in the young organism's inchoate imagery and moves toward more sophisticated symbolizations in maturity (Henry, 2004: 54).

In relating this to an infant, we find that newborns have an innate sense that cannot be explained by learning or by instinct. Infants expect to be nourished, and they:

know something about the breast and how to make use of it to enhance their own life process: it is an inchoate biological response...[to begin]...suckling...[The] inchoate image is an innate tendency, direction, or physiological "push" that is present in young human organism and the undeveloped "wired in" inchoate image involves an interpretive anticipation of interacting with the environment (Henry, 2004: 54).

In simplistic forms, individuals have an innate sense of survival and to continue their existence – to be viable human beings.

In the same context individuals strive to be viable beings physically, they also strive to preserve their vitality.

Just as man struggles from the time of birth to maintain the integrity and viability of his physical organism and to avoid biological extinction through physical death, so too does man struggle psychologically to create form and to preserve a sense of self as alive (Henry, 2004: 54).

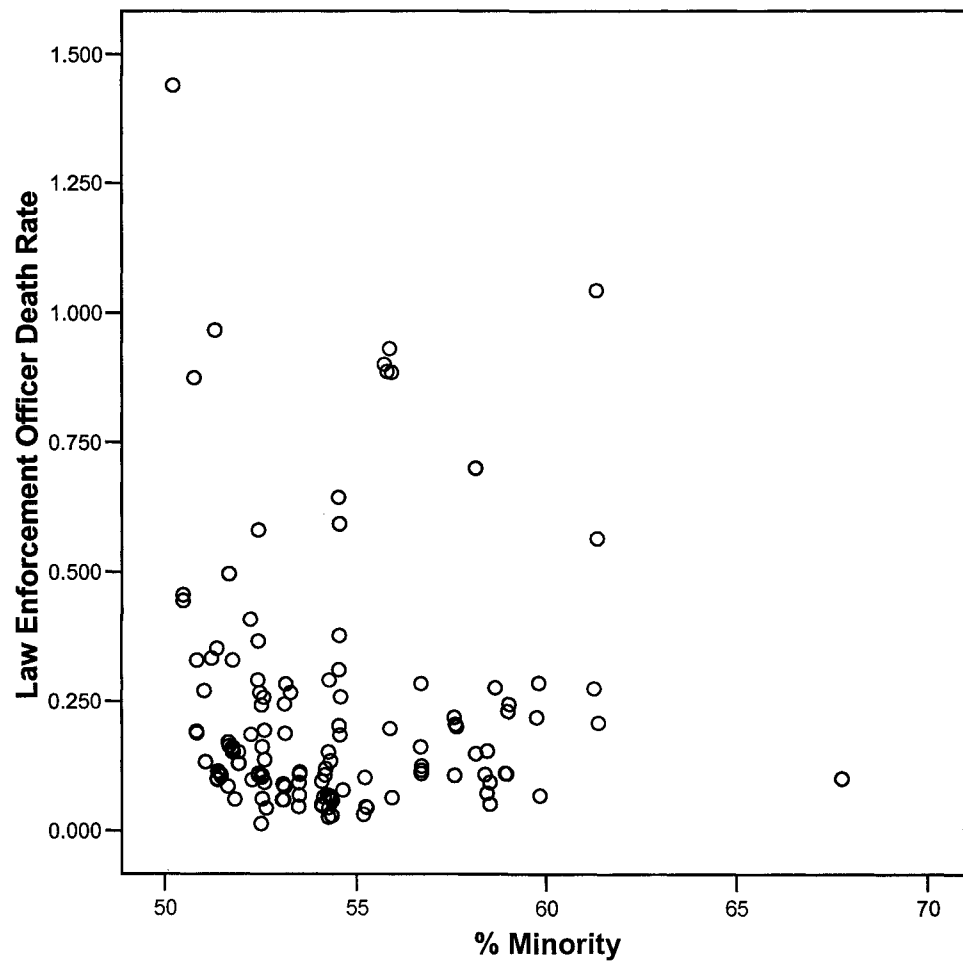
To explore this more closely, Lifton suggests the use of three sub paradigms including: connection versus separation (connections with other people and attachments to groups), integrity versus disintegration (self-preservation and the awareness of the life cycle), and movement versus stasis (progress, growth and change).

Lifton calls these images of separation, disintegration, and stasis death equivalents, and they serve as psychic precursors and anticipatory models for the more highly symbolized images and feelings about death that develop with maturity (Henry, 2004: 54).

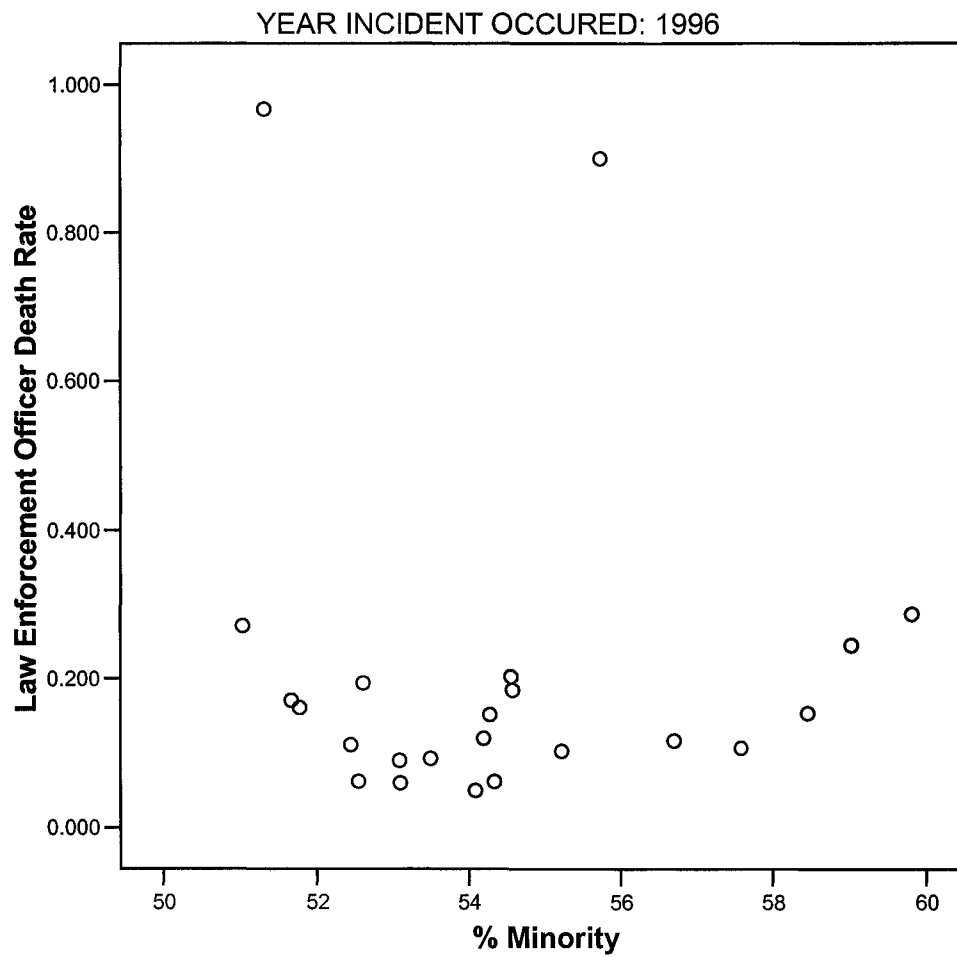
It is key to understand that these images and death equivalents are paramount in the maturation of individuals. The formative symbolic process is shaped by imagery (of death) throughout the life cycle (Henry, 2004). In some cases individuals will become psychically numb, avoiding or refusing to accept new images placed in front of them as a process of preservation or to avoid becoming overwhelmed with unmanageable images;

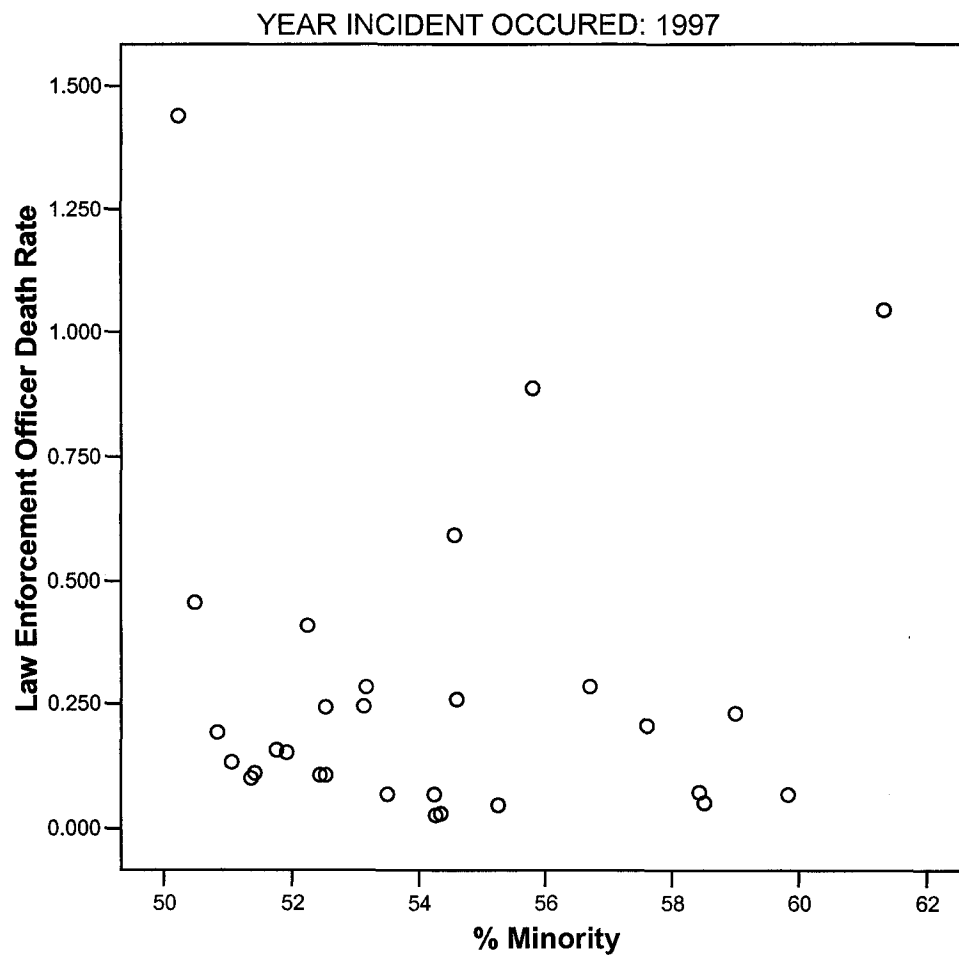
and further dissociating themselves with the images to avoid trauma – to numb themselves out of a sense of survival. Lifton also discusses the death imprint and death guilt as important to the element of psychological survival linked to law enforcement officer deaths more recently in the writings of Henry.

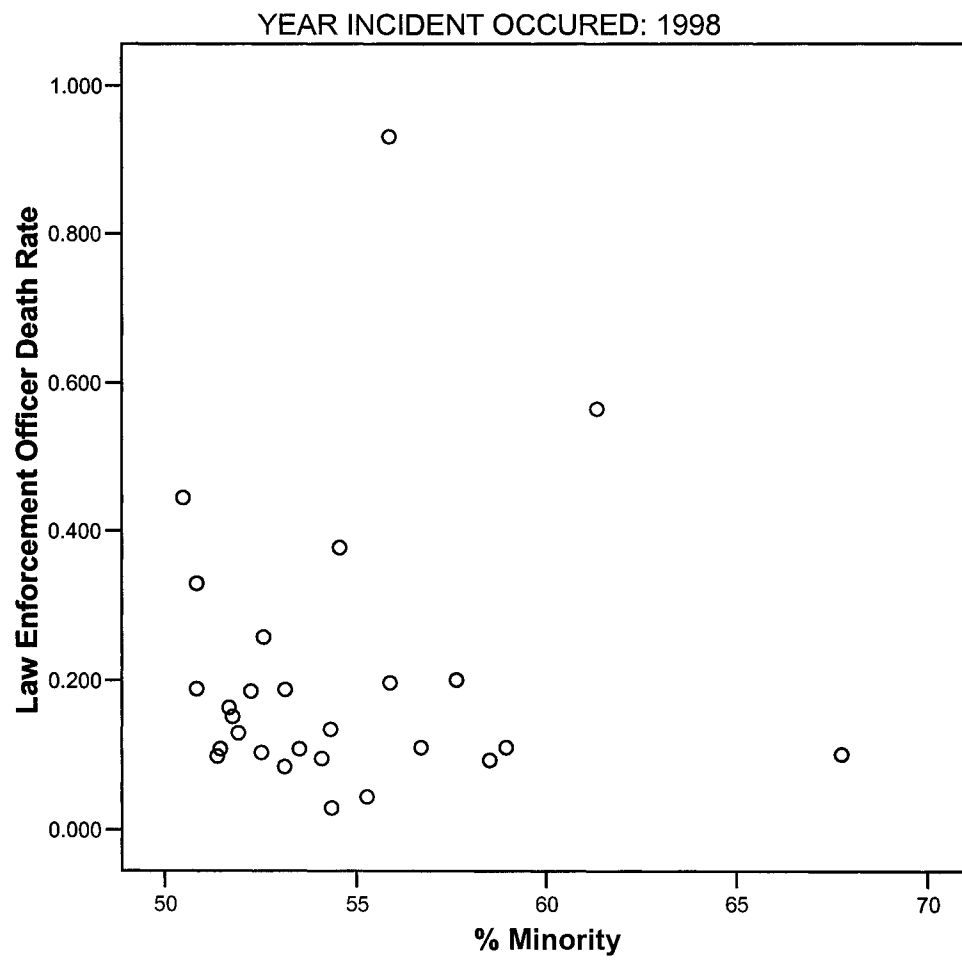
APPENDIX B
BIVARIATE SCATTERPLOTS

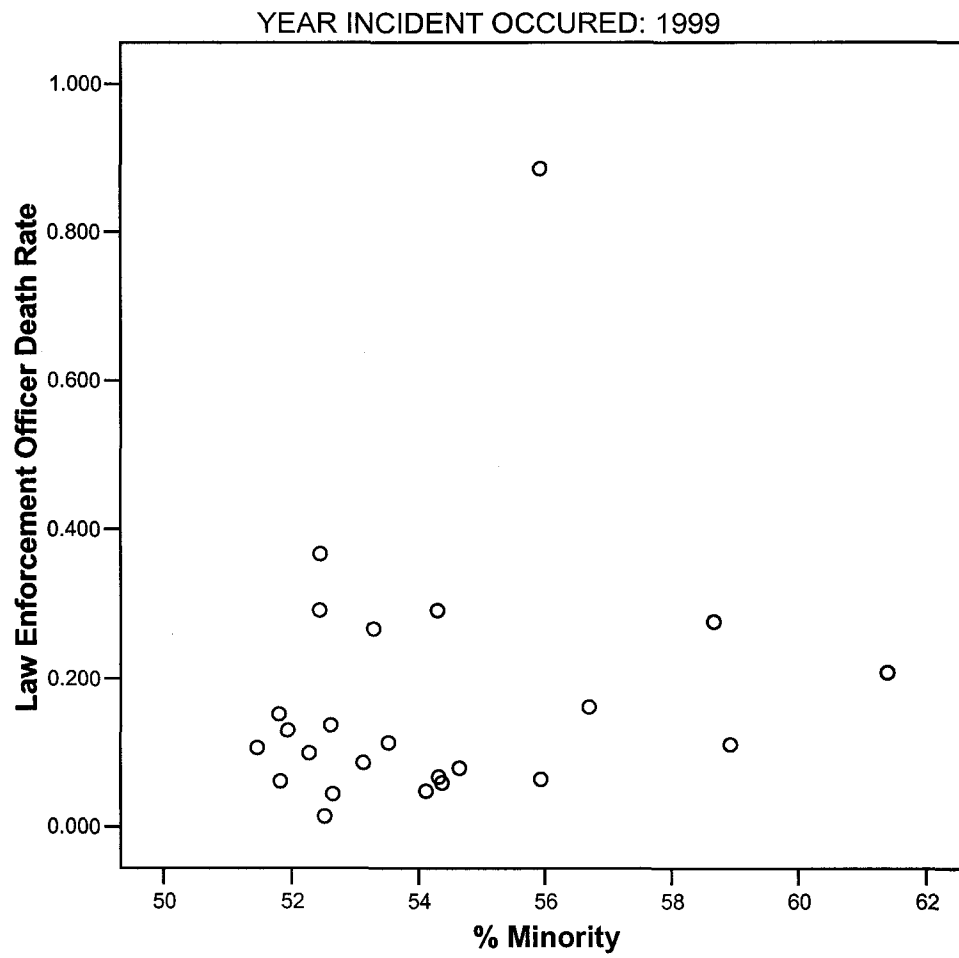


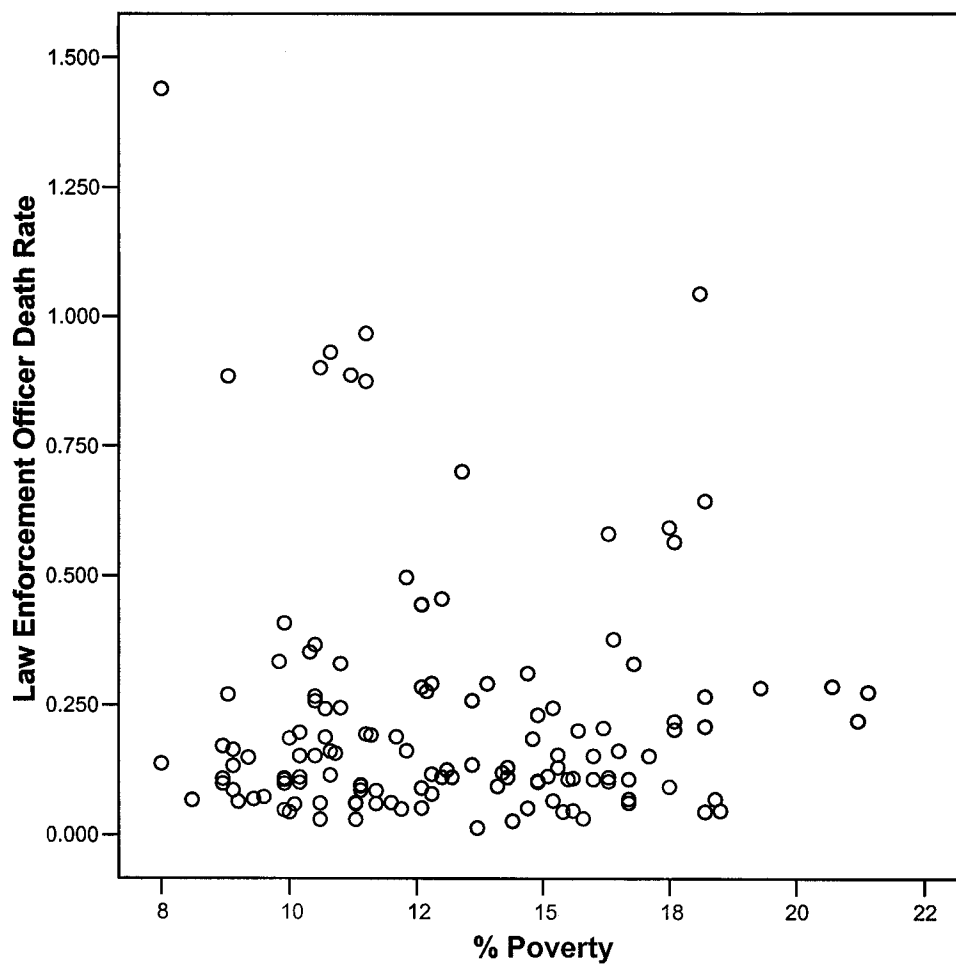


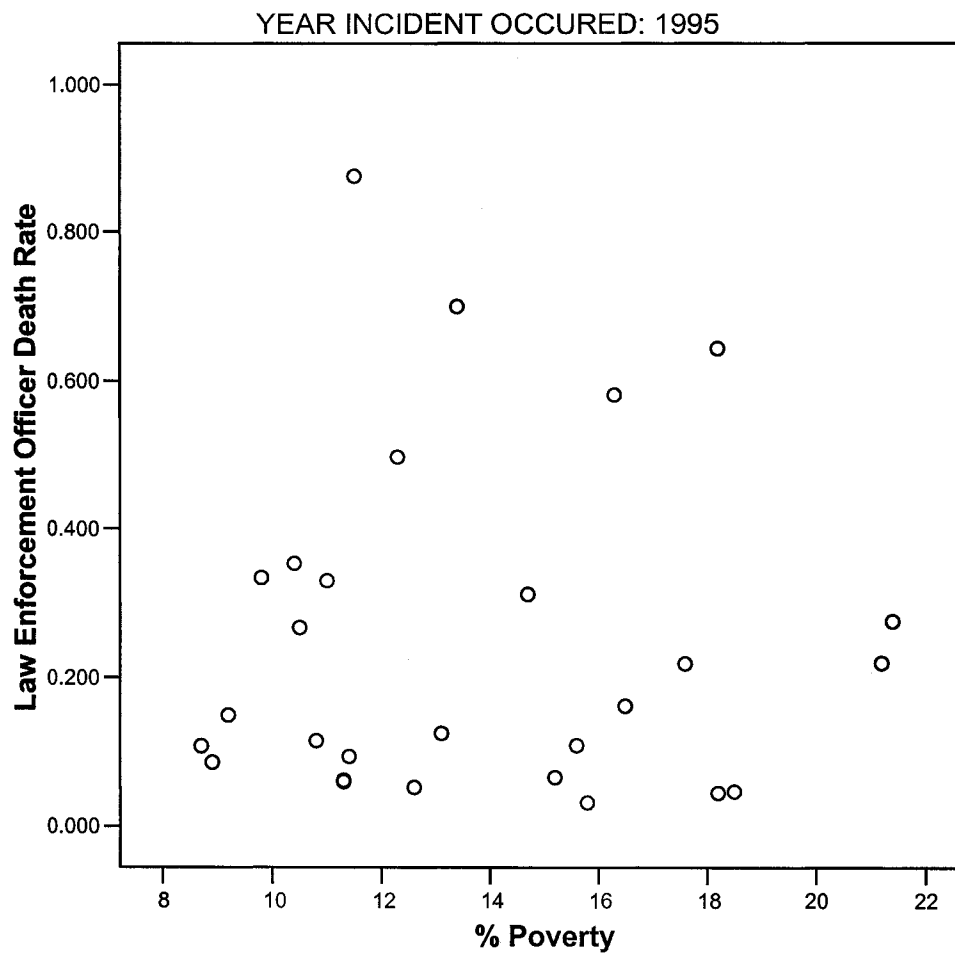


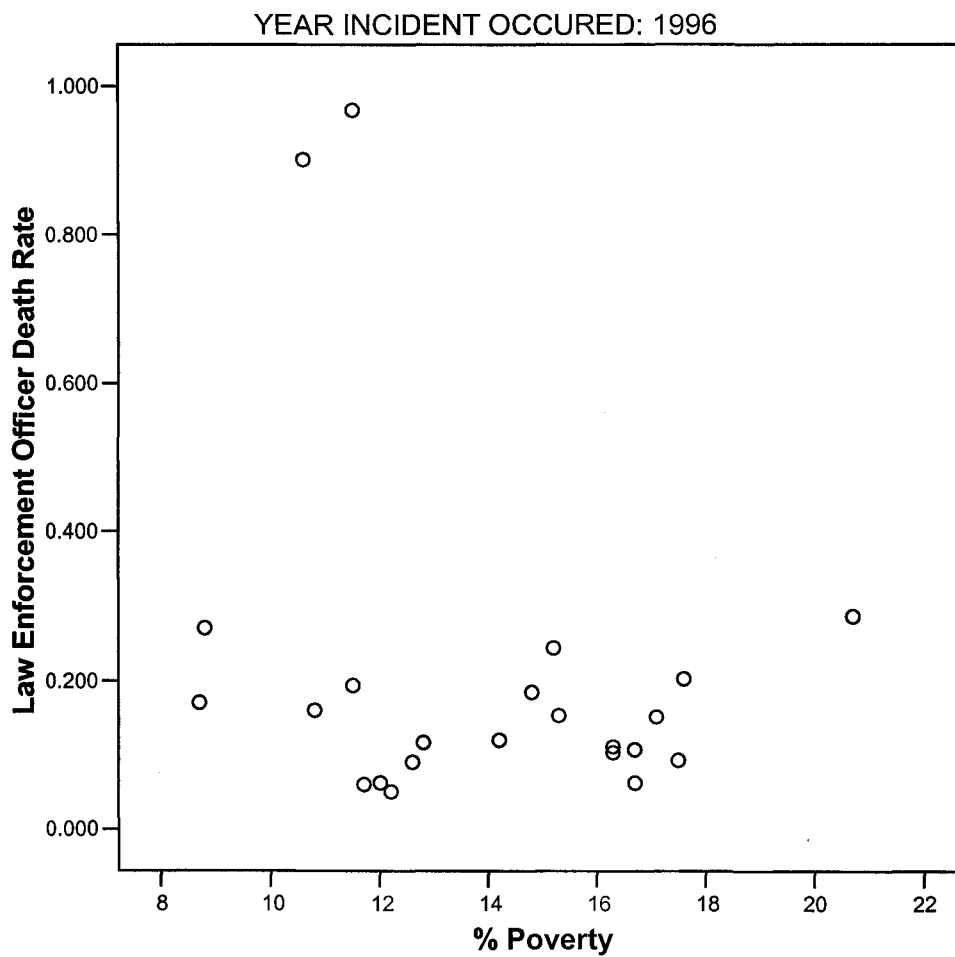


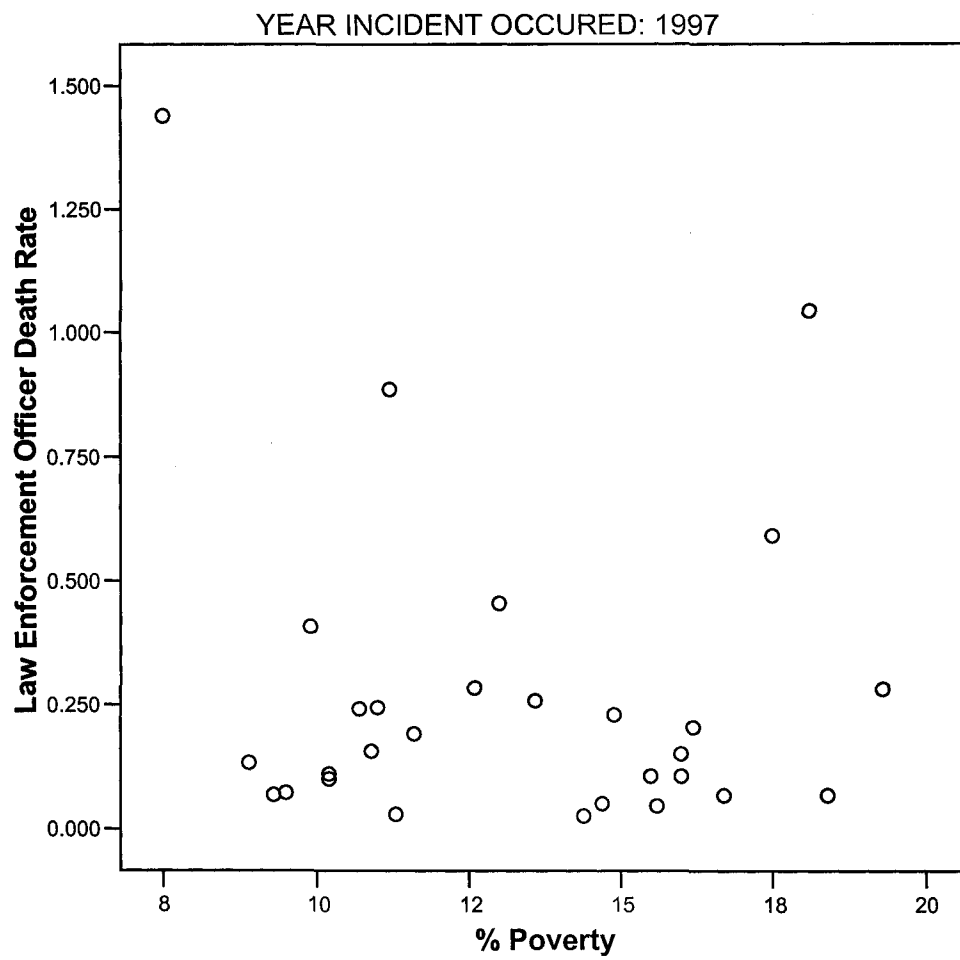


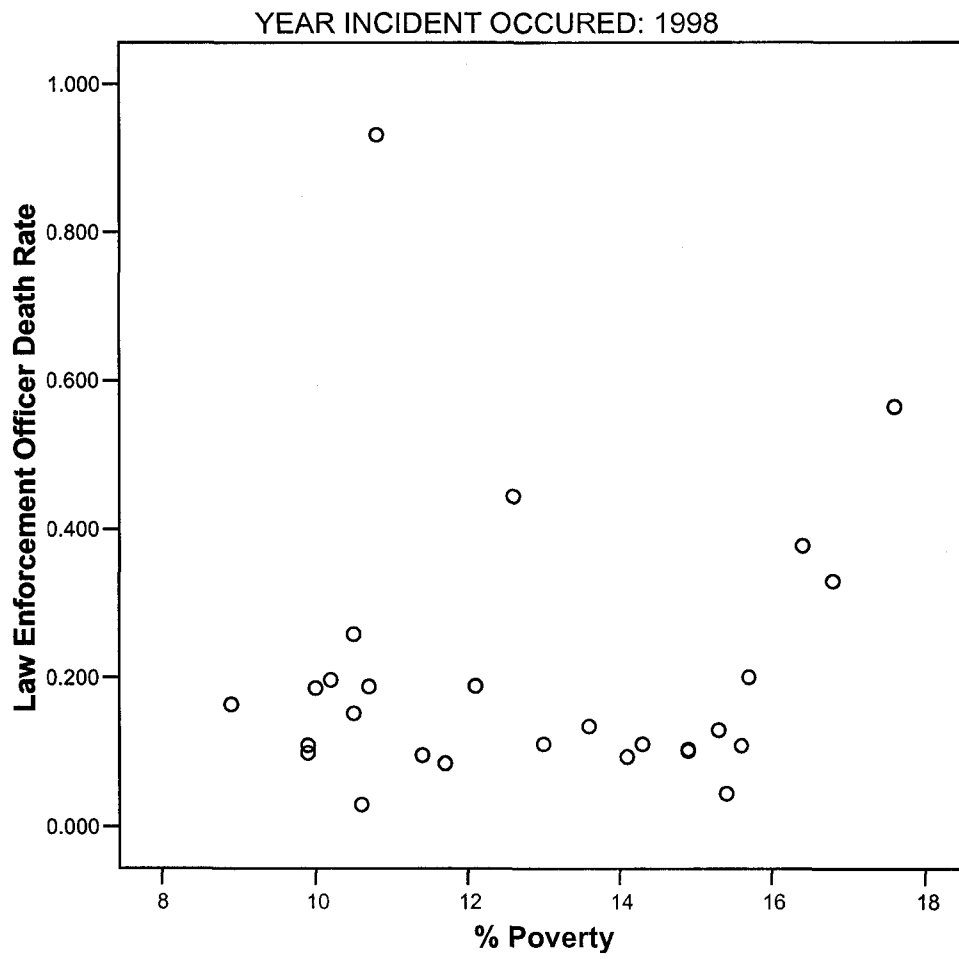




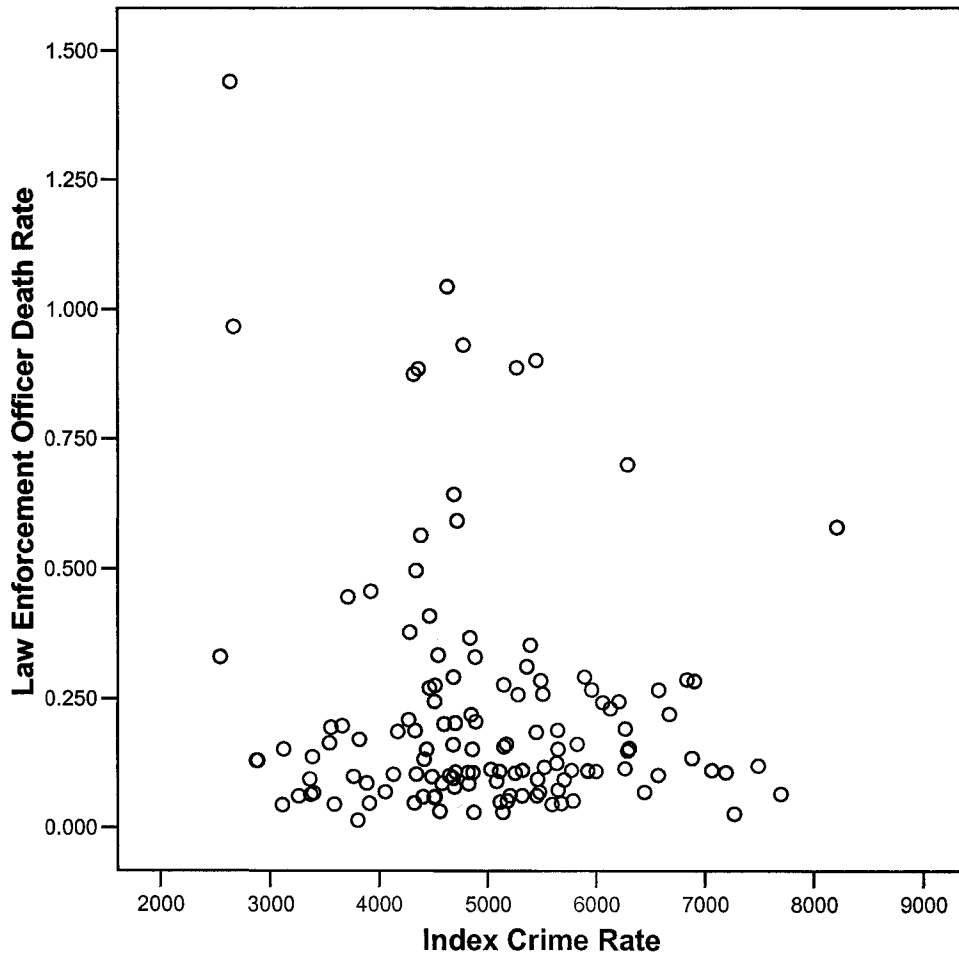


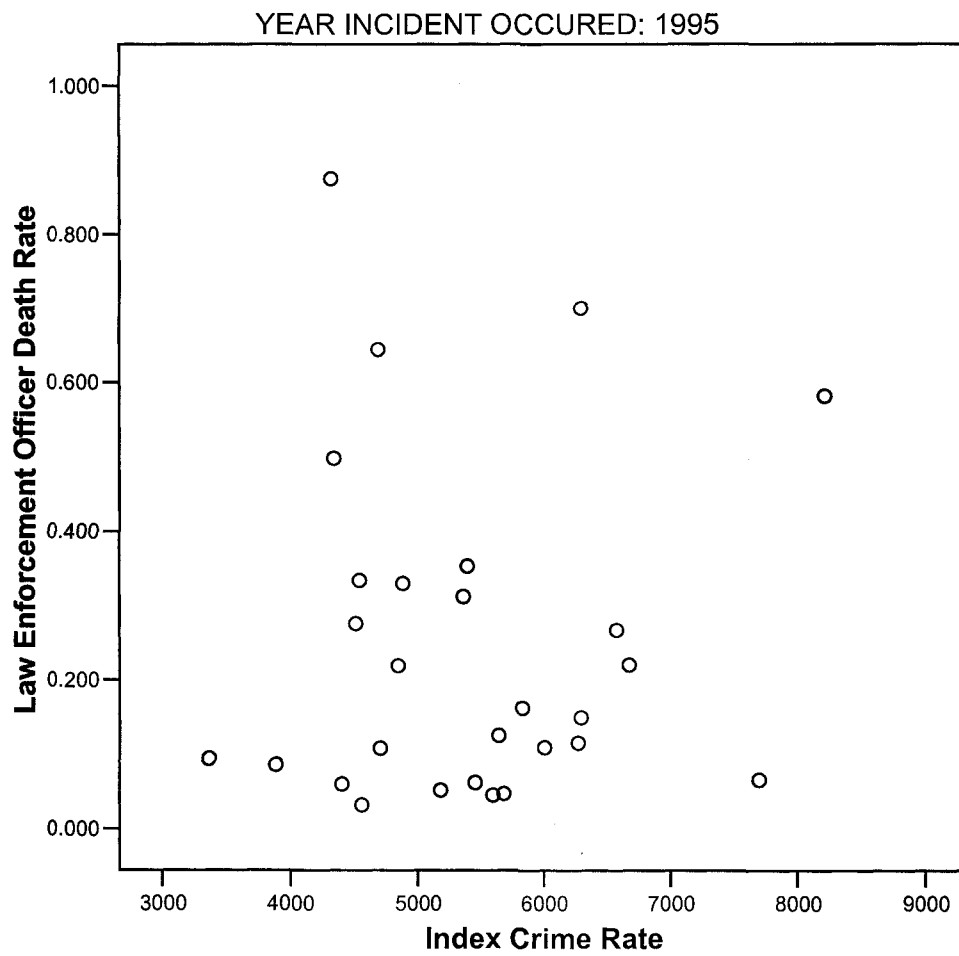


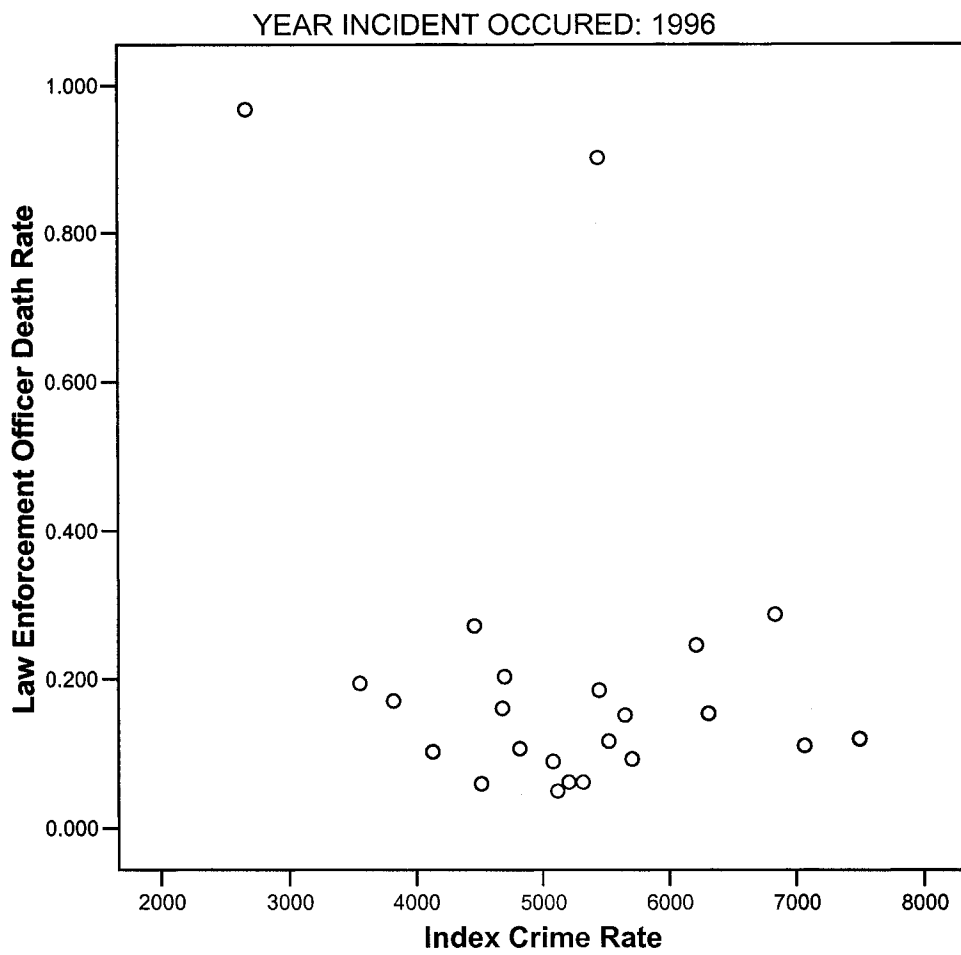


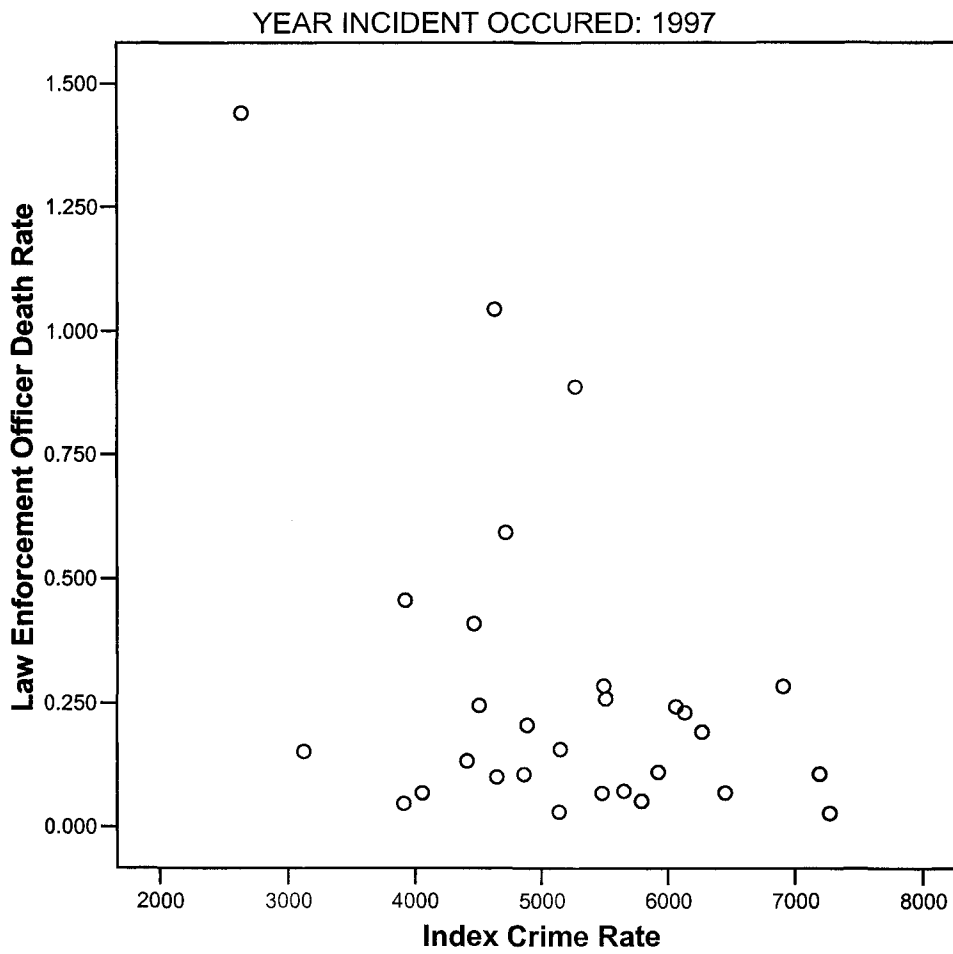


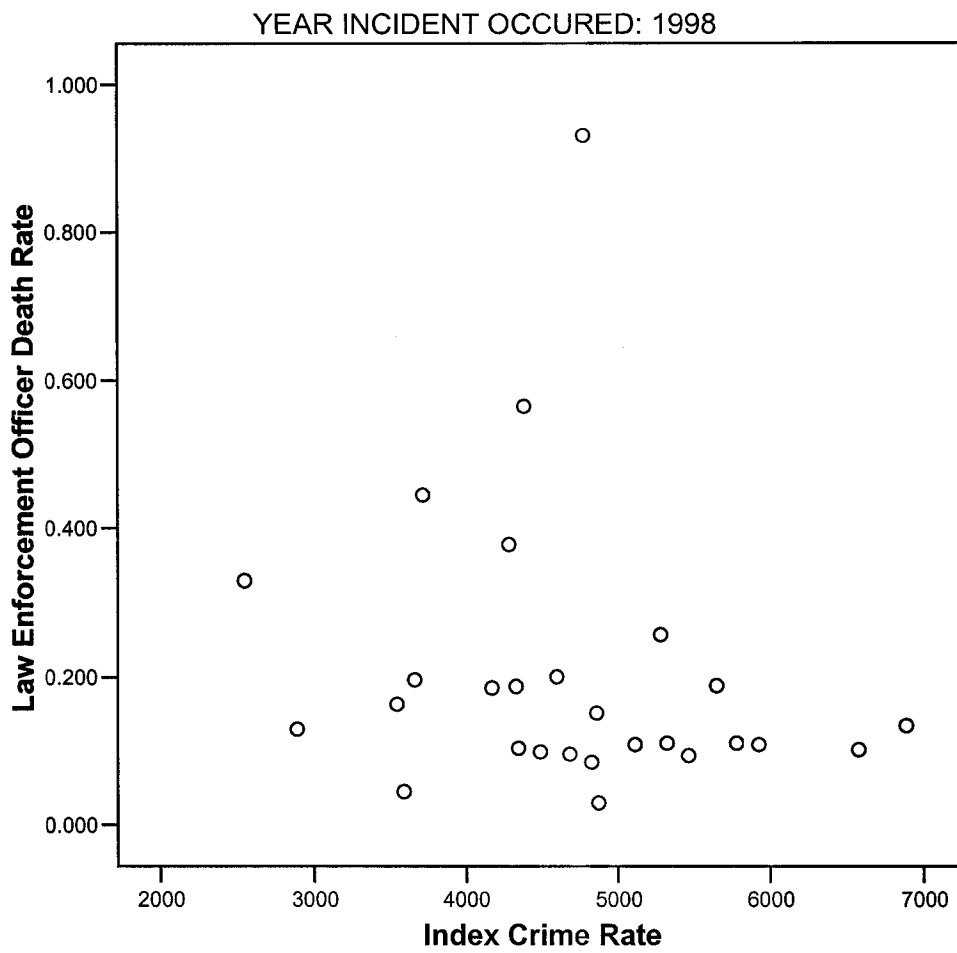


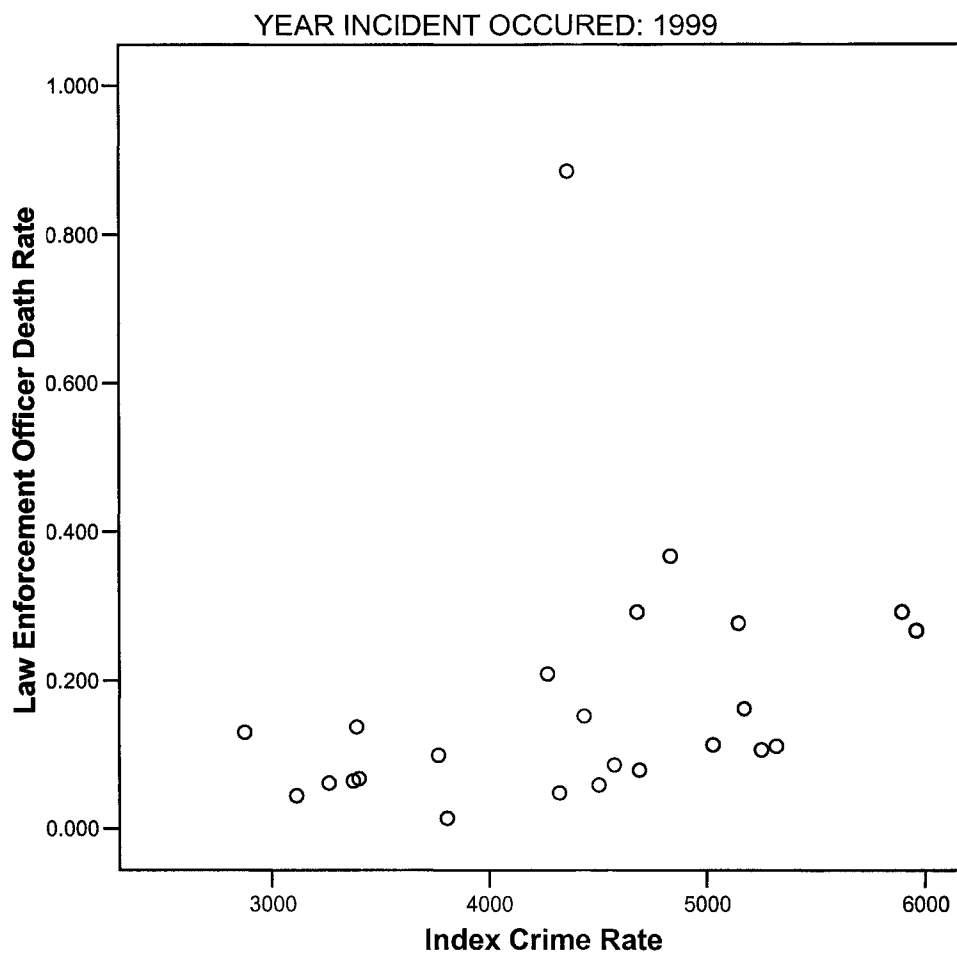


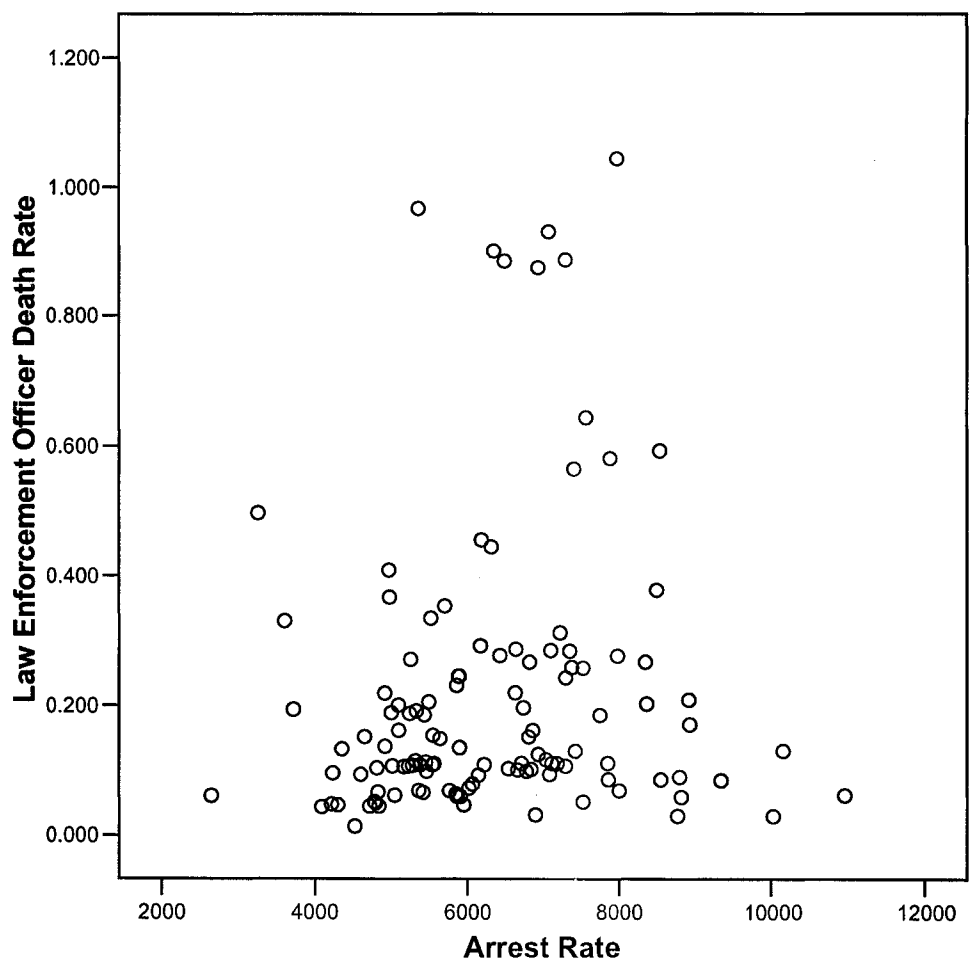


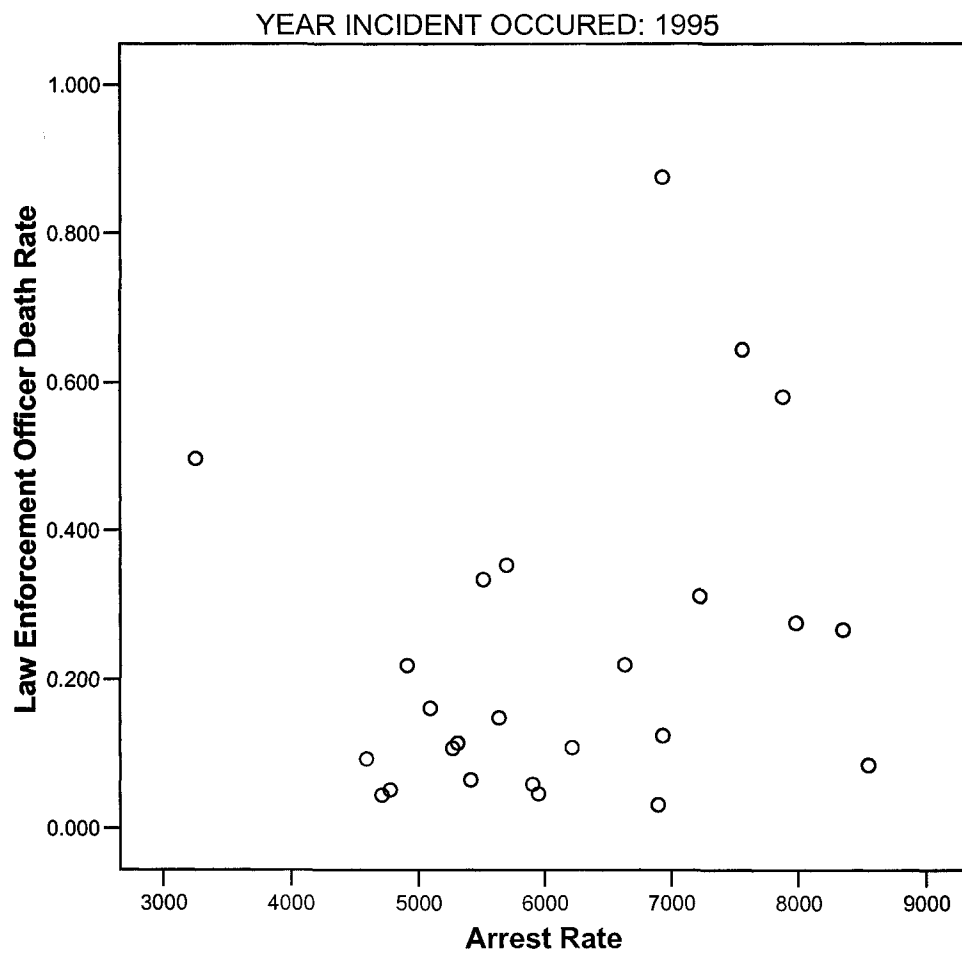


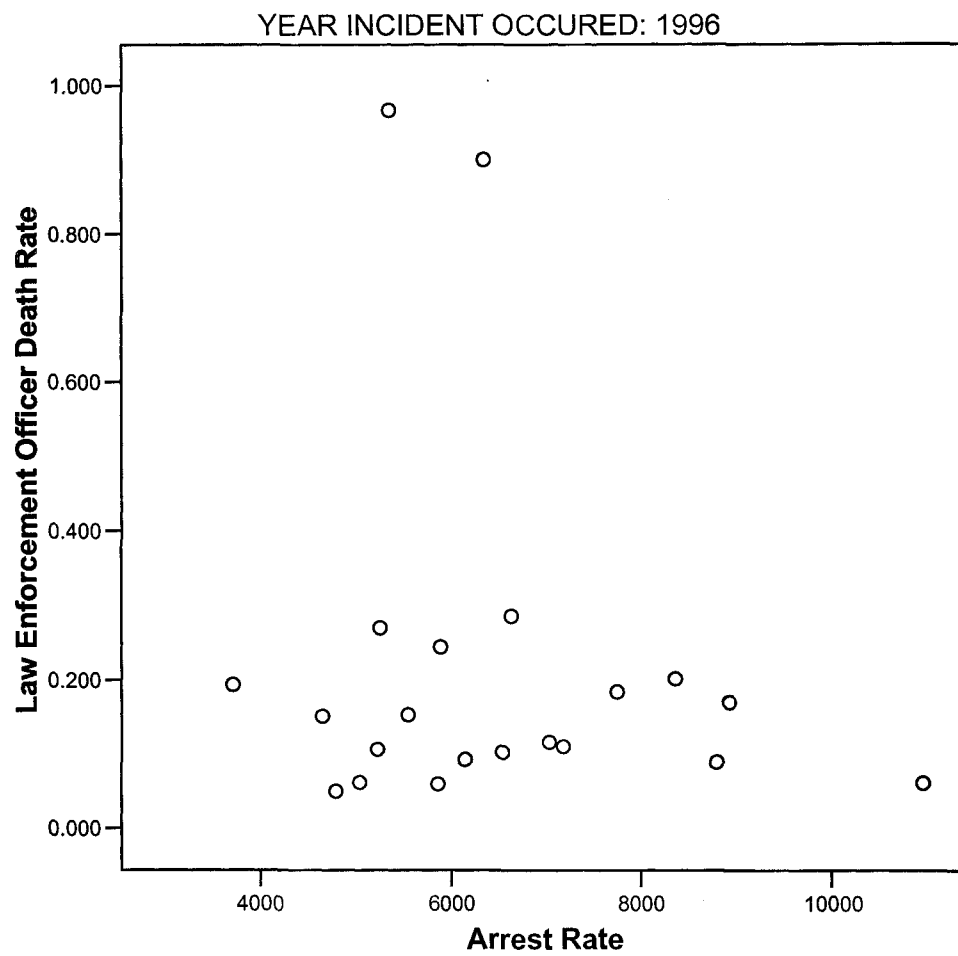


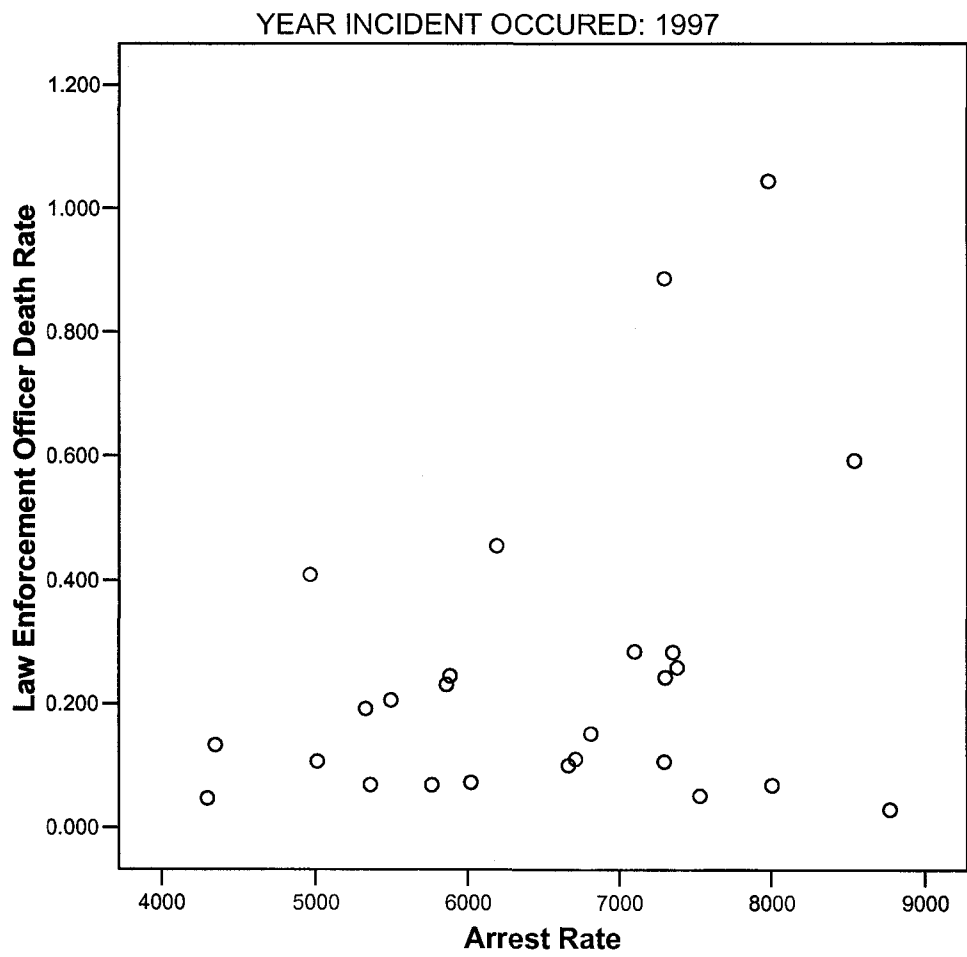


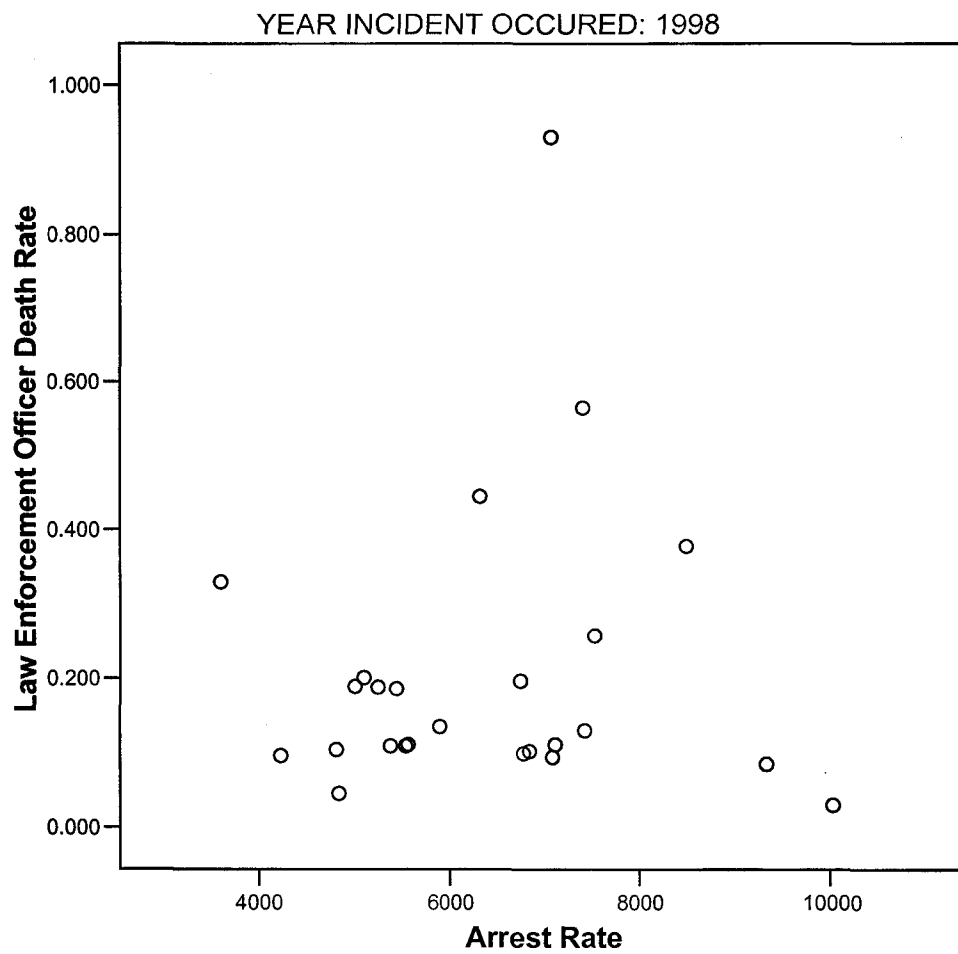


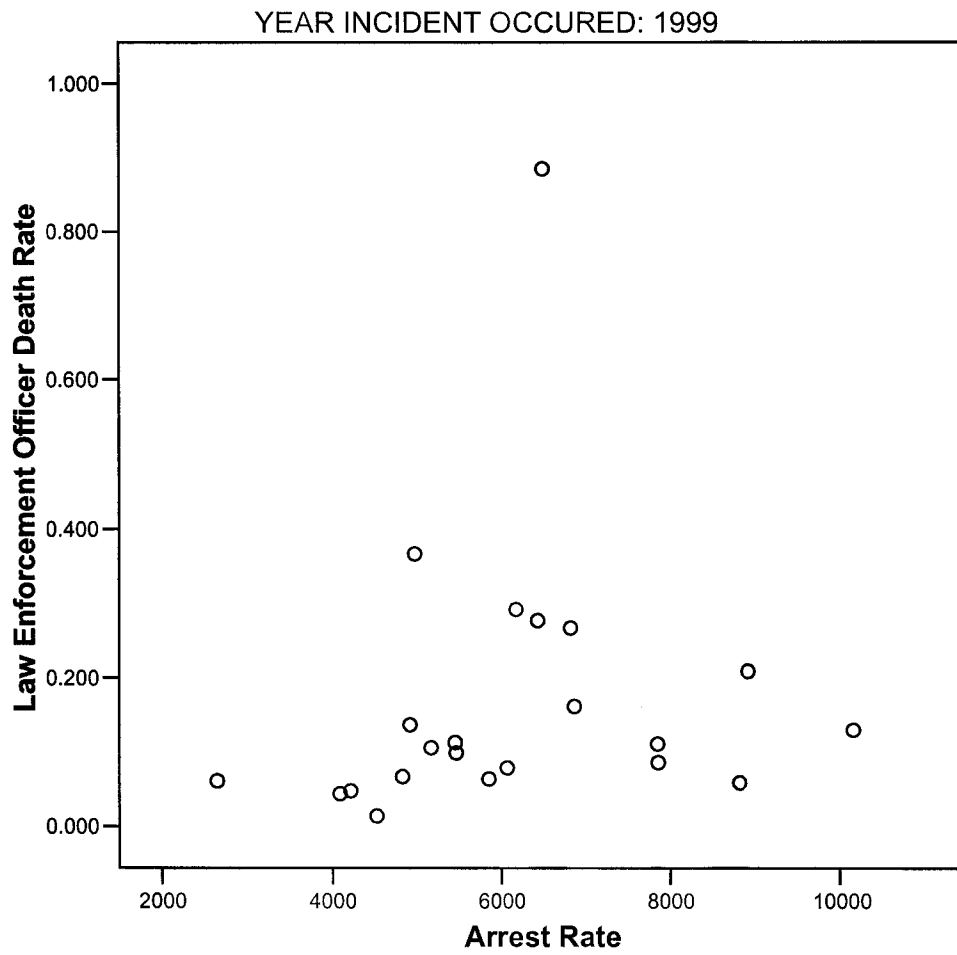












APPENDIX C

ASSUMPTIONS OF ORDINARY LEAST SQUARES REGRESSION

This appendix is a brief discussion of the major assumptions of ordinary least squares (OLS) regression, as well as the impact of influential cases and univariate normality on the results of OLS regression (see Chatterjee & Price, 1991). Influential cases will be determined using influence statistics. These statistics, by definition, measure the impact of a given case on the regression results. In other words, influential cases will affect the value of the slope coefficients and/or the standard error estimates, which will affect the significance tests. If justifiable, the influential cases should be removed.

Univariate normality must be assessed because it could have an impact on multivariate normality. To identify whether or not univariate normality exists, the univariate distributions and normality tests should be analyzed. If univariate non-normality is found, the variables should be transformed. One possible transformation is the logging of variables.

The first assumption to be discussed, linearity, is the most important assumption. This assumption is that the model is linear in its parameters; OLS regression assumes that a straight hyperplane is the best possible description of the relationships of the dependent and independent variables. The nominalization test is run to determine if this assumption is violated. If the assumption is violated the curve fit estimation is run to determine how to correct for nonlinearity.

The second assumption is multivariate normality. Multivariate normality exists when the residuals are normally distributed. If this assumption is violated, the standard error estimates are overestimated, thus increasing the probability of committing a Type II error. If the residuals are highly skewed, the interpretation of the R^2 is compromised. If multivariate non-normality is found, then the variables should be transformed. Typically,

the variables identified as non-normal by the univariate distributions would be logged in order to create a more normal residual distribution.

The third assumption is the absence of collinearity. In other words, there are no linear relationships between the independent variables. If this assumption is violated, there will be over inflated standard error estimates. This will make it difficult to reject the null hypothesis, which will increase the amount of Type II error. One way to determine if variables are collinear is to look at the variance inflation factor (VIF); if the VIF is greater than 2.5, then that variable is collinear. Collinearity can be corrected by removing the collinear variable(s) or creating an index by combining the variables that are most likely to be collinear.

The fourth assumption to be discussed is homoskedasticity, which is the assumption of equal error variance. This assumption is violated when the size of the squared residuals changes systematically with the value of one or more the independent variables. If this assumption is violated, the standard error estimates are either underestimated or overestimated, which thereby affects the significance tests. One of the methods researchers can use to determine if the assumption has been violated is the White's test. The White's test statistic is calculated by multiplying the sample size by the R^2 of a regression in which the squared residual is the dependent variable. The residuals will be homoskedastic as long as the value of the White's test statistic is less than the critical value. If the assumption is violated, then a weighted least squares regression, which produces more efficient standard error estimates, will be conducted. The weight factor would be determined based on an analysis of the partial plots of the residuals and the independent variables.

The final assumption that will be discussed here is autocorrelation, which is the assumption that the residuals are independent of or uncorrelated with adjacent residuals. In this study the concern would be with spatial autocorrelation, because of the potential for the residuals of adjacent states to be correlated. To control for the potential of spatial autocorrelation, an additional variable could be added to the model. This variable would measure, for each state discussed, the law enforcement officer death count for adjacent state(s). This measure tests for the presence of positive autocorrelation for states that border one another.

APPENDIX D

HUMAN SUBJECTS INSTITUTIONAL REVIEW BOARD APPROVAL LETTER

Date: November 15, 2004

To: Charles Crawford, Principal Investigator
Kasey Tucker, Student Investigator for dissertation

From: Amy Naugle, Interim Chair

Re: Approval not needed

This letter will serve as confirmation that your project "A Structural Analysis of Law Enforcement Officers Feloniously Killed Nationally in the United States, 1995-1999" has been reviewed by the Human Subjects Institutional Review Board (HSIRB). Based on that review, the HSIRB has determined that approval is not required for you to conduct this project because you will analyze secondary data available on a publicly available data source. Thank you for your concerns about protecting the rights and welfare of human subjects.

A copy of your protocol and a copy of this letter will be maintained in the HSIRB files.

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