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Subcultures of self and other-directed violence: Suicide, homicide and accidental death in the United States, 1980-1984

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SUBCULTURES OF SELF AND OTHER-DIRECTED VIOLENCE: SUICIDE, HOMICIDE AND ACCIDENTAL DEATH IN THE UNITED STATES, 1980-1984

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DISSERTATION

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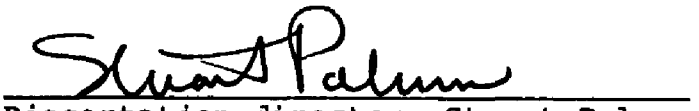

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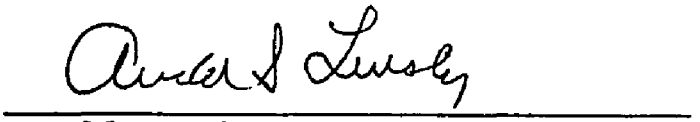

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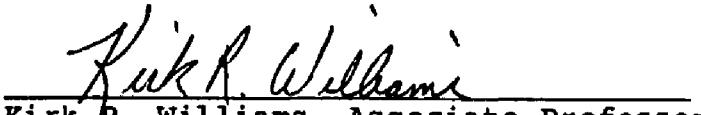

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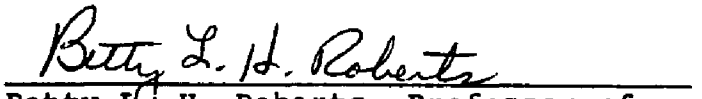

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ABSTRACT

SUBCULTURES OF SELF AND OTHER-DIRECTED VIOLENCE: SUICIDE, HOMICIDE, AND ACCIDENTAL DEATH IN THE UNITED STATES, 1980-1984

by

Kimberly A. Vogt
University of New Hampshire, May, 1989

This study examined suicide, homicide, motor vehicle accidental death, other accidental death and a combined violent death rate for each of the fifty U.S. states. Suicide, homicide and accidental death are all defined as forms of violent death. Three characteristics were identified that provide the rationale for studying violent death in aggregate form: 1)the intent of the action, 2)aggression, and 3)self destructiveness and risk taking. Two theoretical explanations were used in the examination of violent death rates. The theory of the functional alternative was used to explore the relationship among the different forms of violent death. The theory of a subculture of violence was used to explain the combinations of social characteristics which statistically best predicted increased risk of violent death. Multiple regression analyses examined the relationship between rates of violent death and measures of cultural support for violence. Sex and race-specific rates of violent death (e.g. white female homicide rate) were regressed on the predictor and control variables (Index of Legitimate Violence, divorce rate, percent poor, percent metropolitan, percent black,

Confederate South/ Nonsouth and percent aged 18-24). The final regression models demonstrated only mild support for the subculture of violence thesis. The most striking lack of support for this hypothesis was demonstrated in the homicide models. The Legitimate Violence Index, percent black, and Confederate South, all variables that have been positively correlated with homicide in past research, were not significantly associated with sex and race-specific rates of homicide. The models for motor vehicle accidental death were very well explained by the subculture of violence argument. The Index was also significantly associated with black and white male suicide, and white male combined violent death. It was concluded that future research should continue to explore the relationship among suicide, homicide and accidental death. The use of disaggregated rates of violent death should also be further explored.

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CHAPTER I

INTRODUCTION

The purpose of this dissertation is threefold: 1) to examine theoretically the relationship between homicide, suicide, and accidental death as forms of violent death, in a sociological context; 2) to determine the pattern of suicide, homicide, and accidental death rates in the 50 American States; 3) to examine whether Straus' (1985) Legitimate Violence Index and/or conventional determinants of violence such as region and race explain variations in the rate of suicide, homicide, and accidental death from the perspective of the subcultures of self and other-directed violence.

Social scientists have long studied violence in its various forms. A great deal of research has focused on victims of homicide and suicide (e.g. Durkheim 1951, Wolfgang 1958). Few researchers, however, have studied accidental death as a form of violent death (e.g. Michalowski 1977, Porterfield 1960). Rarely have researchers compared these three forms of violent death together (e.g. Holinger 1980, Weiss 1976, and Whitlock 1971). Research studying all three forms of violent death together has, for the most part, focused on establishing age, sex, and race differences in the rates, in an epidemiological fashion, without seeking to explain the

differences in the rates. The research that has been done on violent death, has highlighted the impact of violence on our society, particularly in terms of the number of young lives lost (Braucht et al. 1980, p. 310).

Researchers continue to study violence in an effort to explain the form, process, and varying rate of violence. Homicide and suicide are two of the most well researched forms of violent death. The tradition of studying these forms of violence stems, at least in part, from Durkheim's early work on suicide. Durkheim studied the effects of sex, occupation, and marital status on suicide rates within different regions of France, using data from death certificates. Durkheim found that suicide varied from province to province, and that the variation could be explained by the degree of group integration as measured by factors such as marital status. Since Durkheim, many studies of sociological significance have arisen from researching these forms of violence, for example, Gibbs and Martin's (1964) theory of status integration and suicide, and Wolfgang and Ferracuti's (1967) subculture of violence thesis.

Compared with homicide and suicide, few researchers have studied accidental death from a sociological perspective. Accidental deaths, by definition, appear to be beyond the realm of social control and understanding. The 'blame' for accidental deaths is, for the most part, not attributed to specific social conditions associated with

suicide and homicide. Accidents are most often attributed to individual carelessness or acts of nature. Epidemiological studies such as Weiss (1976), however, have demonstrated that rates of accidental death are not randomly distributed throughout the population.

Porterfield (1960), Suchman (1970), and Whitlock (1971), all examined accidents in a social context. These researchers identified sociological concepts such as role, status, and aggression to explain the variation in the rate of accidental death. Accidents have been compared with suicide and homicide as a form of social deviance. This comparison has allowed researchers to utilize ideas from other areas of deviance research, for example:

> "Porterfield (1960) has demonstrated that the accident rate is significantly associated with other indices of social pathology such as suicide, homicide, and crime. To some extent accidents, like suicides and homicides, may represent 'the socialization of aggression' (Gold, 1958)" (Suchman 1970, p. 5).

The violence associated not only with homicide and suicide, but also with accidental death, is evidence of more serious social problems. The large toll that violent death takes in human life makes research on violent death all the more important. What sociological factors affect the rate of violent death? Is it possible to reduce the rate of violent death in American society?

Relationship Among Three Forms of Violent Death

Homicide, suicide, and accidental death are similar in that all three acts result in the death of a human being.

On first thought, these three acts may not seem to have much in common, but upon closer investigation, important similarities appear. If violence is defined as physically reckless, aggressive or destructive behavior, then all three modes of death examined in this study may be defined as forms of violent behavior, and more specifically as forms of violent death (Lane 1979, p. 9).

Examining rates of violent death, researchers have noted that rates of one type of violent death, such as accidents, may fall while another, such as suicide, will rise. The rise and fall of each form of violent death keeps the overall rate of violent death stable. The observation that rates of violent death such as suicide and accidents rise and fall in relation to one another is significant. If several forms of violent death vary yet the overall rate of violent death stays the same, different questions regarding violent death can be addressed. Under what social conditions is one form of violent death more frequent than another?

The theory of the functional alternative, as suggested by the tradition of Henry and Short (1964), Straus and Straus (1953), and Erikson (1966), can be used to explain variation in the rates of the different types of violent death. Erikson, in examining the different crime waves among the Puritan Colonies, argued that the volume of deviant behavior in a community remains fairly constant over time, but the form that the behavior takes changes (1966, p.

23). The total volume of deviant behavior remains constant because the capacity of social control mechanisms to handle deviant behavior remains constant. Communities create boundaries of tolerance for certain behaviors (eg. the amount of violent death). When a particular type of behavior such as homicide has increased, community social controls attempt to constrain and reduce the increase. The act that is being paid renewed interest (homicide) may be reduced due to these social controls.

Acts of violent death such as homicide, suicide and accidental death are similar in form and may vary in relation to a constant overall rate of violent death. The dissertation will examine this relationship in an exploratory fashion. The subculture of violence thesis will be used to examine which social conditions best explain the rate variation among the different forms of violent death.

Subcultures of Violence

The theoretical framework guiding this dissertation stems from the research of Wolfgang and Ferracuti (1967) and Humphrey and Palmer (1978) regarding the subculture of violence and the subculture of self-violence, respectively. This dissertation will examine the applicability of the subculture of self and other-directed violence to the study of violent death. Homicide researchers, in an effort to explain regional and racial differences in the homicide rate, developed what has been called a culture or subculture

of violence thesis (Hackney 1979, Gastil 1971, Doerner 1978, Wolfgang and Ferracuti 1967).

One of the most influential works on the subculture of violence is Wolfgang and Ferracuti's (1967) Subculture of Violence. The subculture of violence thesis suggests that deviant behavior is a reflection of normative support for deviant values by a subgroup within a culture. That is, violent behaviors are supported and encouraged by certain groups.

According to the subculture of violence argument, situations are most likely to involve culturally accepted violence when an individual's character has been questioned, ridiculed, or insulted (Wolfgang and Ferracuti 1967). The individual uses physical aggression to defend his/her character which sometimes leads to the death of one of the parties involved. A subculture of violence, according to Wolfgang and Ferracuti, tends to flourish where certain social conditions such as poverty, unemployment, and blocked legitimate opportunities are strongest.

The subculture of violence thesis has been used almost exclusively to explain homicidal behavior, due in part to the extreme nature of the event. However, a subculture of violence thesis has also been used to explain other forms of violent behavior including suicide and accidental death.

Whitlock (1971) used a subcultural explanation to examine variations in motor vehicle deaths in Australia. According to Whitlock, the fascination with speed and power

in automobiles is representative of the cultural acceptance of driving as an aggressive act. The high rate of motor vehicle deaths among various subgroups of the population is indicative of a subculture of violence according to Whitlock. Whitlock's research is also supported by Humphrey and Palmer's (1978) research on subcultures of self-directed violence.

Humphrey and Palmer (1978) expanded upon Wolfgang and Ferracuti by presenting the idea of a subculture of self-directed violence.

> "It may be that the subculture of violence formulation can be usefully extended to include customs and values which advocate violence toward the self as a response to frustration. That is, population entities can possess subcultures of self-directed violence as well as of other-directed violence" (1978, p. 108).

Humphrey and Palmer hypothesized that a subculture of self-directed violence would be a subculture where attitudes and values allow behavior that is harmful to the self, such as alcohol abuse. Humphrey and Palmer, in their research on suicide and homicide in North Carolina, argued that whether violence is directed against the self or against others may depend upon social and cultural factors. Some subgroups of the population may have values that encourage behavior harmful to others. They hypothesized that values necessary for both self and other-directed violence may reside within a culture. What factors are involved in triggering self or other-directed violence has yet to be determined.

Subcultural explanations have had a strong influence on deviance research over the past twenty years. In addition

to homicide, suicide, and accidental death, subcultural explanations have been used to explain juvenile gang behavior and other forms of deviance. The strength of subcultural theory is that it tries to explain the intergenerational patterns of high rates of violent death and other deviant behavior that occur in subsections of the population. Subcultural theory seeks to explain variation in the rates of violence within a culture. Cultural explanations for behavior seek to understand the link between attitudes, values, and behavior. In order to theoretically establish the possibility of a subculture of violence, it must be assumed that there is successful socialization of cultural ideals such as violence, and that this socialization affects behavior.

Objectives

This dissertation will examine the relationship between homicide, suicide, and accidental death as forms of violent death in a societal context. The theory of the functional alternative will be used, in an exploratory fashion, to examine the relationship among the three forms of violent death. This dissertation will expand upon earlier research of violent death by examining a combined rate of violent death. Past sociological research that has examined all three forms of violent death has, for the most part, taken an epidemiological approach (Weiss 1976, Holinger 1979, 1980). While this approach has been important in

identifying groups which are most at risk of dying violently, it lacks a theoretical framework to explain why different groups have higher rates.

A multivariate model will be used to investigate the pattern of suicide, homicide, motor vehicle and other accidental death in the United States for the years 1980-1984. Traditional determinants of violence, such as race and region, will be used, along with a newer measure, the Index of Legitimate Violence, to explain variations in the rates of suicide, homicide, motor vehicle and other accidental death. The relationship between conventional determinants of violence and rates of violent death will be critically examined within the framework of subcultural theses of violence. The research will examine how well subcultural theories of violence explain varying rates of homicide, suicide, motor vehicle and other accidental death. The utility of subcultural explanations for examining the rate of violent death as a whole will also be addressed.

Data and Analysis

Data from several sources will be used. Data on suicide and accidental death will be gathered from the vital statistics of the United States for the years 1980-1984. Data on homicide, are from the Comparative Homicide File, which has been compiled from the Supplemental Homicide Report of the Uniform Crime Reporting Office of the FBI for the years 1980-1984. Race and sex-specific victim homicide

rates will be used from the Comparative Homicide File. Independent variables will be gathered primarily from two sources: the Comparative Homicide File and the State and Regional Indicators Archive, both at the University of New Hampshire.

Predictors of violent subcultural orientation will be used to explain variation in the rates of the three forms of violent death. Straus' 1985 Index of Legitimate Violence, which measures legitimately prescribed violent behavior in American states will be the predictor of violent subcultural orientation.

Multiple regression will be used to examine the relationship between the predictor and dependent variables. The dependent variables are: sex and race-specific homicide, suicide, motor vehicle accidental deaths and non-motor vehicle accidental deaths. The predictor variable is the Index of Legitimate Violence. Region (Confederate South/Nonsouth) and percent of the state population that is black are included in the model, however, their utility as measures of violent subcultural orientation is unclear. They are identified as control variables. Percent of the state population aged 18 to 24, percent of the state population living in metropolitan areas, the percent of the state population living below the poverty line and divorce rate are also included as control variables. The analysis will provide insight into the relationship between sex and race-specific rates of violent death and violent subcultural

orientation. Given the results of previous research, homicide and motor vehicle accidental deaths should be best predicted by violent subcultural orientation. The prediction of variation in rates of suicide and other accidental deaths is less clear.

The units of analysis for this dissertation will be the fifty United States. A great deal of homicide, suicide, and accidental death research has been done at the state level and there is considerable state-to-state difference in these rates. Homicide research, in particular, has used states as the unit of analysis in an effort to explain regional differences (Gastil 1971, Hackney 1979, Loftin and Hill 1974). Suicide research has also used states as an important level of analysis (ie. Durkheim 1951, Stack 1980).

Although the use of state level analysis is widespread in other social sciences such as political science, sociologists have been critical of the use of such an aggregated level of analysis (Robinson 1950). Others however, have maintained that states are an important and valid level of analysis. Straus (1987) found little difference in the use of city, SMSA, and state level data among many variables and concluded that the state as a unit of analysis is valid and should be treated with the same caution that other aggregated units of analysis are given.

The study of violence has traditionally been a sociological concern. The social and structural factors that effect violent death are of primary concern to this

dissertation. The dependent variables on accidental death and suicide being used in this study are sex and race-specific. This data is not available from the Vital Statistics at any other level. The importance of sex and race-specific rates in the study of the subculture of violence thesis led to the decision to use states as the units of analysis. The research being conducted is concerned with the relationship between social and cultural characteristics of groups and rates of violent death. A research design using states as the unit of analysis is appropriate for this type of research.

Significance of Study

This dissertation will expand upon past research on the culture of violence thesis by examining conventional and newer determinants of violence and their ability to explain varying rates of different forms of violent death. In addition, this dissertation will examine the relationship between three forms of violent death (homicide, suicide, and accidental death) which have rarely been examined together from a sociological point of view.

The study of accidental death is particularly important because of its recent rise in the ranking of causes of death. Studies have shown that with the decline of deaths due to communicable diseases, accidental death has become one of the leading causes of death. In 1979, accidents were the fourth leading cause of death, after heart disease,

cancer, and stroke, for persons of all ages; and the leading cause of death among persons aged 1 to 38 (National Safety Council 1983, p. 8).

The study of accidents is important because this form of violent death has been neglected in sociological research. The examination of violent death requires knowledge of its different forms. Homicide and suicide have both been studied extensively, accidental deaths have not been studied extensively. Better understanding of the etiology of accidental death will contribute to the overall understanding of deadly violence in American society.

The study of violent death is important so that we can ascertain what social indicators are significant in determining variations in the rate of violent death. A significant part of this dissertation investigates the use of subcultural explanations to examine violent death. Subcultural theories have been dominant in the sociology of deviance for at least thirty years, yet the measurement of subcultures and tests of the theories are still highly controversial. This dissertation will use subcultural theories to explain the pattern among all three forms of violent death. The study of violent death will help in learning more about what social conditions cause high rates of violent death.

CHAPTER II

THEORETICAL EXPLORATION OF THE RELATIONSHIP AMONG THE THREE FORMS OF VIOLENT DEATH

This chapter examines definitions of violence and violent death, and the relationship among the three forms of violent death. It is divided into five sections. The first discusses the sociological analysis of acts which, on the surface, appear to be very individualistic. The second discusses definitions of violence and violent death, formulating working definitions that will be used in this dissertation. The third section discusses characteristics of homicide, suicide, and accidents, and how these forms of death fit within the term violent death. The fourth major section discusses the expected interrelationships among the forms of violent death. The fifth section discusses the theoretical basis for the research. Specifically, the theory of the functional alternative and the subculture of violence thesis are presented along with a rationale for studying violent death in this context.

Individual Acts vs. Sociological Analysis

It has been well documented in the sociological literature that acts which appear to be extremely individual, such as suicide, are also social phenomena that can be explained through sociological interpretation. Durkheim, in his classic work Suicide, discussed how the

seemingly individual act of suicide could be examined sociologically:

> "If instead of seeing in them only separate occurrences, unrelated and to be separately studied, the suicides committed in a given society during a given period of time are taken as a whole, it appears that this total is not simply a sum of independent units, a collective total, but is itself a new fact sui generis with its own unity, individuality and consequently its own nature - a nature, furthermore, dominantly social" (Durkheim 1951, p. 46).

Social acts such as suicide, homicide, and accidental death all appear to be very individualistic, depending for the most part on individual characteristics as to whether or not the act occurs. But the aggregation of individual acts reveals that there are patterns of similarity that occur over time. Homicide, suicide, and accidental death are all patterned acts. Researchers have identified particular groups in the population which have typically high or low rates of violent death. For example, white males have an historically high suicide rate, while black males have an historically high homicide rate. Why are these acts so much more frequent among some groups than among others?

Both suicide and homicide have been studied by sociologists for over a hundred years, social patterns have been identified and explanations have been presented. The sociological explanation of accidents however, has had a much shorter history. All three acts have proven to be prime subjects for sociological analysis. Rates of homicide, suicide, and accidental death vary from city to city, county to county, state to state, and country to

country. For example, Durkheim (1951) found that suicide varied from province to province and that the variation could be explained by the degree of group integration as measured by factors such as marital status. Messner (1982) studied SMSA's in the United States, finding differences in the rate of homicide which were largely explained by the percentage of blacks and location of the SMSA in the Southern United States. All three forms are patterned behaviors suitable for sociological analysis.

Definitions of Violence and Violent Death

Violence exists in such broad-ranging forms among humans that its study is seemingly endless. The fascination with violence has brought forth many questions. What functions does violence serve in a society? How much violence is tolerated and in what forms? How does tolerance of violence vary from one society to another?

Violence has been used by groups and individuals to control or exert power over others for as long as history has been recorded. The United States, in particular, is noted for a long and continual history of violence. The cultural aspects of violence in the United States will be discussed further in Chapter three. This section discusses definitions of violence and violent death. From the discussion, working definitions of both violence and violent death are derived. Violence and then violent death will be discussed.

Violence

There are many definitions of violence, ranging from the general to the specific. The term violence is often used to describe a wide variety of actions and behaviors. Which specific actions are defined as violent, however, varies from culture to culture. Violence can be generally defined as "exertion of physical force so as to injure or abuse" (Webster's 1977, p. 1306). This generalized definition identifies the two key components of violence, 1) the exertion of physical force and, 2) injury. All acts of violence involve physical force of one kind or another, whether it be the rate of speed of an automobile, the strength of a closed fist, or a bullet propelled from a gun. Acts of violence also involve injury, induced in some form, from a physical force. An injury may be slight, serious, or fatal, but in some way the original state of the individual is changed.

Other, much broader definitions of violence have been used by other researchers. Concepts such as structural violence (e.g. poverty), cultural violence (domination and control), or psychological violence have been suggested (Newman 1979). Definitions of violence that focus on concepts such as domination, however, are too broad to be useful in this study.

Researchers of violent death, as with other researchers of violence, frequently omit any discussion of the definition of violence. One researcher, however, does offer

a definition of violence. Lane (1979), in conjunction with a longitudinal study of violent death in Philadelphia, developed a working definition of violence. According to Lane (1979, p. 2), violence is defined as physically reckless, aggressive, or destructive behavior. Following Lane's definition, recklessness, destructiveness, and aggression are forms of physical force as described in the more general definition of violence. Lane stated that with his working definition of violence, the three forms of violent death: homicide, suicide and accidents, can all be considered as forms of violence. Each of these forms of violent death involves one or more of the behaviors identified by Lane as violent. Lane's (1979) definition of violence will be used as the working definition of violence in this dissertation.

Violent Death

The rationalization for studying homicide, suicide, and accidents under the single category of violent death has not been widely discussed. Frequently, researchers simply state that they are defining violent death as suicides, homicides and accidents because that is the way it has been defined in the past (e.g. Seiden and Freitas 1980, Combs-Orme, et al. 1983). This pattern was set early on by epidemiologists studying violent death.

Researchers such as Holinger (1987), Lane (1979) and Svalastoga (1982) do attempt to explain why they have

identified homicide, suicide, and accidents as forms of violent death. Svalastoga (1982) described the three as a type of violent death he called 'operational violence'. Operational violence is defined as violence that occurs "during the normal operation of a 'social system'"(1982, p. 9). Svalastoga stated that if these three forms of violence are seen as one type of violence, then positive correlations between the three forms can be further examined for common underlying components (1982, p. 52).

Lane (1979) suggested that the three forms of violence can be linked by the shape of longitudinal statistical data which show that the three forms all have rate changes during roughly the same time periods. Lane also cited psychological theory such as Freud's death instinct as an important link between the three forms.

Recently, Holinger (1987) provided a detailed explanation of why these forms of death should be studied in aggregate form. Holinger defined violent death as death "caused by force: not natural" (1987, p. 4). Mortality that is 'natural' involves the deterioration of the body in some form, such as heart disease. In contrast, homicide, suicide and accidents are caused by forces <u>outside the body</u>, making them uniquely similar. Secondly, Holinger cited research results that suggested that victims of violent death may provoke their own death by engaging in risk taking behavior (1987, p. 4). Each of the researchers identify characteristics which define violent death as a unique form

of death.

In this dissertation, violence will be defined as physically reckless, aggressive, or destructive behavior. Concurrently, violent death will be defined as a physically reckless, aggressive, or destructive action that results in death. According to this definition, homicide, suicide, and accidents can be defined as forms of violent death. These definitions will be used as the working definitions of violence and violent death for this research.

Characteristics of the Three Forms of Violent Death

With a working definition of violent death in place, how do homicide, suicide, and accidents fit into the definition? What characteristics of homicide, suicide, and accidents are vital to understanding these three forms of violent death? There are three important characteristics of homicide, suicide, and accidents that provide the rationale for studying violent deaths in aggregate form: 1) the intent of the action, 2) aggression, and 3) self destructiveness and risk taking. These three characteristics identify key concepts in the understanding of homicide, suicide, and accidents and their identification as types of violent death.

Intent

Violent deaths are similar because an external force causes the death of an otherwise healthy body. What

characteristics of the events preceding death affect the situation? How do the intentions of one's actions affect the final outcome? Intent is defined as a predetermined goal which precedes an action designed as the means to achieve the goal. For example, a person intends to obtain a bachelor of arts degree. They enroll in and carry out a course of study which will lead to that degree, achieving the original goal. Intentions do not, however, guarantee that the original goal will be achieved.

The externalized intentions of actions preceding accidents, homicide, and suicide vary greatly. Clearly, in suicide there is intention to harm or kill oneself. Verbal threats of suicide and written suicide notes identify the intended act of suicide.

The intentions preceding homicide are less clear. For the most part, the intent to do harm to another individual is present, while the intent to kill may not be. The most common types of homicide, intrafamilial and acquaintance, the so called 'crimes of passion', rarely involve the intent to kill.

Accidents are typically defined by the unintentional nature of the actions preceding the event. Few people consciously decide to become involved in an accident!

The subject of intent becomes more complex when unconscious motivation is considered. Overt intention toward death is not a common characteristic among the three forms of violent death.

The intent of actions leading to each form of violent death is important in understanding the nature of the different forms of death, and violent death as a whole. The degree of intention toward death flows from no intent (accidents), to some intent (homicides), to a strong intent (suicides). Cultural definitions determine which acts are defined as suicides, homicides and accidents. The intent to harm oneself or another is always important in determining which form of violence has taken place. Intention is an important social characteristic of violent death, but clearly varies among the three forms. Social definitions of intended and unintended behavior outline what actions will be defined as precursors to each type of violent death. An external force leading to death is the most unique characteristic of homicide, suicide, and accidents. It is this unique characteristic that ties all three types together under one category: violent death.

Aggression

Homicide and suicide can be described as acts that are at opposite ends of a continuum of aggression, with homicide representing the most extreme form of aggression directed outward towards another individual, and suicide representing the most extreme form of aggression directed inward. Where accidental death fits on the continuum is less clear. Some types of accidental death, such as automobile fatalities, are easier to see as the outcome of outwardly directed

aggressive acts. Other types of accidents are more difficult to assess. It seems likely that accidental deaths as a whole would fall somewhere in between homicide and suicide on the continuum, where the direction of the aggression is more generalized, representing an overall disregard for life.

Homicide, like other forms of outward aggression such as aggravated assault and rape, is the outcome of the acting out of feelings of frustration and anger. Frequently, homicide is the result of an emotional outburst which escalated from simple disagreement or an affront to one's character, to an explosion of physical aggression resulting in the death of one of the persons involved (e.g. Luckenbill 1977). Aggression results in homicide when either physical or weapon superiority provides advantage to one of the parties involved. The decision to aggress outwardly is based on two factors: social factors relating to the environment in which the homicidal event occurs and; psychological factors relating to the makeup of the individuals involved.

Suicide, like homicide, is thought to be an aggressive act that is a reaction to frustration. Suicide represents the most extreme form of inwardly directed aggression. Pressures in everyday life can become overwhelming for some people. The continual conflict of social roles and relationships may bring about situations which require resolution. Anger and frustration that has built up may

culminate in suicide, resolving conflict for the individual by completely removing them from society.

Accidents, like suicide and homicide, can be described as aggressive acts. The direction of the aggression, whether inward or outward is less clear. Some types of accidents such as motor vehicle fatalities, are easier to understand as aggressive acts. Whitlock (1971), for example, examined the high rates of traffic fatalities in Australia, focusing on aggression as a cause of these fatalities. Whitlock hypothesized that:

> "road death and injury rates are recognizable indices of the total sum of aggression in a given society; and that the higher these death and injury rates rise, the higher in general will be other manifestations of social aggression as measured by violent death and violent crime" (Whitlock 1971, p. 3).

The fascination with speed and power in automobiles may be representative of the cultural acceptance of driving as an aggressive act. Some groups in society may socially approve of the use of aggression in driving more than other groups. This may lead to higher rates of accidental injury and death. Aggression in non-motor vehicle accidents is more difficult to assess, and may represent a more generalized disregard for life, both the self and others.

Homicide, suicide, and accidents all contain components of frustration that are released in an aggressive fashion. Homicide and suicide are most clearly acts of aggression. Accidents have an aggressive character when the individual has greater control over the outcome (ie. auto accidents) as

opposed to lesser control (a tree limb breaking and falling onto a pedestrian).

Reckless and Destructive Behavior

The third characteristic of violent death is the degree of self-destructiveness and recklessness that underlies each of the forms of violent death. Self-destructive and reckless behaviors are closely related. Committing suicide is the ultimate form of self-destruction to which all other self-destructive acts can be compared. Other behaviors are self-destructive, but more subtly so; overeating, oversmoking, and substance abuse are good examples. Recklessness is related to self-destructiveness because of the element of risk taking. Dangerous or hazardous situations face us everyday, yet some people seem to engage in reckless behavior disproportionately. Driving at high speed on a snow and ice covered road, or getting involved in a barroom brawl, are both good examples of reckless behavior.

Homicide, at first glance, would not seem to fit the description of a self-destructive behavior at all. Research by Wolfgang (1958) and others, however, described what is called victim-precipitated homicide. The victim precipitation element in homicide supports the argument that many homicides can be described as self-destructive acts. In many aggressive acts such as homicide, the victim is a major precipitator of the aggression.

> "The term victim-precipitated is applied to those criminal homicides in which the victim is a direct, positive precipitator in the crime. The role of the victim is characterized by his having been the first in the homicide drama to use physical force directed against his subsequent slayer" (Wolfgang 1958, p. 252).

In Wolfgang's study of criminal homicide in Philadelphia, approximately twenty-six percent of the cases were determined to be victim-precipitated homicides. Most of these cases involved victims and offenders who were related in a close or primary fashion. In heated arguments between lovers and friends, the victim may often have been to blame for aggravating and escalating a particular situation to a homicidal state. The notion of victim-precipitated homicide lends support to the argument that homicide is in part a self-destructive act. Homicide can be viewed as not only self-destructive, but also reckless if one considers the number of people that continually expose themselves to situations that are known to be volatile and at high risk of homicide victimization. Continually finding oneself in fights and arguments with friends or lovers, and using physical aggression to resolve altercations, increases the probability that a homicide might occur. Both the victim-precipitation and high risk arguments support the contention that homicide be described as a self-destructive act.

Accidental death, although not as clear cut as suicide, is not difficult to characterize as a self-destructive act. Although accidents can be defined as events which involve low levels of intention and expectedness (Suchman 1961, p. 276), it does not preclude accidents from being defined as

self-destructive. At first glance, accidents may seem like events which are beyond the control of individuals and society. Sociologists such as Gusfield (1981), however, have shown that accidents, especially automobile accidents, often contain implications of blameworthiness and liability. "As a sociological category, 'accident' is a way of distinguishing certain events from others in a fashion which entails specific consequences" (Gusfield 1981, p. 35). The assumption that some types of accidents are avoidable or controllable is a socially selective one. In American society, many automobile, occupational, and home accidents are seen as preventable. Society has defined certain behaviors and situations as safe and unsafe. A degree of respect for the care and safety of oneself and others is prescribed in American society. If socially prescribed precautions and rules are not followed, then the individual is blamed for the 'accident'. Carelessness and negligence are not socially acceptable excuses when accidents occur.

Accidents can be described as self-destructive when carelessness and risk have been involved. The behavior of individuals involved in accidents has often been related to suicidal, and occasionally, homicidal, behavior. Tabachnick (1973) associates self-destructive (suicidal) factors with accidental death. In automobile fatalities, Tabachnick found three important self-destructive factors: motivation, an action oriented character type, and alcohol use (1973, p. 5). The individual who is action oriented often engages in

risk-taking behavior, such as driving a car at high speeds, as a way of releasing frustration. By continually placing oneself in situations of high risk, the likelihood of an accident is increased. Accidents, although not as blatantly self-destructive as suicide, often reveal an underlying awareness that a situation is hazardous or risky, yet nothing is done to reduce the risk.

Homicide, suicide, and accidental death all contain elements of self-destructiveness and recklessness. The form and amount varies with the type of violent death. The element of self-destructiveness and recklessness is an important link between all three forms of violent death. The unexpectedness and preventability of homicide, suicide, and accidental death make these acts even more interesting from a sociological point of view. The similarities among homicide, suicide, and accidents: an external force as the cause of death, aggression, self-destruction, and recklessness all support the study of these three types of death under the single concept of violent death.

Expected Interrelationships Among the Forms of Violent Death

The three characteristics just discussed identify important similarities and differences among homicide, suicide and accidental death. Intent identifies the important difference between actions and outcome. With homicide, suicide, and accidental death, the outcome is the same, yet the actions leading up to the death may vary.

Intentions to kill vary from strong, as with suicide, to almost nonexistent, as with some forms of accidental death. All three types of death were identified as resulting from aggressive action. The direction of the aggression differs with the form of death. All three forms of death were shown to have elements of self destruction and risk taking.

Based on these characteristics, what interrelationships might be expected? What types of rates should be used? The variation of the intent of the action, the direction of aggression, and degree of self destruction and risk taking suggest that the categories of homicide, accidental death, and suicide should be further broken down.
Rates of violent death vary greatly for males and females, blacks and whites. Are there specific social characteristics which best explain rates of violence for one group but not another? The subculture of violence thesis suggests that males, particularly minorities, have adopted the values that generate cultural acceptance of violence. It is therefore important to examine which social characteristics differentiate increased rates of violent death among males and females, blacks and whites. To further investigate racial and gender differences, the rates for each form of violent death will be broken down by race and sex. The use of sex and race-specific rates is discussed further in Chapter four.

Accidental deaths will be measured in two categories, motor vehicle accidental deaths and nonmotor vehicle

accidental deaths. The degree of aggression, and destructiveness are greater in motor vehicle accidental death. Nonmotor vehicle accidental deaths exhibit characteristics of risk taking, but intentions and aggressiveness are not as clear.

The different categories of homicide, suicide, and accidental death will be interrelated in diverse ways based on the direction of the aggression, the amount of self destructiveness, and the degree of intent. Motor vehicle accidental deaths may be closely related to suicides. Other accidental deaths may be more closely related to homicide. The interrelationships between the categories of violent death will be examined in Chapters five and six.

Theoretical Explanations of the Relationship Among the Forms of Violent Death

Two theoretical explanations will be used in this dissertation to examine rates of violent death in the United States. The main theoretical focus will be the subculture of violence thesis. The subculture of violence thesis will be examined to test its applicability to the study of violent death and each of its three forms using a multivariate regression model. In a more exploratory fashion, the theory of the functional alternative will be applied to study how rate variations in each type of violent death affect the combined violent death rate in states and regions. This theoretical approach will be used to explain graphic presentations of rate variation among the forms of

violent death. This section briefly explains the underlying components of both theories.

Theory of the Functional Alternative

Examining rates of violent death, researchers have noted that rates of one type of violent death such as accidents, may fall, while another, such as suicide, will rise. The rise and fall of each form of violent death purportedly keeps the overall rate of violent death stable. The observation that rates of violent death such as suicides and accidents rise and fall in relation to one another is significant. If several forms of violent death vary, yet the overall rate of violent death stays the same, different questions regarding violent death can be addressed. Under what social conditions is one form of violent death more frequent than another?

One tradition of sociological theory, the theory of the functional alternative, can be used to explain variation in the rates of the different types of violent death. This tradition argues that rates of self and other-directed violence are inversely related, but the overall rate of violence stays the same. Three research studies exemplify this theoretical tradition: Henry and Short's (1964) study of suicide and homicide, Straus and Straus' (1953) study of suicide and homicide in Ceylon, and Erikson's (1966) study of crime in Colonial Massachusetts.

Henry and Short (1964) in their work Suicide and Homicide, studied the relationship of suicide and homicide with the business cycle. The researchers found that suicide rates rose during depressions, while homicide rates rose during economic prosperity. Henry and Short used three major variables: status, strength of the relational system, and degree of external restraint. They found that outwardly directed aggression (homicide) is legitimated when external restraints are high. Inwardly directed aggression (suicide) is legitimated when external restraints are low. These findings accounted for the high rates of homicide among the lower classes and high rates of suicide among the upper classes. The ebb and flow of the different types of violence is dependent on the business cycle, but the overall rate is relatively stable.

Straus and Straus (1953) researched the effects of social structure on suicide and homicide. Based upon cross-national research in Ceylon, Straus and Straus found that in loosely structured societies, homicide rates are high. Conversely, in tightly structured societies (such as Ceylon), where reciprocal rights and duties are expected and enforced, homicide rates are low and suicide rates are high (1953, p. 467). Among different populations, even within the same society, social structure effects the type of violence that is permitted.

Erikson, in examining the different crime waves among the Puritan Colonies, argued that the volume of deviant

behavior in a community remains fairly constant over time, but the form that the behavior takes changes (1966, p. 23). The volume of deviant behavior remains constant because the capacity of social control mechanisms to handle deviant behavior remains constant. Communities create boundaries of tolerance for certain behaviors (e.g. the amount of violent death). When a particular type of behavior such as homicide has increased, community social controls attempt to constrain and reduce the increase. The act which is the recipient of renewed interest (e.g. homicide) may be reduced due to these social controls, keeping the overall rate of violence constant. Acts of violent death such as homicide, suicide, and accidental death are similar in form and may vary in relation to a constant overall rate of violent death.

This tradition of research suggests that the rates of the different forms of violent death move in opposite directions based on structural factors. In this dissertation, the functional alternative tradition will be used to interpret patterns of rate variation within regions of the United States. Graphic presentation of the three forms of violent death in four regions of the United States will be examined to determine if a pattern of inverse variation can be detected. As stated earlier, this portion of the dissertation is purely exploratory in nature and will not be represented in the multivariate regression model being used to test the subculture of violence thesis.

Subculture of Violence

The subculture of violence thesis suggests that a lot of deviant behavior is a reflection of normative support for deviant values by a subgroup within a culture. That is, violent behaviors are supported and encouraged by certain groups. Wolfgang and Ferracuti (1967) proposed that different subcultures within society would have higher rates of violent crime because violent behavior was used to protect one's self image in these subgroups. The subculture of violence thesis contends that violent behavior is a necessary and accepted way of life among certain groups. The subculture passes on the attitudes and beliefs as to the accepted use of physical aggression as a problem solving technique in certain situations. Especially when confronted with persons of similar upbringing, the choices of resolving a conflict situation are limited to culturally learned responses such as violence.

The subculture of violence thesis has been used almost exclusively to explain homicidal behavior. However, a subculture of violence argument may also be used to explain other forms of violent behavior.

Whitlock (1971) used a subcultural explanation to examine variations in motor vehicle deaths in Australia. For Whitlock, the fascination with speed and power in automobiles is representative of the cultural acceptance of driving as an aggressive act. The high rate of motor

vehicle deaths among subgroups of the population is indicative of a subculture of violence.

Subcultural theories have been used to explain the three forms of violent death separately, but have not been used to explain all three forms of violent death as one measure of violence (together). The similarities in the three forms of violent death allow us to study them as one unit. The research that has been done on the three forms of violent death separately has laid the groundwork for examining violent death as a whole from a subculture of violence perspective. The subculture of violence perspective will be examined in detail in chapter three. The subculture of violence thesis and the theory of the functional alternative are two distinctly opposite theoretical perspectives. The subculture of violence suggests that rates of violent death should be similar because the cultural environment produces attitudes of a general disregard for life which leads to reckless and self-destructive behavior such as homicide. The theory of the functional alternative, on the other hand, suggests that the forms of violent death vary inversely, producing a constant overall rate. The structural constraints of the social system prevent rates from growing larger. The theoretical tenets of these two theories are logically incompatible, they cannot be simultaneously true. This study will examine which theory is most applicable to the study of violent death.

Summary

Chapter two explored the various definitions of violence and violent death, presenting the working definitions of violence and violent death to be used in this dissertation. Violence is defined as a physically reckless, aggressive, or destructive behavior. Violent death is defined as a physically reckless, aggressive, or destructive action that results in death. Homicide, suicide, and accidents fall within this definition of violent death. Several characteristics of homicide, suicide, and accidents were identified and discussed as to how they fit under the definition of violent death. The fact that homicides, suicides, and accidental deaths are caused by forces outside the body (as opposed to a physical deterioration) is identified as a unique characteristic that ties the three forms of violent death together. The characteristics of intention, aggression, self-destruction, and recklessness were discussed, outlining underlying similarities and differences in the different types of violent death. These links were used to establish that homicide, suicide, and accidental death may be combined to form a composite measure of violent death. A composite measure of violent death is useful in the study of violence because it provides a broad measure of overall violence.

Finally, the subculture of violence thesis and the theory of the functional alternative were presented as the two theories to be used in this dissertation, the theory of

the Functional Alternative in an exploratory fashion, and the Subculture of Violence Thesis in a more extensive statistical fashion. Each theory will be used to explain variation in rates of violent death. Sociological explanation, particularly at an aggregate level (such as states), has specific advantages and disadvantages. The aggregate level of explanation is important for this study in order to determine the nature of the relationship among the forms of violent death and to determine which social characteristics best predict increased rates of violent death. Chapter three will discuss in detail the subculture of violence thesis and the concepts of inward and outward aggression.

CHAPTER III

SUBCULTURES OF VIOLENCE

The theoretical framework guiding this dissertation stems from the research of Wolfgang and Ferracuti (1967) and Humphrey and Palmer (1978) regarding the subculture of violence and the subculture of self-directed violence, respectively. This chapter reviews literature related to subcultures of violence that provides background for the theoretical component of the dissertation. The chapter is divided into two sections, subcultures of other-directed violence and subcultures of self-directed violence. The first section discusses research relating to Wolfgang and Ferracuti's subculture of violence thesis and related research dealing with violence directed against others. The second section discusses research relating to Palmer and Humphrey's subculture of self-directed violence. A general subculture of violence combines both self and other-directed violence. The form that the violence takes depends on social conditions which favor either self or other-directed violence.

Sociology of Subcultures

The sociological study of subcultures in the United States developed from research by 'Chicago school' sociologists of the 1940's. The research of the Chicago

school focused on the social ecology of urban life. In particular, researchers studied the areas of work, recreation, home life, health, illness and deviance of the inhabitants of the city of Chicago. From the research on deviance, a sociology of subcultures was developed. Subcultures are defined as groups with norms, values, or customs that differ from the norms of the larger culture. Frequently, the term subculture is used to identify groups that deviate negatively from the larger culture.

Sutherland's differential association theory provided the basis for understanding the genesis and continuation of a subculture. Differential association theory maintains that all behavior, whether deviant or not, is learned in a similar manner. Continual exposure to a set of ideas and actions supports the adoption of these ideas and actions. A subculture develops when the ideas and actions that are passed on differ from the ideas of the larger culture. The underlying conflict between the values of the larger culture and members of that culture stimulate the formation of a subculture where similar values can be shared and supported.

The research on delinquency during the 1950's provides an excellent example of the study of subcultures. Cohen (1955) and Miller (1958) both studied the delinquent gang as a subculture. The values of the delinquent gang are seen as a product of the lower class working culture which is in conflict with the middle class culture. The rejection of middle class values by young males is emphasized within the

delinquent gang. Values such as immediate gratification, toughness and rejection of authority are part of the subculture of delinquent gangs. The gang subculture passes on its values from one generation of members to the next, with older members initiating the younger members. The study of delinquent gangs is just one example of the sociology of subcultures research. Another major focus of subcultural theory has been the exploration of variation in the rate of homicide throughout the United States.

Subcultures of Other-Directed Violence

The term subculture of other-directed violence is used to focus on research surrounding an act of violence directed outward against another such as homicide, and some types of accidents. The majority of the research in this area has dealt with the act of homicide. Research on homicide is discussed first; second, research is presented that focuses on accidents, suicide and other-directed violence.

One of the most influential works on the sociology of subcultures and homicide was The Subculture of Violence by Wolfgang and Ferracuti (1967). Since the book was published, there has been heated debate over the theoretical and empirical testability of the concept of subcultures of violence. Much of the research focused on two important explanatory variables, region of the country (South or Nonsouth), and race. Research has been filled with methodological problems and has provided inconclusive results.

Wolfgang and Ferracuti's Research

Wolfgang and Ferracuti's research on the subculture of violence provides one of the most comprehensive theoretical examinations of subcultures and homicide. Their work has provided the main theoretical base for much of the homicide research in this area. The subculture of violence thesis suggests that a lot of deviant behavior is a reflection of normative support for deviant values by a subgroup within a culture. That is, violent behaviors are supported and encouraged by certain groups. Wolfgang and Ferracuti (1967) proposed that different subcultures within society would have higher rates of violent crime because violent behavior was used to protect one's self image in these subgroups. The subculture of violence thesis contends that violent behavior is a necessary and accepted way of life among certain groups. The subculture passes on the attitudes and beliefs as to the accepted use of physical aggression as a problem solving technique in certain situations. Especially when confronted with persons of similar upbringing, the choices in resolving a conflict situation are limited to culturally learned responses such as violence.

According to the subculture of violence argument, situations are most likely to involve culturally accepted violence when an individual's character has been questioned, ridiculed, or insulted (Wolfgang and Ferracuti 1967). The individual uses physical aggression to defend their

character, which sometimes leads to the death of one of the parties involved. A subculture of violence, according to Wolfgang and Ferracuti, tends to flourish where certain social conditions such as poverty, unemployment, and blocked legitimate opportunities are strongest. These structural conditions restrict the alternatives to violence as a recourse to an affront on one's character that might otherwise be available under more favorable conditions. Three social groups have been identified by Wolfgang and Ferracuti as most closely identifying with a subculture of violence: young males, blacks and other minorities, and persons of low socioeconomic status.

Wolfgang and Ferracuti's research identifies which groups are most likely to adhere to the values of a subculture of violence. The values relating to violence in the subculture are backed up by social rewards and punishments. Members of the subculture who do not follow norms regarding the use of violence are ostracized by other members of the subculture. Members who follow the norms are rewarded with respect and esteemed status (Vold and Bernard 1986).

Research on Region and the Subculture of Violence

Since the work of Wolfgang and Ferracuti, other researchers have expanded the concept of the subculture of violence to try and explain the high rate of homicide in the Southern region of the United States. The cultural

uniqueness of the Southern United States has been widely documented by historians (Reed 1972). The confederacy, slavery, and the large plantations all helped to create a 'Southern' culture. These institutions reflected the cultural norms and values that were held in high esteem in the South such as honor, duty and family ties (Reed 1972). It is this unique culture that researchers say supports the use of violence in the resolution of conflicts. Violence as a way to resolve conflict is similar to the dueling and vigilantism that was so prevalent in the South.

The research on a regional culture of violence has, however, proved inconclusive. Two articles, one by Raymond D. Gastil (1971), and another by Sheldon Hackney (1979), present the idea of a regional culture of violence. Gastil, in his research, stated that a regional culture of violence, as opposed to a subculture of violence, need not stress violent norms and values. A regional culture of violence may condone lethal violence or have a violent tradition (1971, p. 416). Gastil characterized a regional culture of violence as having a "...large percentage of the population involved in violence...", lethal violence as an important subtheme, and emphasis on the knowledge and use of weapons (1971, p. 416). Both Gastil and Hackney attribute a Southern culture of violence to the unique past history of the South. The slavery, rurality, lack of law enforcement, and Southern vigilantism single out the Southern states from the rest of the United States in their use of violence.

Gastil (1971) created an 'Index of Southernness' in order to examine the effect of Southernness on state homicide rates. The Index of Southernness assigned rank ordered scores to states based on the percentage of residents living in that state who were born in the South. Hackney (1979), similarly, created a dummy variable of confederate and nonconfederate states to measure Southernness. Both researchers found that controlling for other variables such as age, income, rurality, and race, Southernness explained a significant portion of the variance in homicide rates between states.

Loftin and Hill (1974), refuting the claims of Gastil and Hackney, criticized their methodologies and conclusions regarding the regional culture of violence thesis. Loftin and Hill argued that structural poverty has more of an effect on the variation in homicide rates than does region. Loftin and Hill found that the effect of region is significantly reduced when socioeconomic factors are controlled for, regardless of which measure of Southernness was used.

Messner (1982) examined variation in the rate of homicide in 204 SMSA's. Messner used two measures of poverty, one relative (the Gini index), and one absolute (percent below the poverty line), along with percent black, a South/Nonsouth dummy variable, and percent aged 15-24 as predictors of homicide. Two variables, the percent of the population that is black, and the South/Nonsouth dummy

variable were found to have the largest effects in explaining high rates of homicide. Messner's research supports a subculture of violence argument.

Blau and Blau (1982), examined rates of homicide in 125 SMSA's, testing the effects of Southern location, the proportion of blacks and poverty on homicide. The Blau's found that only their measure of poverty, which was based on Duncan's SEI scores, retained any significance in explaining variation in the homicide rate. They concluded that racial and economic inequality increase rates of violence. Their research only supports a theory of a subculture of violence that is rooted in economic inequality, not historical tradition.

Williams (1984) replicated the research of Blau and Blau (1982) and Messner (1983). Williams argued that specification error masked the true relationship between homicide and poverty that was shown to be insignificant in previous research. Williams reestimated the equations using logarithmic transformations of percent poor and the homicide rate. He found that using this model, the relationship between percent poor and the rate of homicide was clearly and positively significant. Williams' findings support a structural/economic explanation for high rates of homicide, arguing against a subcultural perspective. Williams' research points out the problems of model specification when researching the relationship between social and cultural factors and the homicide rate.

In 1986, Huff-Corzine et al. further examined the controversy over structural versus cultural factors, Southernness, and the homicide rate. The researchers replicated the research of Loftin and Hill, examining the effectiveness of the Structural Poverty Index, along with Gastil's measure of Southernness on state homicide rates. Using ridge regression to control for multicollinearity, Huff-Corzine et al. found that the Structural Poverty Index, Gastil's Southernness Index, and percent born in the South, were all significantly and positively related to the total homicide rate. The findings support the argument that there are regional variations in the homicide rate, but that it is difficult to identify the impact of culture.

Baron and Straus (1986) tackled the regional culture of violence and homicide argument in a refreshing way. The authors proposed that one of the most difficult problems in this research area had been the use of a region (North-South) variable as a substitute for violent cultural orientation. Baron and Straus (1986, p. 3) proposed the use of an alternate measure of cultural approval of violence: the Legitimate Violence Index. "This index is composed of 12 indicators of noncriminal violence and is conceptualized as a measure of one aspect of the cultural approval of violence (ie. socially acceptable or legitimate violence)" (Baron and Straus 1986, p. 3). Using the fifty United States as their units of analysis, Baron and Straus used multiple regression to test the effects of cultural and

economic variables on the 1980 Uniform Crime Report's reported homicide rate. Baron and Straus found that the West, (particularly mountain regions), not the South, ranked highest on the legitimate violence index. The results of regression analysis confirmed the authors' hypothesis that "the homicide rate has a significant tendency to increase in proportion to increases in the levels of legitimate violence, poverty, and economic inequality" (Baron and Straus 1986, p. 15). The regression analyses did not, however, support the argument that Southern region can be equated with cultural support for violence, lessening the argument for using a North-South variable.

One of the difficulties with this line of research is the identification of a clear indicator of a regional subculture. The South- Nonsouth proxy can determine if region has an effect on the homicide rate, but the history of a separate Southern subculture must be present. Much of the historical research on the South has pointed to the South's uniqueness. Even today where cultures have mingled due to mass communication and high mobility, the presence of a 'Southern' identity is not uncommon. If a regional subculture of violence is assumed, can this explain the historically high rates of homicide in the South?

There are methodological problems associated with the use of a South/Nonsouth dummy variable as the sole indicator of a subculture of violence. A measure of violent cultural orientation that is composed of only a single factor is weak

because it is difficult to know if the indicator is measuring what it is supposed to measure. There may be other explanations for why the Southern region of the United States has such high rates of violence. Methodologically, indicators which include a variety of measures to get at one concept are more reliable than a single measure. The South/Nonsouth variable has been positively correlated with high rates of violence, and should be included in a model explaining rates of violence. On these grounds, however, it is unclear exactly what this variable measures.

Research on Race and the Subculture of Violence

A second line of research using the subculture of violence thesis focuses on the racial variation in both homicide victim and offender rates. The high percentage of black victims and offenders of homicide has been widely documented. Sociological explanations ranging from structural poverty to relative deprivation, in addition to subcultural explanations, have been used to examine these differences. Researchers have argued that the unique history of Black Americans has contributed to a subculture in which life is devalued and violence is viewed as an important defense of masculinity.

Curtis (1975) expanded on Wolfgang and Ferracuti's subculture of violence thesis, arguing that it was the economic, structural, and racial constraints of the South which created the violent subculture that exists today. The

culture of black males, in particular, is seen as an extension of the traditions of masculinity, honor and toughness that developed in the antebellum South. "What we observe is more likely the redirection of intact masculinity into exaggerations of certain allowable kinds of dominant-culture manliness displayed in the everyday transactions of the ghetto-slum" (1975, p. 30). Curtis found that his cultural/structural explanation better predicted rates of violence than the purely cultural thesis proposed by Wolfgang and Ferracuti.

An article by Sampson (1985) examined the effects of the racial composition of cities on city homicide rates using a subculture of violence argument. Sampson expanded on Wolfgang and Ferracuti's (1967) and Curtis's (1975) theories about subcultural formation among specific groups within the population. Sampson hypothesized that if a black subculture exists, "...black offending rates should be related positively to percent black for violent crimes, independent of other structural characteristics, particularly poverty and inequality" (1985, p. 52). Sampson found that percent black did not have a significant effect on homicide for whites or blacks, even when controls for sex of the offender were included. Poverty and general inequality in a city were positively related to homicide for blacks and whites. Sampson concluded that by using age, sex, and race specific rates, one of the major tenets of the subculture of violence thesis- that blacks and other

minorities will have higher rates of violence that is caused by subcultural attitudes is not supported. He surmised that because blacks in cities with larger black populations did not have significantly different rates of homicide from blacks in cities with smaller black populations, a black subculture is not substantiated.

The variable percent of the population which is black has become synonymous in the research with a black subculture. Researchers such as Messner (1982, 1983) using the percentage of black persons in the population as an indicator, have found that there is a strong association between this variable and the homicide rate. It is not clear, however, exactly how strong a variable percent black is for measuring black culture. The use of percent black as a measure of culture can be confounded by several other factors such as the social and economic deprivation that the Black American population suffers.

Hawkins (1983, 1985) specifically argued that a subculture of violence theory cannot be substantiated for the black population due to the institutional discrimination of blacks in American society. Hawkins identified the historical pattern of discrimination against blacks in social, economical and political institutions as the major cause of high rates of black violence. Homicide can be viewed as a predictable outcome in the efforts by blacks, particularly males, to gain control over their environment. The historical lack of law enforcement in black

neighborhoods represents an extension of societal attitudes toward the value of black lives. The economic/conflict argument presented by Hawkins is one of the strongest alternative explanations of the high rates of violence among the black population.

A clear understanding of the relationship between race and the homicide rate is far from being resolved. As with region, race is an extremely complex variable which has not been clearly defined in the homicide literature.

The variables race and region are two of the most widely used indicators of a subcultural orientation toward violence. Research has not identified how the variables can be clearly defined measures of subcultural support for violence. Indeed, these variables often seem to confound subcultural orientation and the exact differences in the homicide rates that they are trying to explain, high rates of homicide in the South and among blacks. The difficulties in using such aggregate variables and levels of analysis, has led several researchers to test empirically the subculture of violence thesis using surveys of individual attitudes and behavior. Much of this research focused on the variation in attitudes and values toward violence among different sectors of the population.

Empirical Tests of the Subculture of Violence Thesis

Research at the individual level attempts to empirically test the subculture of violence thesis by

surveying individuals with regard to values and attitudes toward violence and rates of participation in violence. One of the earliest articles on the subject was written by Sandra Ball-Rokeach (1973). Ball-Rokeach tested two hypotheses:

> "1) persons who vary in participation in violent behavior should also vary in their attitude toward violence- favorable attitudes toward violence being positively associated with frequent participation in violent behavior; 2) persons who vary in participating in violence should also vary in underlying value patterns- patterns that should be logically related to violent behavior" (Ball-Rokeach 1973, p. 737).

Correlations between attitudes toward violence and participation in violence, testing hypothesis one, were significant but weak. Hypothesis two was not supported by her samples. The items used to measure values and attitudes in this survey were very general, asking about equality, for example. The questions did not get at the core values that one would associate with a subcultural orientation toward violence.

Erlanger (1974), in similar research, surveyed black and white males in Milwaukee, Wisconsin to examine attitudes toward violence and respect or status accorded to those who commit violent acts. With questions about personal approval of violence, Erlanger was better able to measure subcultural ideals. The data showed that blacks and poor males were more likely to fight than whites and nonpoor males. This finding is consistent with the subculture of violence thesis (Erlanger 1974, p. 285). Perceived esteem for fighting, the

societal reaction measure, was not statistically significant. Erlanger concluded that the rate of approval of the use of physical aggression was not that much different from mainstream society, refuting a subculture of violence thesis.

Smith (1979), in a unique article, empirically tested the subculture of violence thesis by examining the attitudes toward violence, and violent behavior, of ice hockey playing and non ice hockey playing boys in Toronto, Canada. The individuals were interviewed using the Rokeach value survey and a modified value survey by Blumenthal et al., which dealt specifically with violence. Composite indexes were created for two factors labeled 'hit' and 'kindness' along with an index of approval of hockey violence. Smith found that violent hockey players had a significantly more proviolence attitude than nonviolent hockey players (Smith 1979, p. 243). The proviolence attitudes among hockey players did not, however, extend to the general approval of violence. Smith concluded that the hockey subculture may be more of an occupational subculture than a generalized subculture. Smith's research is important because it explicitly related violent attitudes with violent behavior, defining subcultural in and out groups.

Individual level analysis of the subculture of violence thesis is important in understanding the relationship between individual attitudes and behavior and the identification of a subculture. The link between behavior

and attitudes is difficult to measure. This link, however, is an important part of the subculture of violence thesis. In order to theoretically establish the possibility of a subculture of violence, it must be assumed that there is successful socialization of cultural ideals such as violence, and that this socialization affects behavior. The subculture of violence thesis also assumes that socialization of cultural ideals regarding violence are the primary source of violent behavior.

Related Research on Other-Directed Violence

Although the majority of research on the subculture of other-directed violence has focused solely on the act of homicide, there has been some research involving one or more of the other forms of violent death. In contrast to the homicide research, no direct empirical tests of the subculture of violence argument are available. The research follows, in a more general way, the subculture of violence argument.

Ross (1959) in an early article, discussed the relationship between automobile accidents and cultural support. Ross discussed the lack of cultural stigmatization for the commission of traffic violations. Ross hypothesized that with the lack of social support for traffic laws and the high frequency of the violation of traffic laws, the risk of accidents is increased. Ross (1959) showed that the majority of accidents occur during the violation of traffic

law, supporting his argument. Ross' research demonstrated how cultural values affect human behavior which results in greater risk of accidents.

Porterfield (1960) examined the relationship between automobile deaths, suicide, and homicide. Porterfield contended that the rate of automobile fatality would be positively correlated with the combined rate of suicide and homicide (1960, p. 491). Theoretically he argued that motor vehicles are deadly weapons. "...it may be predicted that drivers who have little regard for their own lives or the lives of others or both ('other things being equal') will have higher rates of accidents than drivers who place a high value on human life" (1960, p. 492). Using age-adjusted death rates for white males in 163 metropolitan areas, Porterfield found positive correlations between automobile accidental death and the combined suicide/homicide rate. The author concluded that aggressive and hazardous driving is characteristic of persons who have suicidal and/or homicidal tendencies.

Both Ross' and Porterfield's research is empirically weak. The authors do, however, demonstrate the early interest in the relationship between cultural values, behavior, and rates of violent death.

Michalowski (1975) studied the relationship between rates of vehicular homicide and the subculture of violence. Michalowski equated driver negligence with anti-social behavior. From a subculture of violence perspective,

Michalowski (1975, p. 32) hypothesized that:

> "vehicular homicides, if they are at all related to socio-cultural patterns of aggressivity, would seem to represent a free- floating willingness to risk violent outcomes, rather than a desire to bring physical harm either to some specific individual or to people in general".

Michalowski theorized that several subculture of violence mechanisms can work through traffic fatalities, namely, willingness to cause harm to oneself and others, and using the automobile to express aggression and physical prowess (1975, p. 33).

Michalowski studied 119 cases of fatal auto accidents, where the driver was charged with wrongful death, in Columbus, Ohio from 1969 to 1971. The author found that vehicular homicides occurred more frequently in areas with low socioeconomic status, a large black population and high rates of other types of interpersonal violence such as assault and homicide. Michalowski concluded that driving as a learned behavior, is affected by the subcultural context of the learner (1975, p. 42).

Research on all types of other-directed violence, whether homicidal or accidental, has been studied in a subcultural context. The subculture of other-directed violence perspective is only one of several perspectives that have been used to examine homicide and other forms of violence. Other researchers contend that it is not cultural, but structural factors of a society that affect the rate of violence. Economic and social factors such as poverty, income inequality and divorce are instrumental

variables in the study of homicide for these researchers (e.g., Blau and Blau 1982; Williams 1984). In recognition of the importance of these perspectives in the explanation of rates of violence, two variables will be used in this study as indicators of these perspectives. The economic perspective will be represented by the percent below the poverty level. The social disorganization perspective will be represented by the divorce rates. The next section discusses research related to self-directed violence and subcultural orientation.

Subculture of Self-Directed Violence

The ideas for defining a subculture of self-directed violence are drawn from the research of Palmer (1972), Palmer and Humphrey (1980), and Humphrey and Palmer (1978). Their 1978 research most clearly discusses a subculture of self-directed violence.

Humphrey and Palmer's Research

Humphrey and Palmer, in a unique article, developed a thesis which they called a subculture of self-violence. Using data from the Office of the Chief Medical Examiner of North Carolina, for the years 1972-1975, the researchers studied homicide and suicide victims. Rates of homicide and suicide are compared from 1972 and 1975 by age, sex, marital and occupational status. North Carolina was found to have both an above average homicide rate (16.1 per 100,000 in

1975), and an above average suicide rate (14.8 per 100,000 in 1975). Humphrey and Palmer demonstrated that homicide increased from 1972 to 1975 for the most part, in groups that were typically at lower risk (whites, the elderly, and professional workers), the only exception being sex- the male rate rose the most from 1972 to 1975 (Humphrey and Palmer 1978, p. 106). Among suicide victims, again lowest risk groups showed the greatest increases (females, the young, and professional workers). Only one high risk group (whites) showed the a great increase in the suicide rate.

Humphrey and Palmer found that in North Carolina, other-directed violence had remained stable, while self-directed violence increased (1978, p. 107). The groups that were being victimized changed, with traditionally lower risk groups becoming more of a factor in the rate of homicide and suicide. To explain these changes, Humphrey and Palmer proposed that a subculture of self-directed violence might be emerging in North Carolina, and possibly the United States as a whole (1978, p. 108). The authors concluded that both subcultures of self and other-directed violence can exist in a population group.

> "The suggestion here is that subcultures of self-violence contain customs and values which advocate various forms of self-destructive behavior which vary in quality and degree: oversmoking, alcoholism, drug abuse, other behaviors harmful to physical and psychological health, with suicide simply the most extreme form" (Humphrey and Palmer 1978, p. 109).

Humphrey and Palmer laid the groundwork for the study of subcultures of self-directed violence. Other researchers

have discussed other forms of violent death in subcultural terms which follow a subculture of self-directed violence perspective.

Related Research on Self-Directed Violence

Paul Holinger, in a series of studies (1987, 1982, 1981, 1980, 1979), examined suicide, homicide, and accidents from what he called a 'self-destructive' perspective, focusing on risk-taking behavior. Holinger (1987, p. 5) contended that:

> "Suicide, homicide, and accidents, in this framework, are seen as related in that all may represent some expression of self-inflicted mortality, with suicide being the most overt, and homicide and accidents being more subtle manifestations of self-destructive tendencies and risk taking".

Holinger (1987) studied the pattern of violent death from 1900 to 1981. Holinger found that rates of homicide, suicide, and motor vehicle accidents were generally parallel over time (1987, p. 125). Non motor vehicle accidents, while fluctuating more irregularly, also correlated positively with suicide. These findings support Holinger's similar earlier research. The correlation of homicides and accidents with suicide supported Holinger's theory that self-destructiveness plays an important role in all forms of violent death.

Hacker and Suchman (1963) researched the importance of roles and statuses and the accident rate. The various roles and statuses in a society are theorized to have an impact on the accident rate. "These variables may call for varying

amounts and kinds of risk-taking among some groups with differing cultural norms concerning the value of safe and unsafe behaviors" (Hacker and Suchman 1963, p. 384). For example, the difference between masculine and feminine roles may place greater pressures on males to engage in risk-taking behavior that leads to accidental death. The researchers stated the need for cross-community comparison of accident rates, focusing on variations in cultural values, occupational structure, power relationships, and social stratification (1963, p. 389). The authors emphasized the importance of subcultural values in explaining variations in accident rates.

Tabachnick (1973), as discussed in Chapter two, associated self-destructive (suicidal) factors with motor vehicle accidental death. Tabachnick hypothesized that risk-taking behavior (such as driving a car at high speeds) is a way of dealing with frustration (1973, p. 194). Tabachnick argued that people differ in the categories of risk-taking that they are willing to engage in. The degree of risk-taking that an individual engages in is affected by cultural and psychological factors.

Self-directed violence and subcultural theory has not been researched nearly as much as other-directed violence. The researchers, particularly Humphrey and Palmer, do however, make strong cases for the use of subcultural theory. As rates of suicide, homicide and accidents change, different explanations such as self and other-directed

violence are needed to explain what social factors are affecting the rate changes.

Summary

The subculture of violence thesis is one of the most widely researched of all criminological theories. Wolfgang and Ferracuti laid the groundwork for subcultural theory within the field of homicide research. A subculture of violence is not isolated to other-directed violence, but can be seen as violence with a cultural base which flows between being directed at the self and others. Several important variables drawn from subcultural research will be used in this dissertation. The Legitimate Violence Index will be used as a predictor variable indicating violent subcultural orientation. Race, region will be included in the regression model, however, based on the inconclusiveness of past research, they are not identified as indicators of violent subcultural orientation. The subculture of violence thesis is seen as applicable to all forms of violent death. It is the purpose of this dissertation to empirically examine the applicability of the subculture of violence thesis in explaining variations in the rate of homicide, suicide, accidental death and a combined violent death rate. Chapter four presents the methods and materials to be used in the current research.

METHODOLOGY AND MEASUREMENT

CHAPTER IV

This chapter describes the research question and the variables used to test it. Multiple regression analysis is used to test the hypothesis, with each of the American States as the units of analysis (N=50). This chapter is divided into three sections. In the first section, the research question and related hypotheses are discussed. In the second section, the use of states as units of analysis is discussed. The third section describes the indicators used in this study to operationalize violent death (the dependent variables), the measure of subculture of violence (the predictor variable), and the control variables.

The Research Question

Two theoretical arguments are explored in this dissertation. The subculture of violence thesis and the theory of the functional alternative are two distinctly opposite theoretical perspectives. The subculture of violence thesis suggests that rates of violent death should be similar because the cultural environment produces attitudes of a general disregard for life which leads to reckless and self-destructive behavior. The theory of the functional alternative, on the other hand, suggests that the forms of violent death vary inversely. The theoretical

tenets of these two theories are logically incompatible, they cannot be simultaneously true. Chapter five will examine the applicability of the theory of the functional alternative to the study of violent death. If this theory fails to explain the pattern of violent death then more support is given to the examination of violent death from a subcultural perspective. As discussed in Chapters two and three, the main purpose of this dissertation is to examine whether the subculture of violence thesis explains variations in the rates of homicide, suicide, motor vehicle accidents, nonmotor vehicle accidents and combined violent death. The literature on the subculture of violence shows that two variables in particular have been used as proxies for violent subcultural orientation: region of the United States (Southern or Nonsouthern), and race. Previous research results involving race or region (see Chapter three), have shown mixed results. Measures of race and region, since they have shown association with rates of violence, but have not been clearly identified as measures of violent subcultural orientation, will be included in the model as control variables. Critics of the subculture of violence thesis have argued that an attitudinal measure of violence acceptance is needed that does not confound the question being answered and the measure being used. In response to this problem, Straus (1985) developed an Index of Legitimate Violence which measured, culturally legitimate support for the use of violence at the state level. The

Legitimate Violence Index will be used as a proxy for the subculture of violence argument.

The theoretical argument of this dissertation maintains that the subcultures of self and other-directed violence are part of a cultural acceptance of violence, of all forms, in the United States. The Index of Legitimate Violence, which is intended to measure a general acceptance of violence in American society, may be useful in explaining all types of violence. Given this argument, the Index of Legitimate Violence should be a predictor of high rates of both self and other-directed violence. A research hypothesis, for the major research thrust of this dissertation (testing the subculture of violence thesis), is derived from this reasoning:

H1: The higher the level of legitimate violence, the higher the rates of homicide, motor vehicle accidental death, combined violent death, suicide, and nonmotor vehicle accidental death.

States as Units of Analysis

The analysis of this dissertation focuses on rates of homicide, suicide and accidental death in the United States. The state as a unit of analysis is appropriate for the purpose of this research.

The use of states as units of macrosociological analysis has been hotly debated. Many sociologists argue that the state is too large a level of aggregation to provide meaningful analysis. The major concerns with state level data are that states are artificial political

boundaries without social meaning, and that within-state variation is problematic for states.

Other sociologists view states as similar to counties and cities, in that they have distinctive social, political and economic identities. State legislatures vary in the legal and social policies that they set, which leads ultimately to unique state identities, even for states that are geographically close together (for an extensive discussion, see Colby, 1985). States are known for having particular social and political climates. For example, laws regarding the use of violence vary from one state to another, creating differing social climates for the acceptance of the use of violence.

The problem of within-state variation, or state-wide heterogeneity, is of greatest concern from a sociological stand point. How can states as large as New York, with the huge metropolis of New York city and the rural Adirondack region enclosed within its boundaries, be considered a single statistical entity? In a recent article, Straus (1987) addressed the problem of within-state variation. Straus empirically tested a large number of sociological variables, comparing state data for SMSA and NONSMSA regions of each of the fifty United States. Straus found that states with a high rank on a variable for SMSA regions also ranked high for NONSMSA regions. This can be interpreted as meaning that although SMSA and NONSMSA areas within a state vary, the state itself is similarly ranked, in comparison

with other states, regardless of which data are used. For example, using SMSA data, a state is ranked first in the percent of the population that has graduated from high school, using NONSMSA data, the state would be similarly ranked. Straus also sought to answer the question of whether state data give different results than city and SMSA data when the identical question is being answered. Straus found that regardless of the level of analysis used, similar results were obtained (1987, p. 2). Straus' research provided much needed empirical evidence that state level data are a valid for many sociological analyses.

State level data are readily available for a wide range of sociological variables. Many government agencies, such as the Census Bureau and the FBI, report information at the state level. The availability of data is important considering the cost and difficulty of obtaining data. Previous research on violent death has used individual, city, county and state levels of analysis. Homicide research, in particular, has used states as the unit of analysis in an effort to explain regional and racial differences in the homicide rate (Gastil, 1971; Hackney, 1979; Loftin and Hill, 1974). Suicide has also been studied at the state level (Durkheim, 1951; Stack, 1980). This research has identified distinct variation in state patterns of violence, with socio-structural forces explaining much of that variation.

For this dissertation, the state level of analysis was chosen because of the availability of data and appropriateness. Each of the dependent variables in this study is sex and race-specific (e.g. black male suicide rate). Sex and race-specific data are not available from the Vital Statistics of the United States at any other level. Race and sex-specific rates of homicide, suicide and accidents are critical to this research. For example, cultural support for the use of violence may be more applicable to male rather than female rates of homicide. Since one of the purposes of this research is to find out how well the subculture of violence argument explains rates of violent death, the sex and race detail is necessary to provide a clearer picture of variation in rates of homicide, suicide, and accidental death. Additionally, many of the items used to create the Index of Legitimate Violence, the main predictor variable, are available only at the state level (Straus, 1985).

Data Sources and Measures

Dependent Variables

The dependent variables in this study are five measures of violent death, each broken down by sex and race (blacks and whites). As discussed in Chapter two, the rates of violent death are broken down by sex and race based on the theoretical research on the subculture of violence thesis. Adoption of values legitimating the use of violence was

identified as being most closely associated with males, particularly minority males. This is the main theoretical rationale for using sex and race-specific rates of violent death. The dependent variables are rates of homicide, suicide, motor vehicle accidental death, nonmotor vehicle accidental death, and a combined measure of violent death for each category: white males, black males, white females, and black females. The referent years for the dependent variables are the years 1980-1984. A five year period was chosen to lessen the problem of low frequencies commonly associated with violent death.

The data on suicide, motor vehicle accidental death and nonmotor vehicle accidental death were gathered from the Vital Statistics of the United States. The Vital Statistics of the United States contains information regarding morbidity and mortality for each of the fifty U.S. states. The assignment of a death to one particular category is determined in accordance with definitions determined by the World Health Organization's International Classification of Diseases. The variable "motor vehicle accidental death", includes any and all deaths involving motor vehicles made for on-road highway use. The majority of these vehicles are regular passenger cars, trucks, vans and motorcycles.

The variable "all other accidental death" includes a wide variety of accident types such as industrial accidents, water and air transportation accidents, and typical slips, cuts and falls. This category is particularly broad, but at

the state level, no further breakdown of accident categories is available. The broadness of this category makes assessment of its utility as a measure of self or other-directed violent death difficult. The variable is included in the analysis to find out if any explainable pattern exists for this category of violent death.

The variable "suicide" includes all forms of self-inflicted injury resulting in death, as defined by the coroner or medical examiner filling out the death certificate. There is a great deal of controversy over the potential variation in the assignment of suicide as the cause of death. Recent research (Pescosolido, 1985), however, indicated that although suicides may be under counted, there is little variation caused by the state system that exists (whether it is a medical examiner or a coroner who determines the cause of death). Since the current study includes accidental, suicidal, and homicidal forms of violent death, it seems logical that the few misclassified suicides will be picked up in the other categories.

The actual rates being used were obtained by averaging the reported number of deaths for each type of death for the years 1980-1984 and creating rates per 100,000 population. The formula used was ((d/p) x 100,000)/5, where d= the total number of reported deaths for the years 1980-1984, and p= the total sex and race-specific state population for the year 1980. The division by five is used to create a rate

expressed on a per year basis, as opposed to a 5 year death rate. The use of the referent year 1980 for state population can be a methodological problem. In states where population has grown during the 1980-84 period, for example, the rate of violent death reported will be higher than if a more current referent year is used. The possibility of this causing severe differences is noted, but should not be problematic.

The data on homicide are from the Comparative Homicide File, which has been compiled from the Supplemental Homicide Report of the Uniform Crime Reporting office of the FBI for the years 1980-1984. Race and sex-specific victim homicide rates per 100,000 population are used (see Williams and Flewelling, 1987 for a detailed description of the Comparative Homicide File). The use of victim rates, as opposed to offender rates may be somewhat problematic in the examination of the relationship among the three forms of violent death. The victim in a confrontation that ends in homicide may or may not be the original aggressor in the situation. Past research, however, does indicate that the socioeconomic status, race, and other related factors are similar for both the victim and offender in homicide situations (Wolfgang and Ferracuti 1967). It is important to note here that the use of victim rates may provide different results that if offender rates were used.

The combined violent death rate was created by summing the four death rates for each sex and race-specific

category. For example, the combined violent death rate for white females was computed by adding the white female homicide rate + the white female suicide rate + the white female motor vehicle accidental death rate + the white female nonmotor vehicle accidental death rate. This variable assigns a total rate of violent death for each sex and race-specific category of violent death, to each state.

The frequency distributions for each of the dependent variables show a great deal of state-to-state variation. Table 4.1 shows the means, standard deviations and value ranges for each of the dependent variables. The state ranks for these variables are listed in tables 4.2 through 4.11.

Descriptive Statistics.

Motor vehicle accidental death. Motor vehicle accidental death rates vary widely, particularly by race and sex of the victim. As seen in table 4.1, the mean motor vehicle accidental death rate varies from 8.4 for black females, to 35.0 for white males. Among males, there is a difference of 10 deaths per 100,000 between the rate for blacks (25.6) and whites (35.1). In general, the rate of motor vehicle accidental death is greater for males than for females, regardless of race.

Tables 4.2 and 4.3 show the variation of motor vehicle accidental death across states for each sex and race pairing. The most striking contrast is the range of values for black females. Seven states, (Alaska, Montana, South Dakota, North Dakota, Maine, Hawaii and Vermont), had no

TABLE 4.1 DESCRIPTIVE STATISTICS OF DEPENDENT VARIABLES

LABEL	MEAN	STD DEV	MINIMUM	MAXIMUM
MV ACC DEATH RATE:*				
WHITE MALE	35.067	9.225	18.24	61.40
BLACK MALE	25.597	11.479	.00	48.31
WHITE FEMALE	12.876	3.238	7.36	20.09
BLACK FEMALE	8.432	6.470	.00	37.38
OTHER ACC DEATH RATE:				
WHITE MALE	32.201	10.080	20.57	87.57
BLACK MALE	36.720	13.618	.00	59.77
WHITE FEMALE	14.277	1.901	9.88	19.70
BLACK FEMALE	14.932	6.553	.00	26.99
SUICIDE RATE:				
WHITE MALE	22.461	5.499	13.33	43.34
BLACK MALE	12.838	7.900	.00	52.68
WHITE FEMALE	6.195	2.073	2.89	15.17
BLACK FEMALE	2.467	2.447	.00	13.50
HOMICIDE VICTIM RATE:				
WHITE MALE	6.357	4.240	1.08	19.57
BLACK MALE	40.285	23.741	.00	124.03
WHITE FEMALE	2.541	1.323	.48	8.23
BLACK FEMALE	10.773	5.163	.00	21.96
VIOLENT DEATH RATE:				
WHITE MALE	96.086	23.935	62.50	159.10
BLACK MALE	115.440	35.066	.00	162.21
WHITE FEMALE	35.889	6.850	27.16	57.08
BLACK FEMALE	36.604	14.249	.00	85.35

*All rates are per 100,000 population

Table 4.2. State Ranks for White and Black Male Motor Vehicle Accidental Death Rate, 1980-84

STATENM	MVAWMR	STATENM	MVABMR
N M	61.40	UTH	48.31
WYO	60.30	S C	44.93
TEX	49.98	OKL	43.86
OKL	48.69	MIS	41.45
MIS	46.23	N C	40.73
NEV	46.16	FLA	39.53
MON	45.16	TEX	38.47
ARI	44.46	ALA	37.51
FLA	43.15	LA	36.99
LA	42.80	IDA	36.45
ALA	42.16	ARK	35.61
IDA	41.27	W V	35.50
GA	40.83	ARI	34.45
S C	40.71	GA	33.98
CAL	39.43	WYO	31.88
ALK	39.01	N M	31.87
ARK	38.97	VA	31.54
TEN	38.70	DEL	31.11
COL	37.48	NEV	30.48
N C	36.27	TEN	30.07
W V	36.17	ALK	28.65
KAN	36.14	S D	28.43
KY	35.78	CAL	27.97
ORG	34.76	COL	26.48
S D	33.17	WAS	25.20
N D	32.87	MO	24.34
VT	32.84	KAN	24.06
MO	32.05	IND	22.80
UTH	31.90	N J	22.75
DEL	31.06	R I	22.47
NEB	30.82	ORG	21.95
WAS	30.59	MD	21.76
IND	30.23	KY	21.56
ME	29.41	MAS	20.18
IOW	29.09	MIC	18.95
N H	28.62	NEB	18.74
HAW	27.83	ILL	18.66
VA	27.64	CON	18.41
WIS	27.46	N Y	17.80
MD	27.45	MON	17.56
MIC	27.36	OH	17.39
ILL	26.65	PA	16.99
PA	26.48	HAW	16.94
MIN	26.11	IOW	14.39
CON	25.54	MIN	12.47
OH	25.38	WIS	9.39
N J	23.05	N H	8.79
N Y	22.92	N D	.00
MAS	22.63	VT	.00
R I	18.24	ME	.00

Table 4.3. State Ranks for White and Black Female Motor Vehicle Accidental Death Rate, 1980-84

STATENM	MVAWFR	STATENM	MVABFR
NEV	20.09	IDA	37.38
N M	19.72	WYO	26.99
MIS	18.56	UTH	15.61
WYO	18.44	N M	13.95
OKL	18.37	ARI	13.86
TEX	17.08	OKL	13.30
FLA	17.08	DEL	12.98
ARI	16.61	FLA	12.75
IDA	16.37	N H	11.66
GA	15.81	WAS	11.56
ALA	15.34	TEX	10.96
S C	15.30	S C	10.78
ALK	15.12	NEV	10.23
COL	15.05	N C	10.13
LA	14.28	ALA	10.01
ORG	14.17	MIS	9.98
CAL	14.10	W V	9.82
TEN	14.01	COL	9.68
KAN	13.71	GA	9.58
UTH	13.49	CAL	9.45
ARK	13.32	ARK	9.44
N C	13.22	NEB	8.83
MON	12.94	CON	8.67
S D	12.70	LA	8.64
WAS	12.42	KAN	8.58
W V	12.23	VA	7.29
MO	12.18	TEN	6.98
KY	11.95	MAS	6.88
IND	11.78	IND	6.87
DEL	11.61	MO	6.73
N D	11.58	ORG	6.69
NEB	11.50	MD	6.66
IOW	11.45	N J	6.51
ME	11.45	MIN	6.13
N H	11.01	OH	6.06
MIC	10.82	KY	6.00
HAW	10.43	WIS	5.88
WIS	10.34	ILL	5.69
MD	10.24	R I	5.62
MIN	10.16	MIC	5.59
VA	9.92	N Y	5.40
ILL	9.73	PA	4.83
OH	9.52	IOW	.96
PA	9.27	ALK	.00
VT	8.84	MON	.00
N J	8.69	S D	.00
N Y	8.55	N D	.00
CON	8.44	ME	.00
MAS	7.47	HAW	.00
R I	7.36	VT	.00

Table 4.4. State Ranks for White and Black Male Other Accidental Death Rate, 1980-84

STATENM	OTHACWMR	STATENM	OTHACBMR
ALK	87.57	ARK	59.77
WYO	46.29	MIS	58.07
MON	42.13	S C	53.91
IDA	41.49	LA	51.18
N M	41.23	N C	50.86
MIS	40.48	ALA	50.17
OKL	38.96	ALK	49.49
NEV	38.89	GA	48.17
LA	38.39	FLA	47.51
KY	36.88	OKL	46.67
TEX	36.42	N M	46.22
ARK	34.51	VA	44.88
ARI	34.29	N H	43.96
W V	34.10	MO	43.79
N D	34.08	W V	42.73
S D	33.93	KY	42.64
ALA	33.88	WYO	42.51
ORG	33.74	TEX	42.05
COL	33.36	MIN	41.83
KAN	33.29	NEV	41.42
TEN	32.83	ARI	41.14
GA	32.72	WAS	40.61
CAL	32.62	PA	40.34
WAS	31.91	CAL	39.97
S C	31.90	TEN	39.74
MO	31.64	DEL	39.11
N C	31.46	N J	38.44
NEB	30.77	KAN	37.35
FLA	30.72	MAS	37.32
UTH	30.35	ILL	36.91
VA	29.29	IDA	36.45
VT	28.86	IND	35.82
ME	28.82	ORG	35.54
MIN	28.04	MON	35.12
HAW	27.83	R I	34.45
IOW	27.01	CON	32.90
ILL	25.54	NEB	32.37
MAS	25.06	MIC	32.31
IND	24.94	IOW	31.67
PA	24.69	OH	31.03
N Y	24.48	MD	31.01
CON	24.40	N Y	29.70
WIS	23.63	WIS	27.04
OH	23.59	UTH	26.01
R I	23.07	COL	23.80
MIC	22.78	HAW	22.03
MD	22.54	N D	.00
N H	22.16	S D	.00
N J	21.94	VT	.00
DEL	20.57	ME	.00

Table 4.5. State Ranks for White and Black Female Other Accidental Death Rate, 1980-84

STATENM	OTHACWFR	STATENM	OTHACBFR
ALK	19.70	WYO	26.99
MO	18.26	ARK	25.72
OKL	17.88	MIS	24.47
VT	17.38	N H	23.32
NEB	16.55	MO	22.96
KAN	16.48	IOW	22.05
WYO	16.33	OKL	21.09
MIS	16.09	ALA	20.39
ARI	15.85	ALK	20.12
N M	15.45	KAN	20.02
MAS	15.44	NEB	19.27
GA	15.38	GA	19.00
KY	15.19	N C	18.71
MIN	15.18	PA	18.69
CAL	15.16	S C	18.41
COL	15.11	LA	17.91
ALA	14.93	KY	17.55
IDA	14.78	DEL	16.91
IOW	14.75	ORG	16.74
N D	14.73	TEN	16.60
TEX	14.68	WAS	16.52
LA	14.50	CAL	16.47
W V	14.41	ME	16.37
TEN	14.34	MAS	16.35
FLA	14.10	W V	16.17
WAS	14.05	MIN	16.10
VA	14.00	VA	15.91
S C	13.93	UTH	15.61
PA	13.86	ILL	14.78
ARK	13.78	FLA	14.68
IND	13.65	N J	14.57
S D	13.63	MD	14.12
NEV	13.60	IND	14.11
N C	13.52	R I	14.05
ORG	13.44	OH	13.95
N Y	13.40	TEX	13.89
UTH	13.26	N Y	12.82
MON	13.16	CON	12.66
CON	13.11	NEV	12.60
ME	12.85	MIC	12.32
R I	12.81	ARI	12.19
N J	12.78	COL	10.89
MD	12.69	WIS	8.39
OH	12.46	HAW	7.19
ILL	12.21	N M	6.97
N H	12.16	VT	.00
WIS	11.45	IDA	.00
MIC	10.95	N D	.00
DEL	10.58	S D	.00
HAW	9.88	MON	.00

Table 4.6. State Ranks for White and Black Male Suicide Rate, 1980-84

STATENM	SUICWMR	STATENM	SUICBMR
NEV	43.34	MON	52.68
N M	36.20	VT	31.01
WYO	31.07	UTH	26.01
ARI	30.81	NEV	21.88
COL	30.79	ME	20.99
FLA	30.17	ARI	20.05
CAL	27.44	IOW	17.27
VT	26.27	MIN	16.88
MON	26.21	CAL	16.33
IDA	25.43	WAS	16.10
TEX	25.28	W V	15.78
ORG	24.96	OH	14.74
OKL	24.78	PA	14.43
GA	24.72	ORG	13.59
LA	24.59	COL	13.43
N C	23.69	MIC	13.43
VA	23.55	ALK	13.02
UTH	23.13	VA	12.72
TEN	22.93	KAN	12.35
ARK	22.74	IDA	12.15
WAS	22.52	MO	12.05
KY	22.04	MD	12.03
ME	21.91	R I	11.98
S C	21.72	HAW	11.86
ALA	21.61	OKL	11.67
ALK	21.50	N M	11.16
MO	21.31	WYO	10.63
DEL	20.99	LA	10.26
W V	20.90	MAS	9.71
N H	20.54	KY	9.67
WIS	20.46	N J	9.42
S D	20.30	ARK	9.39
KAN	19.85	TEX	9.28
MIS	19.78	ILL	9.28
MD	19.60	N C	9.20
MIC	19.54	WIS	9.17
IND	19.18	TEN	9.14
PA	19.02	GA	9.00
OH	18.92	IND	8.96
HAW	18.82	FLA	8.92
IOW	18.61	DEL	8.89
N D	18.12	N H	8.79
MIN	17.51	NEB	8.52
R I	17.44	N Y	8.15
ILL	17.32	ALA	8.12
NEB	17.25	S C	8.04
MAS	15.08	MIS	6.92
CON	14.93	CON	6.85
N Y	14.86	S D	.00
N J	13.33	N D	.00

Table 4.7. State Ranks for White and Black Female Suicide Rate, 1980-84

STATENM	SUICWFR	STATENM	SUICBFR
NEV	15.17	WYO	13.50
FLA	9.95	ORG	7.81
N M	9.60	HAW	7.19
CAL	9.53	R I	7.03
ARI	9.30	WAS	4.95
COL	8.78	NEB	4.82
LA	7.97	CAL	4.65
WYO	7.89	ARI	4.43
OKL	7.45	OH	4.27
GA	7.25	MIN	3.83
TEX	7.23	N M	3.49
VA	7.13	OKL	3.04
N C	7.01	PA	2.95
S C	6.81	MIC	2.76
DEL	6.76	VA	2.67
WAS	6.76	COL	2.42
ORG	6.56	NEV	2.36
TEN	6.50	DEL	2.36
ME	6.23	ARK	2.31
MIS	6.22	MD	2.18
MO	6.13	ILL	2.17
ALK	5.97	WIS	2.10
IDA	5.96	TEX	2.05
MIC	5.95	TEN	2.02
UTH	5.76	LA	1.98
KY	5.73	N Y	1.94
OH	5.72	IOW	1.92
HAW	5.69	N C	1.85
VT	5.61	MO	1.83
WIS	5.55	GA	1.82
ALA	5.53	IND	1.65
KAN	5.39	FLA	1.56
R I	5.28	N J	1.54
MON	5.23	ALA	1.54
MD	5.14	KY	1.50
PA	5.12	S C	1.44
ILL	5.07	MAS	1.38
IND	4.99	MIS	1.32
N H	4.92	KAN	1.27
MIN	4.85	CON	.87
ARK	4.82	W V	.58
W V	4.56	ME	.00
N Y	4.56	ALK	.00
CON	4.17	IDA	.00
MAS	4.12	UTH	.00
IOW	4.08	VT	.00
N J	3.89	MON	.00
NEB	3.88	N H	.00
S D	3.08	S D	.00
N D	2.89	N D	.00

Table 4.8. State Ranks for White and Black Male Homicide Rate, 1980-84

STATENM	HOMICWMR	STATENM	HOMICBMR
TEX	19.57	VT	124.03
N M	18.53	MO	82.03
NEV	15.10	MIC	72.80
CAL	13.74	CAL	65.52
FLA	12.82	TEX	64.00
ARI	11.62	IND	63.42
ALK	11.02	NEV	62.78
KY	10.24	N Y	62.63
N Y	9.81	FLA	61.12
OKL	9.69	ILL	58.44
LA	9.21	N M	56.96
S C	8.62	PA	53.88
GA	8.45	LA	53.68
TEN	8.03	NEB	53.67
COL	7.41	ARI	50.25
HAW	7.34	OH	49.84
ALA	7.07	OKL	49.84
N C	6.96	TEN	48.00
MIS	6.56	KAN	45.36
WYO	6.55	IOW	45.03
W V	6.52	GA	44.11
ILL	5.89	ALA	41.94
VA	5.58	MIN	41.48
MO	5.34	MAS	41.23
ARK	5.33	COL	40.19
IND	4.43	MD	40.06
KAN	4.40	ARK	40.01
OH	4.37	CON	39.22
WAS	4.32	UTH	39.18
MIC	4.24	ORG	39.15
MD	4.19	MIS	38.86
N J	4.18	KY	36.70
ORG	4.00	WAS	35.41
DEL	3.99	N J	34.76
IDA	3.93	N C	33.02
R I	3.80	VA	32.28
UTH	3.64	S C	30.89
CON	3.61	WIS	25.92
MAS	3.40	ALK	25.89
MON	3.25	DEL	24.17
VT	3.24	W V	23.57
PA	3.20	R I	21.29
N H	2.55	IDA	12.58
S D	2.07	HAW	9.06
WIS	2.07	WYO	.00
ME	1.97	MON	.00
NEB	1.93	N H	.00
IOW	1.65	S D	.00
MIN	1.34	ME	.00
N D	1.08	N D	.00

Table 4.9. State Ranks for White and Black Female Homicide Rate, 1980-84

STATENM	HOMICWFR	STATENM	HOMICBFR
NEV	8.23	UTH	21.96
TEX	4.73	NEV	20.91
ALK	4.43	ORG	18.51
FLA	4.09	WYO	17.87
OKL	4.07	R I	17.16
CAL	4.05	ME	16.74
ARI	4.01	MIC	16.16
N M	4.00	FLA	15.22
WYO	3.95	MIN	14.73
HAW	3.82	CAL	14.72
COL	3.42	ALK	14.67
LA	3.33	TEX	14.27
S C	3.32	GA	14.09
GA	3.24	KAN	13.44
MIS	2.83	IND	13.40
KY	2.81	COL	13.37
ALA	2.72	N H	12.41
N C	2.62	WAS	12.36
N Y	2.61	NEB	12.27
VA	2.58	MO	12.10
ORG	2.52	OH	12.10
ARK	2.48	W V	11.82
MD	2.43	ARI	11.75
WAS	2.38	KY	11.28
DEL	2.29	N M	11.17
TEN	2.29	ILL	11.07
KAN	2.26	LA	11.04
MO	2.25	WIS	10.83
W V	1.99	OKL	10.59
IND	1.99	MIS	10.50
MIC	1.98	PA	10.42
UTH	1.97	N Y	10.33
ILL	1.88	ALA	9.79
ME	1.86	N J	8.57
N J	1.80	TEN	8.44
OH	1.78	N C	8.41
R I	1.77	VA	8.34
IDA	1.69	MD	8.27
CON	1.67	ARK	8.20
MON	1.58	CON	7.97
N H	1.55	MAS	7.95
PA	1.53	S C	7.76
WIS	1.43	IOW	7.11
MAS	1.32	DEL	4.83
NEB	1.27	HAW	3.76
IOW	1.05	IDA	.00
MIN	1.01	MON	.00
VT	.92	VT	.00
N D	.77	N D	.00
S D	.48	S D	.00

Table 4.10. State Ranks for White and Black Male Combined Violent Death Rate, 1980-84

STATENM	VDWMR	STATENM	VDBMR
ALK	159.10	MO	162.21
N M	157.36	FLA	157.07
WYO	144.21	NEV	156.56
NEV	143.50	VT	155.04
TEX	131.25	TEX	153.80
OKL	122.13	LA	152.12
ARI	121.18	OKL	152.04
FLA	116.86	CAL	149.80
MON	116.75	N M	146.21
LA	114.99	ARI	145.89
CAL	113.23	MIS	145.30
MIS	113.05	ARK	144.78
IDA	112.11	UTH	139.52
COL	109.04	S C	137.77
GA	106.72	ALA	137.73
KY	104.94	MIC	137.48
ALA	104.73	GA	135.26
S C	102.95	N C	133.82
TEN	102.48	IND	130.99
ARK	101.54	TEN	126.96
N C	98.38	PA	125.64
W V	97.69	ILL	123.29
ORG	97.46	VA	121.42
KAN	93.68	KAN	119.12
VT	91.21	N Y	118.28
MO	90.34	W V	117.59
S D	89.47	WAS	117.33
WAS	89.34	ALK	117.06
UTH	89.01	NEB	113.30
N D	86.14	OH	113.00
VA	86.05	MIN	112.65
ME	82.11	KY	110.57
HAW	81.82	ORG	110.22
NEB	80.77	MAS	108.44
IND	78.79	IOW	108.37
DEL	76.61	N J	105.37
IOW	76.36	MON	105.36
ILL	75.40	MD	104.86
MIC	73.91	COL	103.90
N H	73.87	DEL	103.28
MD	73.77	IDA	97.63
WIS	73.62	CON	97.39
PA	73.40	R I	90.20
MIN	72.99	WYO	85.02
OH	72.26	WIS	71.52
N Y	72.07	N H	61.54
CON	68.48	HAW	59.89
MAS	66.16	S D	28.43
R I	62.54	ME	20.99
N J	62.50	N D	.00

Table 4.11. State Ranks for White and Black Female Combined Violent Death Rate, 1980-84

STATENM	VDWFR	STATENM	VDBFR
NEV	57.08	WYO	85.35
N M	48.77	UTH	53.18
OKL	47.77	ORG	49.76
WYO	46.62	OKL	48.02
ARI	45.77	N H	47.39
ALK	45.23	MIS	46.26
FLA	45.22	NEV	46.10
TEX	43.73	ARK	45.67
MIS	43.70	WAS	45.39
CAL	42.83	CAL	45.28
COL	42.36	NEB	45.18
GA	41.69	GA	44.49
LA	40.08	FLA	44.21
S C	39.36	R I	43.86
MO	38.81	MO	43.61
IDA	38.80	KAN	43.30
ALA	38.52	ARI	42.23
KAN	37.83	ALA	41.73
TEN	37.14	TEX	41.16
ORG	36.69	MIN	40.79
N C	36.37	LA	39.57
KY	35.68	N C	39.10
WAS	35.61	W V	38.39
UTH	34.47	S C	38.39
ARK	34.40	IDA	37.38
VA	33.63	DEL	37.09
W V	33.20	PA	36.89
NEB	33.20	MIC	36.83
MON	32.91	OH	36.38
VT	32.76	COL	36.36
IND	32.41	KY	36.33
ME	32.39	IND	36.03
IOW	31.33	N M	35.58
DEL	31.23	ALK	34.79
MIN	31.20	VA	34.21
MD	30.49	TEN	34.03
N D	29.97	ILL	33.72
S D	29.90	ME	33.10
HAW	29.81	MAS	32.56
PA	29.78	IOW	32.04
MIC	29.70	MD	31.23
N H	29.64	N J	31.19
OH	29.47	N Y	30.49
N Y	29.12	CON	30.17
ILL	28.90	WIS	27.20
WIS	28.78	HAW	18.15
MAS	28.35	MON	.00
CON	27.39	VT	.00
R I	27.21	N D	.00
N J	27.16	S D	.00

recorded motor vehicle deaths during the five year period. Two states, however, had extremely high rates of death for black females, Idaho (37.4) and Wyoming (27.0). The rates of black female violent death vary widely because of the extremely small population of black females in several states. The small population of black females creates the problem of small sample variability. If a state with a small population has a few deaths occur in the time period under study, an extremely high death rate is reported. If no deaths occur, then the rate is zero. Small sample variability produces random high and low rate fluctuations, so the integrity of the data should not be compromised. The rates for black males vary widely also, with a standard deviation of 11.5, but the variation is more patterned, with no extreme outliers. The rates for white males and females do not show the wide variation that black rates show. Overall, states in the West and South have the highest rates of motor vehicle accidental death.

Other accidental death. Table 4.1 shows the means and standard deviations for all other types of accidental death. The means for females, both black and white, are remarkably similar (white=14.3, black=14.9). The means for males are also similar (white=32.2, black=36.7). Other accidental deaths vary largely by sex of the victim, with males being the most frequent victims.

The between state variation, as shown in Tables 4.4 and 4.5, provide evidence of some sharp contrasts. Among all

sex and race pairings, the Western states again show the highest accidental death rates. The state of Alaska ranks highest for both white males (87.6) and white females (19.7). The high nonmotor vehicle accidental death rate in Alaska is probably best explained by the occupational hazards associated with the state's chief industries: oil drilling and pipeline construction, and cold water fishing. The death rate for white males is particularly skewed by the high death rate in Alaska, which is 41 points higher than the next closest value (Wyoming= 46.3).

Suicide. The rate of suicide among whites, blacks, males and females, follows traditionally reported patterns. The mean rate of suicide for females (white=6.2, black=2.5) is less than half the male rate for both blacks (12.8) and whites (22.5). Table 4.6 shows the large spread in values for the rate of black male suicide. Montana has a rate of 52.7, while Vermont, the second highest ranking state has a value of 31.0, a difference of 21.7 deaths per 100,000 black males. At the other extreme, South and North Dakota had zero reported suicides by blacks, male or female. The extreme difference between male and female rates is also seen clearly in Tables 4.6 and 4.7. The lowest ranking state for white male suicide (New Jersey) has a rate of 13.3, while the highest ranked states for both black and white female suicide, barely attain this value. For white males and females, the Western states are predominantly highest in rank. For blacks the pattern of top ranked

states indicates that states with small black populations have the highest rates of black suicide.

Homicide. The mean rate of homicide shows a pattern that is different from motor vehicle accidental deaths, other accidental deaths and suicide. While these forms of death tend to split along male/female lines, the homicide rate splits along racial lines. The mean homicide rate for white males is 6.3, for white females, 2.5. The mean homicide rate for black males is 40.2, for black females, 10.7. Table 4.8 shows that the mean homicide rate for black males is affected by one outlying state, Vermont, with a rate of 124.0 deaths per 100,000 black males. The second ranking state for black males, Missouri, has a rate of 82.0, a difference of 42 deaths per 100,000 from the Vermont homicide rate. Irrespective of the outlier, the homicide rate for black males is, on the whole, considerably higher that any of the other race/sex combinations. This finding is similar to past homicide research. The rates of black female homicide victimization are high, but not much more so than the rates of white males. The rate of white female homicide victimization is very low. Nevada is the highest ranking state with a rate of 8.2. For whites, the Southern and Western states rank highest. For black males, Western and Midwestern states rank nearest the top. For black females the Northwest states rank highest. The extreme variation in the homicide rate by race and sex provides support for using sex and race specific violent death rates.

The total homicide rate would have masked these variations.

Combined violent death. The combined violent death rate variable provides an overall indicator of violent death in a state by sex and race. Table 4.1 shows that the violent death rate varies along male/female lines. The mean violent death rate for white females is 35.9, which is similar to the rate for black females, 36.6. The mean violent death rate for white males is 96.0 and for black males, 115.4. The standard deviations are large for black males, white males, and black females, suggesting wide variation in the rates across states.

Looking at tables 4.10 and 4.11, the combined violent death rate takes on more character. The male rates are, on the whole, a great deal higher than the female rates. For white males, the highest ranking states are in the West, the lowest, in the Northeast. In contrast, the highest ranking states for black males are located in the South and Southwest, with the exception of Vermont. Similar to white males the Western states are ranked highest for white females. This is also the case for black females, with the exception of New Hampshire, which is ranked fifth with a combined violent death rate of 47.4. Outliers in each of the individual forms of violent death carry their effects over to the combined rate, causing some of the oddly high rates for white males, black males and black females. Across all sex/race pairs, the Western states have predominantly high rates of combined violent death.

Predictor Variable

As stated earlier, one variable will be used as the proxy for violent subcultural orientation. The referent year for the predictor variable, as well as the control variables, is 1980. The predictor and control variables are from the State and Regional Indicators Archive (SRIA) at the University of New Hampshire. The SRIA is a collection of a wide range of social and economic variables which are available for public use.

The Index of Legitimate Violence was developed by Straus (1985) to measure cultural support for violence. The index is made up of twelve indicators of legitimate (legal) forms of violence. "The theoretical basis for selecting the indicators was the assumption that group differences in values concerning violence should be manifest in many different activities including education, recreation, law enforcement, etc. (Straus 1985, p. 2). The indicators used in the Legitimate Violence Index are aggregate behaviors reflecting socially legitimate involvement in violence. The twelve variables making up the index are: the violent TV audience index, violent magazine circulation index, National Guard expenditures, National Guard enrollment, football player production, hunting licenses per 100,000 population, corporal punishment permission index, lynchings, ratio of executions to homicides, 1940-1959, ratio of executions to homicides, 1960-1979, ratio of death sentences to homicide

arrests for whites, and the ratio of death sentences to homicide arrests for blacks.

The twelve variables making up the Index were scored and adjusted to control for two demographic variables confounding the Index (percent of single males in the population and percent living in Standard Metropolitan Statistical Areas (SMSA's). Finally, the overall index was standardized through a procedure called 'zp' scoring (Straus, 1981).

> Through the zp scaling method, index scores acquire the characteristics of both z scores and percentages. Thus a change of one zp score point can be interpreted as a change of one percent of the zero to 100 score range, while a change of 20 zp score points can be viewed as a change of one standard deviation (Mean=50) (Baron and Straus 1986, p. 9).

The Index of Legitimate Violence has been used to examine a variety of criminal acts including rape and homicide (see Baron and Straus, 1984, 1985, 1986). This research found that the Legitimate Violence Index explains significant portions of the variation in rates of rape and homicide.

Descriptive Statistics.

Legitimate violence index. The Legitimate Violence Index, as discussed earlier, has been scored on a scale of zero to 100. Table 4.13 shows the state ranks on the Legitimate Violence Index. Three Western states, Utah, Nevada, and Wyoming are ranked highest on the Index. As compared with other states, these states scored high with regard to the number of laws allowing socially legitimate

violence, and had high consumption of socially legitimate forms of violence. These states have the strongest support for violent cultural norms. Among the states which ranked lowest on the Legitimate Violence Index, the Eastern region of the United States is well represented. These states show weakest support for violent cultural norms.

Control Variables

Six variables commonly found to be highly correlated with violent death and with state level analysis will be used as control variables in the regression model. The control variables will hold constant the influence that the variable might have in the regression equation.

The variable percent black shows the percent of each state's population which is black. This variable has been used in past research on homicide using the subculture of violence perspective.

The variable confed is a dummy variable which divides the United States into two regions. The Confederate South, which includes the states which seceded from the Union during the Civil War, and the Nonsouth which includes all other states. This variable, has been used in past research on homicide as discussed in Chapter three.

The variable percent of the state population below the poverty level is included in the model because of its importance in past research on violence. Poverty has been shown to have an effect on rates of homicide.

TABLE 4.12 DESCRIPTIVE STATISTICS OF PREDICTOR AND CONTROL VARIABLES

LABEL	MEAN	STD DEV	MINIMUM	MAXIMUM
PREDICTOR VARIABLE				
LEGIT VIOL INDEX: MET+SNGL RESD	50.120	20.146	14.00	96.00
CONTROL VARIABLES				
CONFED: 1=CONFEDERATE STATES	.220	.418	0.00	1.00
BLACK POP: % OF STATE POP	9.140	9.222	.20	35.20
POVERTY: % OF STATE POP BELOW	12.482	3.425	8.00	24.50
POP AGE 18-24: % OF STATE POP	13.456	.753	11.70	14.90
METRO POP: % OF STATE POP	61.368	22.845	15.30	94.90
DIVORCE: RATE PER 1,000 POP	5.694	2.237	2.290	17.30

Table 4.13. State Ranks for the Index of Legitimate Violence and Divorce Rate per 1,000 pop, 1980

STATENM	XCVR2ZP	STATENM	DIV80
UTH	96	NEV	17.30
NEV	90	ALK	8.80
WYO	83	WYO	8.50
GA	81	N M	8.00
MIS	77	OKL	8.00
MON	75	ARI	7.30
FLA	72	FLA	7.30
LA	70	IND	7.30
COL	70	IDA	7.00
TEX	69	ALA	6.90
HAW	69	ARK	6.90
ALK	68	WAS	6.90
ARI	66	TEX	6.80
VT	64	ORG	6.70
S C	63	TEN	6.60
IDA	63	COL	6.40
ALA	62	GA	6.40
DEL	61	MON	6.30
ARK	57	KAN	5.70
ORG	54	N H	5.70
OKL	54	CAL	5.60
CAL	53	MO	5.60
N D	53	ME	5.50
WAS	52	MIS	5.50
VA	52	OH	5.40
N Y	46	UTH	5.30
OH	45	W V	5.30
PA	43	VT	5.10
N M	43	MIC	4.90
ILL	43	N C	4.80
CON	43	HAW	4.60
N C	42	KY	4.60
S D	41	ILL	4.50
KAN	40	S C	4.40
MD	39	VA	4.40
TEN	38	CON	4.30
MIC	36	LA	4.30
MAS	36	IOW	4.10
MIN	35	MD	4.10
N J	33	NEB	4.10
R I	31	S D	4.10
NEB	29	DEL	3.90
WIS	28	MIN	3.80
IND	25	N J	3.80
IOW	24	R I	3.80
MO	22	WIS	3.70
N H	20	N Y	3.50
KY	20	N D	3.30
W V	16	MAS	3.10
ME	14	PA	2.90

Table 4.14. State Ranks for Percent Black and Percent Below Poverty, 1980

STATENM	BLK80	STATENM	POV80
MIS	35.20	MIS	24.50
S C	30.40	LA	18.90
LA	29.40	ARK	18.70
GA	26.80	KY	18.40
ALA	25.60	ALA	17.90
MD	22.70	N M	17.40
N C	22.40	TEN	17.00
VA	18.90	GA	16.40
ARK	16.30	S D	16.10
DEL	16.10	S C	15.90
TEN	15.80	TEX	14.80
ILL	14.70	N C	14.60
FLA	13.80	W V	14.50
N Y	13.70	N Y	13.70
MIC	12.90	OKL	13.30
N J	12.60	FLA	13.00
TEX	12.00	ME	12.90
MO	10.50	N D	12.80
OH	10.00	IDA	12.70
PA	8.80	ARI	12.40
CAL	7.70	MO	12.40
IND	7.60	MON	12.40
KY	7.10	DEL	11.90
CON	7.00	ILL	11.50
OKL	6.80	VA	11.50
NEV	6.40	VT	11.40
KAN	5.30	CAL	11.30
MAS	3.90	ORG	11.30
WIS	3.90	MIC	11.10
COL	3.50	UTH	10.70
ALK	3.40	OH	10.50
W V	3.30	PA	10.50
NEB	3.10	NEB	10.40
R I	2.90	R I	10.30
ARI	2.80	COL	10.20
WAS	2.60	KAN	10.20
HAW	1.80	WAS	10.20
N M	1.80	ALK	10.10
ORG	1.40	HAW	10.00
IOW	1.40	MD	9.90
MIN	1.30	IND	9.80
WYO	.70	MAS	9.80
UTH	.60	N J	9.70
N D	.40	IOW	9.40
N H	.40	MIN	9.30
IDA	.30	CON	8.70
S D	.30	N H	8.70
ME	.30	NEV	8.50
MON	.20	WIS	8.50
VT	.20	WYO	8.00

Table 4.15. State Ranks for Percent Metropolitan and Percent Aged 18-24, 1980

STATENM	MET80	STATENM	YNG80
CAL	94.90	ALK	14.90
R I	92.20	N D	14.90
N J	91.40	HAW	14.80
N Y	90.10	UTH	14.80
MD	88.80	WYO	14.70
CON	88.30	COL	14.50
FLA	87.90	S C	14.30
MAS	85.30	LA	14.20
MIC	82.80	TEX	14.00
NEV	82.00	DEL	14.00
PA	81.90	N C	14.00
ILL	81.00	VA	13.90
COL	80.90	VT	13.90
WAS	80.40	KAN	13.80
OH	80.30	S D	13.80
TEX	80.00	CAL	13.70
HAW	79.00	R I	13.70
UTH	79.00	MAS	13.70
ARI	75.10	WIS	13.70
IND	69.80	MIN	13.70
VA	69.60	N M	13.70
DEL	67.00	MIC	13.60
WIS	66.80	ARI	13.60
MO	65.30	WAS	13.40
ORG	64.90	IND	13.40
MIN	64.60	GA	13.40
LA	63.40	KY	13.40
TEN	62.80	NEB	13.40
ALA	62.00	MIS	13.40
GA	60.00	OKL	13.30
S C	59.80	IOW	13.30
OKL	58.50	NEV	13.20
N C	52.70	ILL	13.20
N H	50.70	ALA	13.20
KAN	46.80	MON	13.20
KY	44.50	MD	13.10
NEB	44.10	OH	13.10
ALK	43.40	TEN	13.10
N M	42.30	N H	13.10
IOW	40.10	IDA	13.00
ARK	39.20	MO	12.90
W V	37.10	PA	12.70
N D	35.90	ORG	12.60
ME	33.00	ME	12.60
MIS	27.10	W V	12.50
MON	24.00	CON	12.40
VT	22.30	N Y	12.30
IDA	18.30	ARK	12.20
S D	15.80	N J	11.80
WYO	15.30	FLA	11.70

The variable divorce rate per 1,000 state population is included in the model as a proxy of social disorganization. Divorce rate has been a significant predictor of violence in past research.

The variable percent metropolitan will control for the percent of a state's population residing in metropolitan areas. This variable helps to control for the possible problem of within state variation.

The variable percent of the state population aged 18-24 will be used to control for high percentages of young people in a state's population. The young have been found to be particularly susceptible to involvement in homicide and accidental death.

Descriptive Statistics.

Divorce Rate. Table 4.13 shows that the divorce rate varies widely across states. Nevada, with its history of easy to obtain divorces, ranks highest in the nation. States in the West and South have the highest rates of divorce. States in the Eastern United States are ranked at the bottom.

Black percentage of the total state population. The variable, percent of the state population which is black, varies widely across states. Table 4.12 shows the mean percent of black population in a state to be 9.1, with a standard deviation of 9.2. Table 4.14 shows that the Southern states, as would be expected, have high percentages

of the total population accounted for by blacks. States in the Northeast, and North central regions have extremely low percentages of blacks in the population.

Percent poor. Table 4.12 shows the mean percent of the state population below the poverty line to be 12.5 percent. The percentages vary greatly, up to a maximum of 24.5 percent (Mississippi). The state ranks in table 4.14 show that Southern states rank highest.

Percent metropolitan. Table 4.15 shows the state rankings on the variable measuring the percent of the population in each state residing in metropolitan areas. States along the East and West coasts rank nearest the top. As expected, states in the Northwest and extreme Northeast rank near the bottom.

Percent aged 18-24. Table 4.15 shows the state ranks for the variable measuring what percentage of the total state population is made up of individuals aged 18 to 24. Alaska, North Dakota, and Hawaii are ranked highest, reflecting states which have had large influxes of young people, and states that have high birth rates. States in the Eastern region of the United States have some of the lowest percentages of young people in the state's population.

Summary

Chapter four described the research questions and variables being used to test them. The theoretical argument

of this dissertation states that subcultures of self and other-directed violence are similar in the acceptance of violence as a means of conflict resolution, with the object of the aggression being the difference. The Legitimate Violence Index is the main predictor variable. The acceptance of legitimate violence is viewed as a proxy for the acceptance of violence as a means to problem solving, legitimate or illegitimate, which is the main tenet of the subculture of violence argument. It is hypothesized that states with a greater acceptance of culturally legitimate violence will have higher rates of violent death. Chapter five discusses state differences in violent death rates. The patterns of homicide, suicide, motor vehicle accidental death, nonmotor vehicle accidental death, and the combined violent death rate among states is discussed using the theory of the functional alternative. Chapter six presents the results of the regression analysis using the variables discussed in this chapter.

REGIONAL DIFFERENCES IN VIOLENT DEATH RATES

CHAPTER V

This chapter examines differences in the combined violent death rate within four regions (Northeast, Northcentral, South, and West) of the United States. The combined violent death rates for white males, black males, white females and black females are examined separately within each of the four regions. The regional analysis is used to gain a better understanding of the dependent variables, and to investigate, in an exploratory fashion, the utility of the theory of the functional alternative in the examination of violent death rates.

The chapter is divided into three sections. The first section reviews the theory of the functional alternative. The second section describes the methods used to create the graphs and correlations used in the analysis. The final section discusses the results of the analysis for each race-and-sex category.

Theory of the Functional Alternative

The theory of the functional alternative is used to examine the combined violent death rates for each region. It is also used within the regions to examine the relationship between the different forms of violent death. Chapter two discussed three studies (Erikson 1966, Henry and

Short 1964, and Straus and Straus 1953) which represent examples of research in the functional alternative tradition. Two concepts drawn from these studies are brought together for use in the current research. Erikson's research suggests that the total volume of deviant behavior in a community remains constant because the capacity of social control mechanisms to handle deviant behavior remain constant. Henry and Short and Straus and Straus' research suggest that when one type of violent death in a society is high, such as other-directed violence (homicide), another type of violent death, which is self-directed (suicide) should be low. These concepts together comprise a theory of the functional alternative which maintains that social structural conditions such as social control mechanisms and mores regarding the expression of aggression, constrain the amount and form of deviance that occurs in a society. Structural constraints such as speed limits and gun control, for example, serve as social control mechanisms which stabilize the rate of violent death in a community. In certain historical periods, one particular form of violent death may be defined as a 'public problem' (Gusfield 1981). The definition of one particular phenomenon as a public problem brings that phenomena into the social and political limelight. The renewed interest serves to focus energy towards the issue such as the passing of legislation or increasing funds to agencies of social control that deal with the problem. Gusfield (1981) discusses how one aspect

of accidents, drinking and driving, developed into a public problem. The concern over drinking and driving in the late 1970's focused attention on the issue and led to greater social control over this behavior. It is through mechanisms of control such as tougher laws regarding drinking and driving which should effect rates of violent death.

Erikson would recommend the use of longitudinal data to examine the applicability of functional alternative theory to the study of violent death. Other researchers such as Henry and Short, however, have applied the theory using data from one point in time. The present study will use the theory of the functional alternative to examine rates of violent death measured at one point in time and compare the rates within regions of the United States. For this study, the two concepts of the theory of the functional alternative suggest that the rates of combined violent death for states within the same region should have similar values, and the rates of self and other-directed violence within these regions should vary inversely. These concepts are examined in this chapter.

Method

In order to examine regional continuity of the combined violent death rate, a series of graphs was created using the SPSSX Plot command. A total of sixteen plots were created to determine regional uniformity for each race-and-sex specific rate of combined violent death. For example, a

plot of black female combined violent death rates for each state in the Northeast is shown in Figure 5.13. A regional analysis is used to examine the concept of rate continuity from the theory of the functional alternative. With the current data set, it seems the most logical to examine the possibility of rate continuity by dividing the U.S. into regions. The most ideal test of this concept would use longitudinal data and examine state differences or similarities over time. A regional analysis, however, will allow a test of this concept at one point in time. Informal and formal social controls that affect the rate of violent death may be similar among states that are located in the same region. For these reasons, a regional analysis was used.

To examine the possibility of inverse variation among the forms of violent death in each region, bivariate correlations were calculated. The cases for all states in a particular region (e.g. the South) were selected, and bivariate correlations were calculated with SPSSX for all dependent variable combinations. For example, Table 5.3 gives the bivariate correlations of all dependent variables for white males in the Southern region of the United States. The next section discusses the analysis of the data for each race-and-sex category.

Analysis

The analysis will be divided into sections based on the four race-and-sex categories. Within each section, the results are presented in two subcategories, one discussing whether or not there is regional continuity in the rates of combined violent death, and another discussing the results of examination of the data for inverse variation among the four types of violent death. A discussion follows the analysis.

White Males

Regional Continuity. As can be seen in Figure 5.1, the rates of violent death in the Northeast for white males are clustered between 60 and 75 deaths per 100,000, with the exception of Maine and Vermont. The rates of violent death in Maine and Vermont were higher than average, suggesting an inconsistent pattern in the rates of combined violent death in the Northeast. In the Northcentral region, as seen in Figure 5.2, the rates for most states are clustered between 72 and 85 deaths per 100,000. The pattern for the Northcentral is similar to that of the Northeast. In the South (Figure 5.3), rates become more disparate, with several states having extremely low rates and several having extremely high rates. Except for these extremes, the majority of states clustered between 100 and 120 deaths per 100,000. In Figure 5.4 it can be seen that the Western region of the United States has the largest variation in

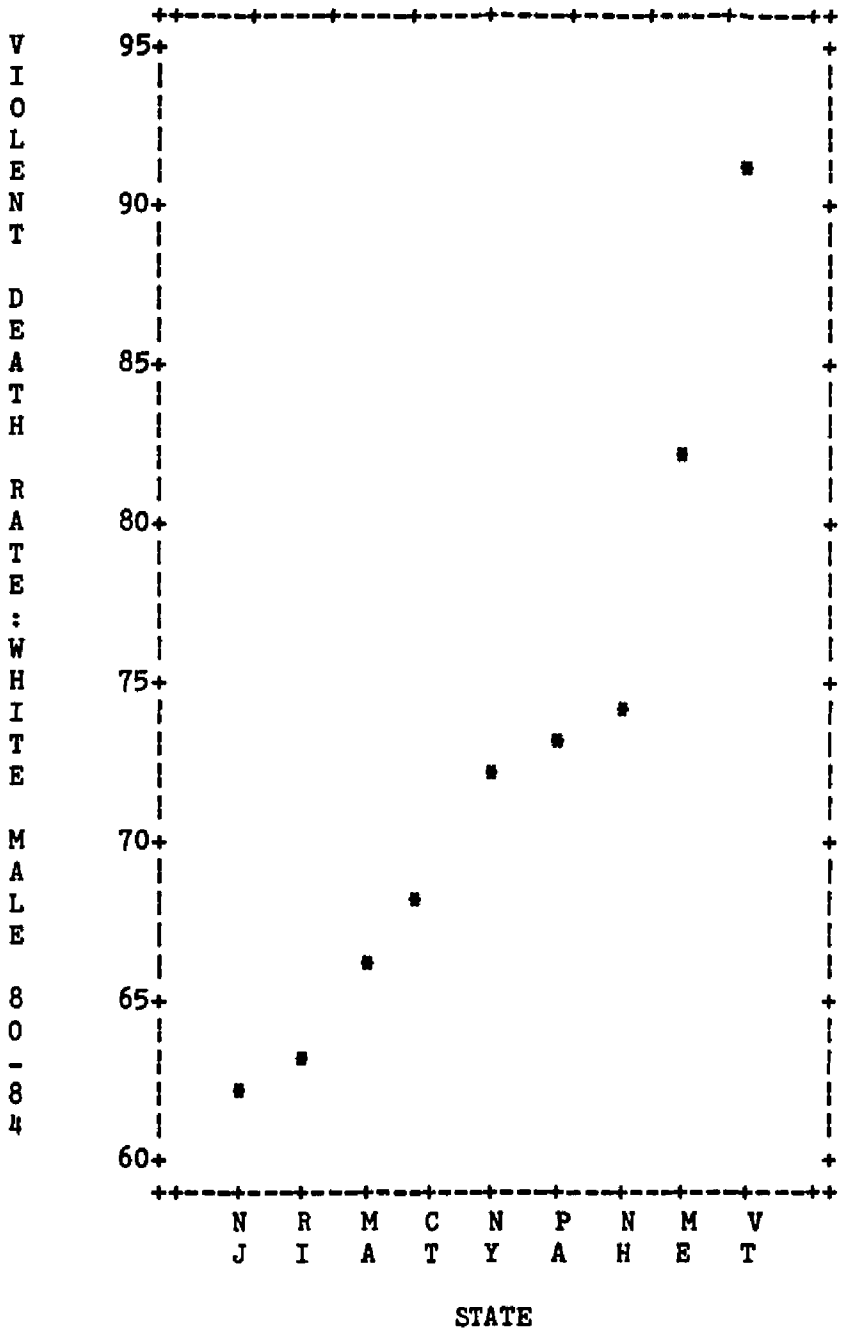

Figure 5.1. Rates of Violent Death for White Males 1980-84: Northeast

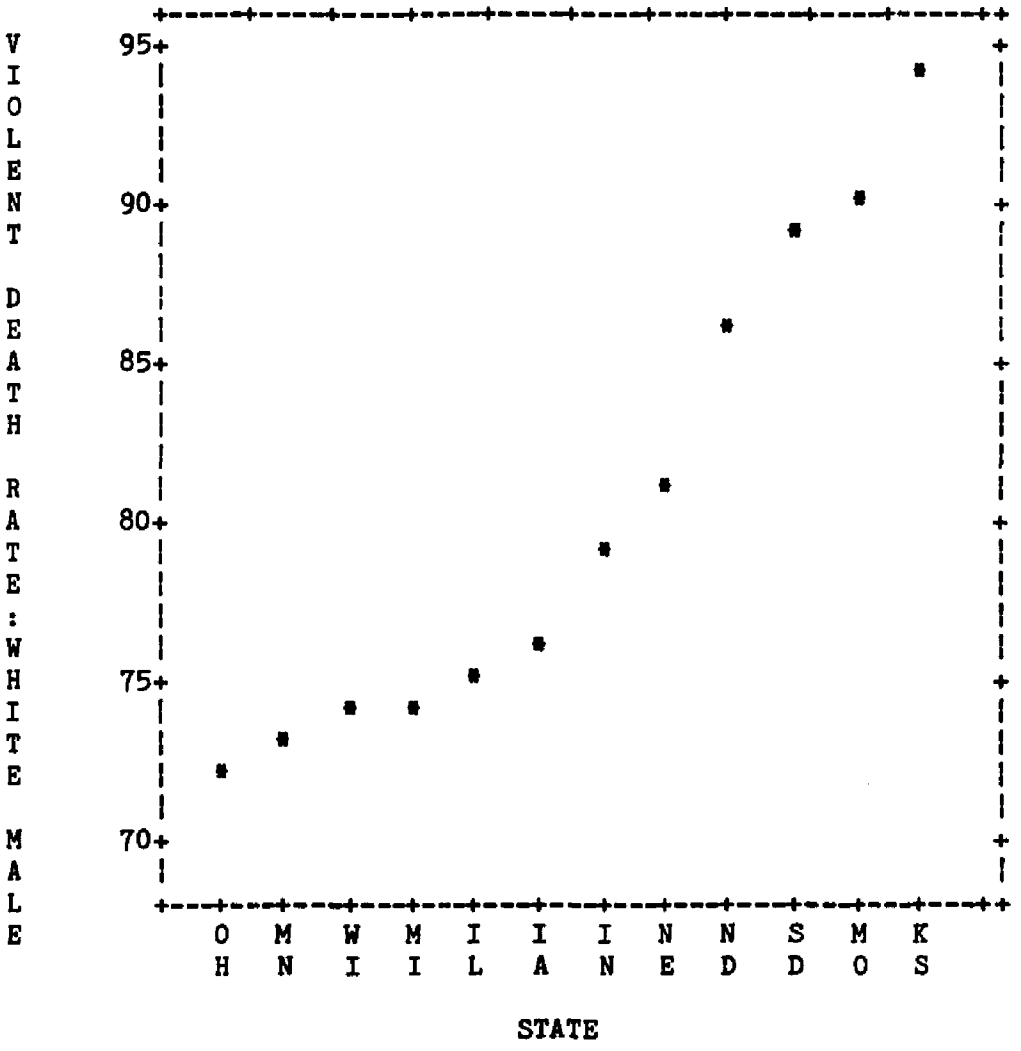

Figure 5.2. Rates of Violent Death for White Males 1980-84: Northcentral

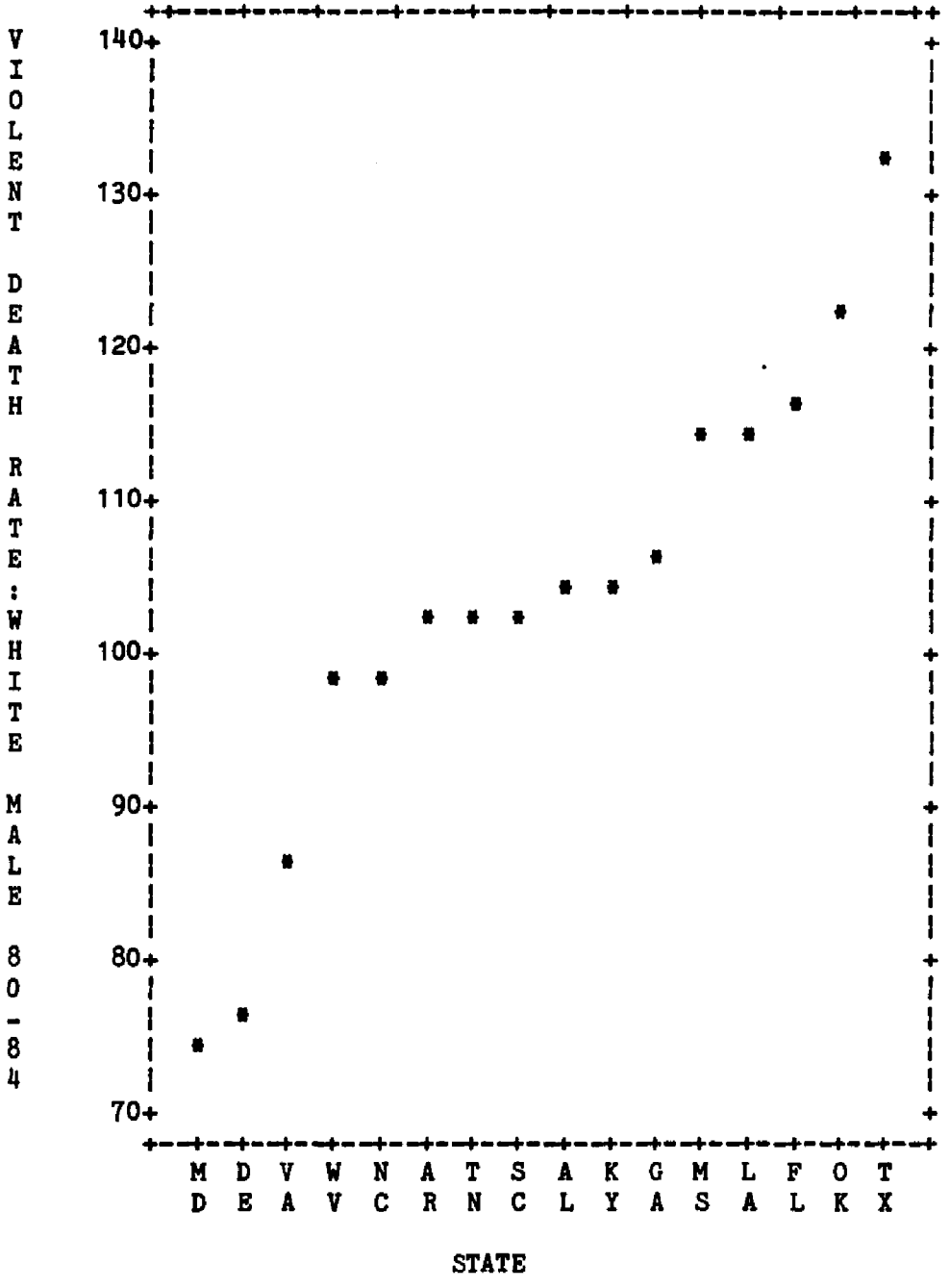

Figure 5.3. Rates of Violent Death for White Males 1980-84: South

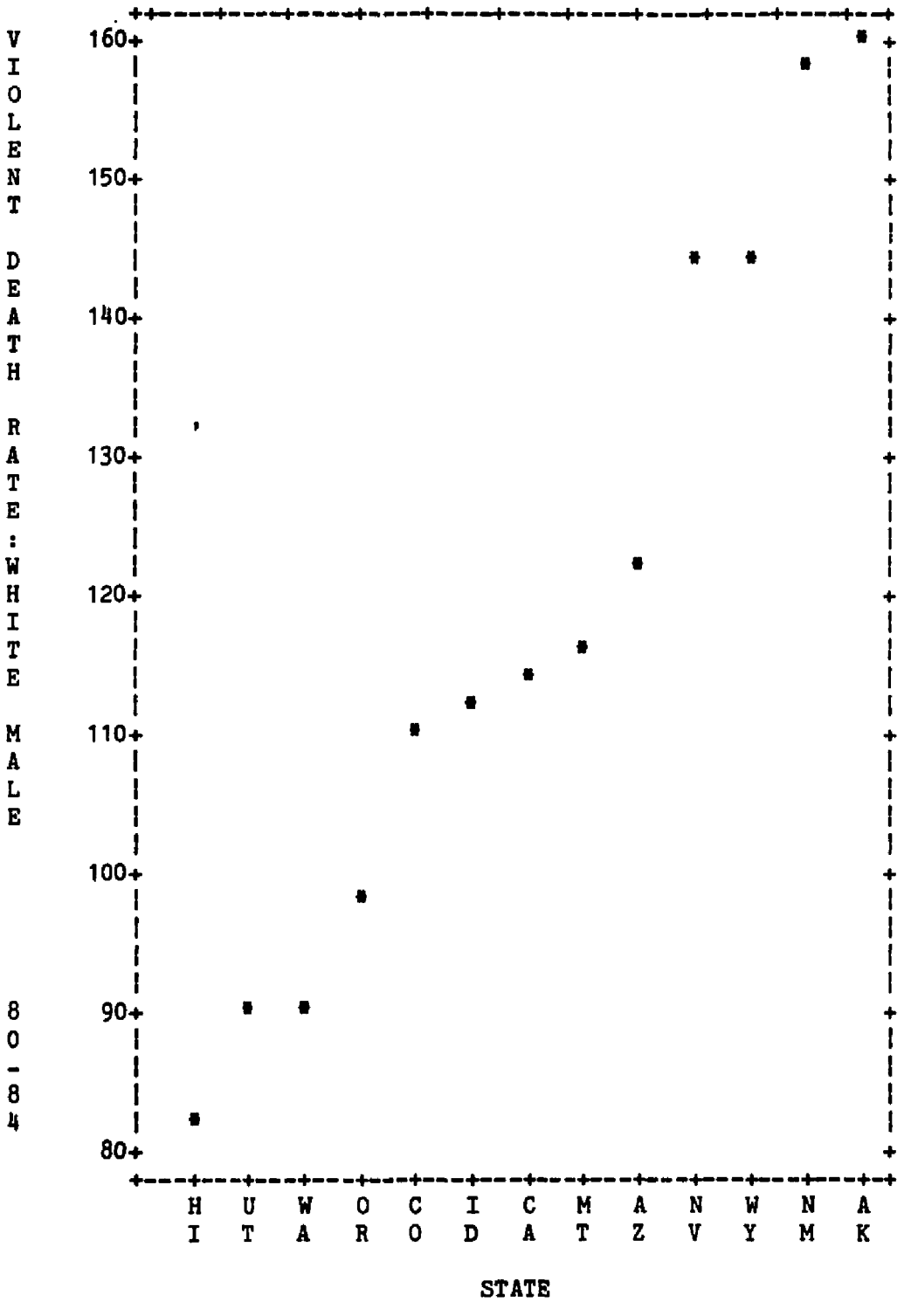

Figure 5.4. Rates of Violent Death for White Males 1980-84: West

Table 5.1. Correlation Matrix of Dependent Variables, White Males: Northeast

	1.	2.	3.	4.
1. Motor Vehicle Acc. Death	1.000			
2. Other Accidental Death	.642	1.000		
3. Suicide	.794	.687	1.000	
4. Homicide	-.387	-.202	-.451	1.000
5. Combined Violent Death	.903	.829	.895	-.194

Table 5.2. Correlation Matrix for Dependent Variables, White Males: Northcentral

	1.	2.	3.	4.
1. Motor Vehicle Acc. Death	1.000			
2. Other Accidental Death	.844	1.000		
3. Suicide	.356	.086	1.000	
4. Homicide	-.067	-.294	.262	1.000
5. Combined Violent Death	.955	.878	.434	.073

Table 5.3. Correlation Matrix of Dependent Variables, White Males: South

	1.	2.	3.	4.
1. Motor Vehicle Acc. Death	1.000			
2. Other Accidental Death	.762	1.000		
3. Suicide	.414	.178	1.000	
4. Homicide	.684	.445	.625	1.000
5. Combined Violent Death	.945	.826	.568	.809

Table 5.4. Correlation Matrix of Dependent Variables, White Males: West

	1.	2.	3.	4.
1. Motor Vehicle Acc. Death	1.000			
2. Other Accidental Death	.235	1.000		
3. Suicide	.678	-.093	1.000	
4. Homicide	.501	.183	.640	1.000
5. Combined Violent Death	.802	.691	.592	.661

rates of combined violent death for white males. Rates are grouped between 90 and 120 deaths per 100,000, but several states have rates above 140 (Alaska, Nevada, New Mexico, and Wyoming).

The patterns of the rates of combined violent death in the four regions show little consistency. The patterns do not support the premise of the theory of the functional alternative that a constant overall level of death exists in regions of the United States.

Inverse Variation. According to functional alternative theory, different types of violent death should be inversely related. One way to measure for any possible relationship between two variables is with bivariate correlations. It would be expected, according to functional alternative theory, that forms of violent death such as suicide which is inwardly directed, and homicide which is outwardly directed, would be inversely related. The bivariate correlations will also give indications as to the nature of accidental deaths, whether they are more inwardly or outwardly directed.

Table 5.1 lists the bivariate correlations among the four forms of violent death for white males in the Northeastern region of the United States. For white males, the correlation between homicide and suicide (-.451) is in the expected direction, supporting the theory of the functional alternative. Suicide and motor vehicle accidental deaths were highly and positively correlated, indicating that for white males, motor vehicle accidents may

be a form of behavior similar to suicide. Other accidental deaths were again positively correlated with suicide. In the Northcentral, suicide and homicide are weakly but positively correlated, the opposite of the Northeastern region. Motor vehicle accidental deaths and suicides were, however, again positively correlated. In the South, suicide and homicide are strongly and positively correlated (.625), as are motor vehicle accidental deaths and homicide. In the West, suicide and homicide are also positively correlated, as are suicide and motor vehicle accidental deaths and homicide and motor vehicle accidental deaths. The lack of a consistent inverse pattern of correlation does not lend support to functional alternative theory. The findings do support the possibility of regional differences in the direction of aggression (inward or outward). Support for a culture of violence perspective is enhanced by this preliminary investigation.

Black Males

Regional continuity. The rates of combined violent death for black males show even greater variation within the four regions than did the rates for white males. Figure 5.5 shows the rates of combined violent death for states in the Northeast. The rates vary from a low of 20.99 in Maine to a high of 155.04 in Vermont. The majority of the Northeastern states had rates in the range of 100 to 120 deaths per 100,000. In the Northcentral region, rates were even more

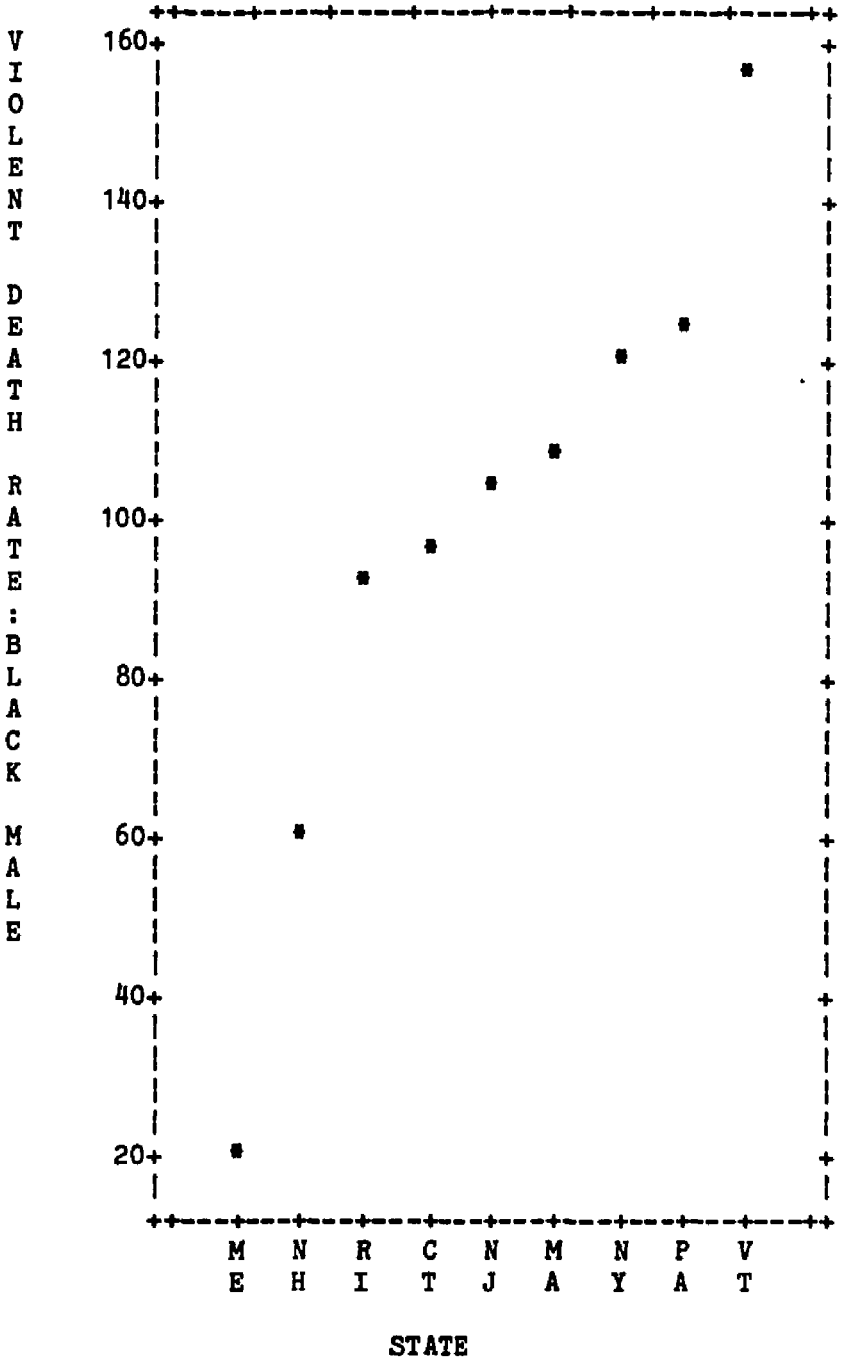

Figure 5.5. Rates of Violent Death for Black Males 1980-84: Northeast

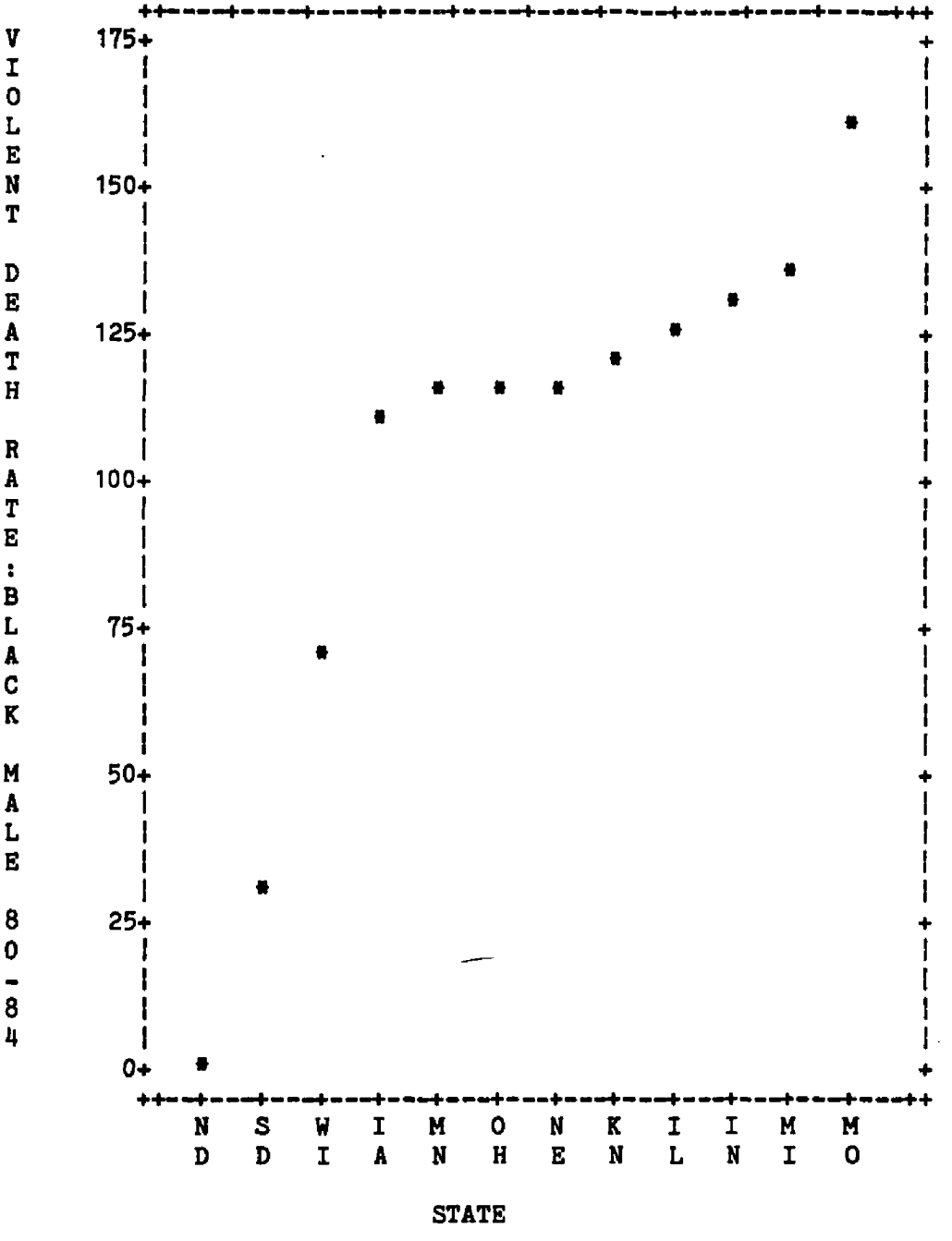

Figure 5.6. Rates of Violent Death for Black Males 1980-84: Northcentral

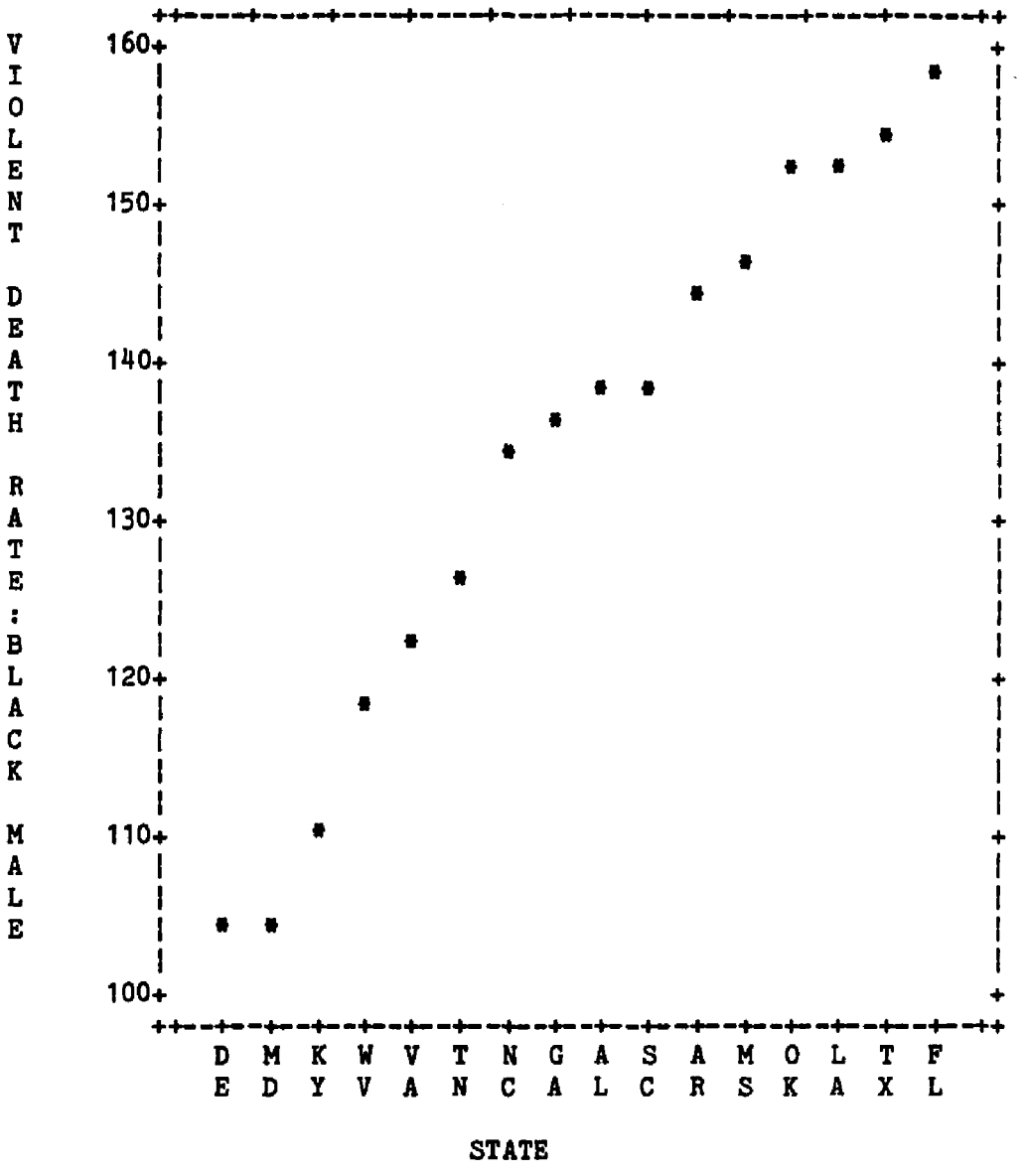

Figure 5.7. Rates of Violent Death for Black Males 1980-84: South

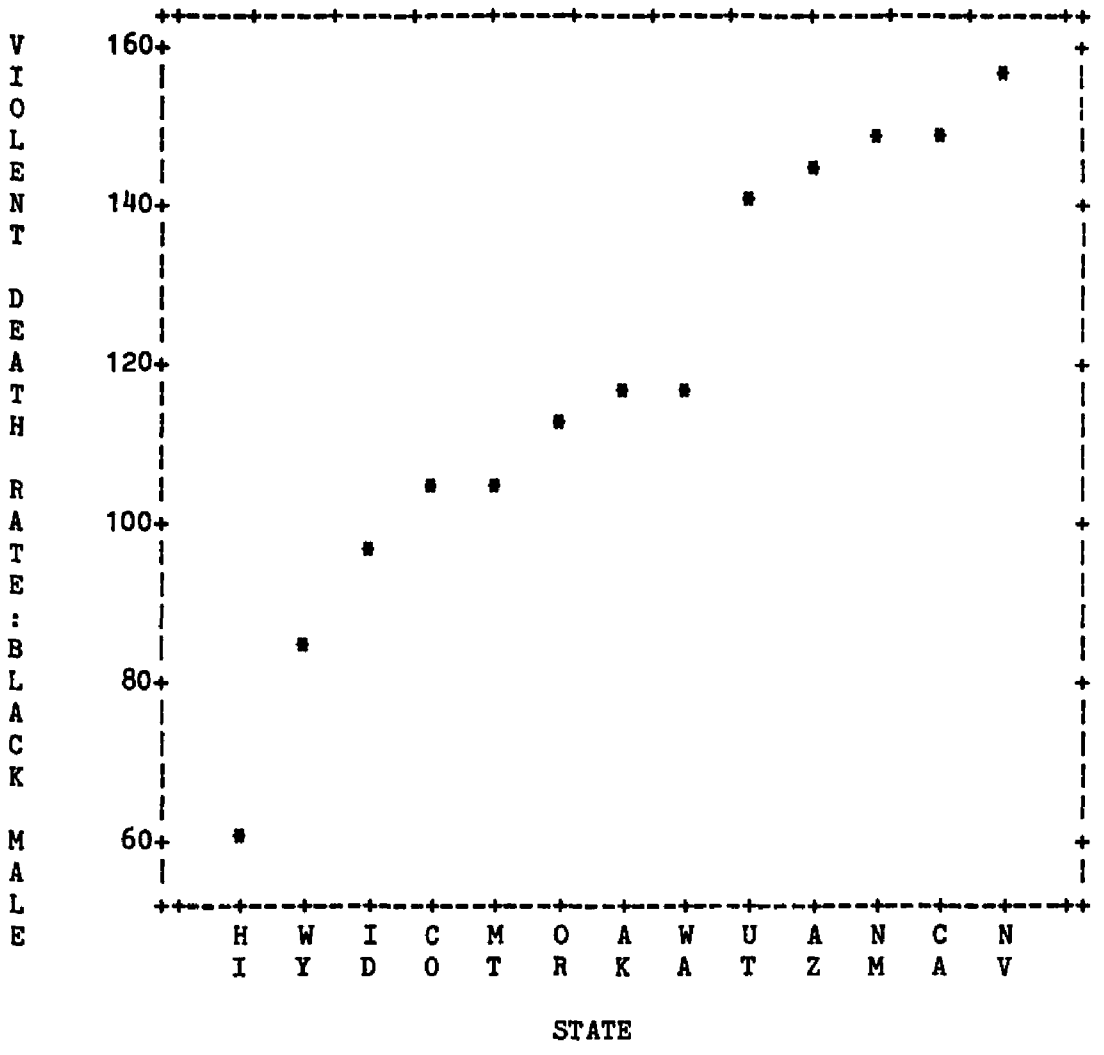

Figure 5.8. Rates of Violent Death for Black Males 1980-84: West

Table 5.5. Correlation Matrix of Dependent Variables, Black Males: Northeast

	1.	2.	3.	4.
1. Motor Vehicle Acc. Death	1.000			
2. Other Accidental Death	.804	1.000		
3. Suicide	-.787	-.851	1.000	
4. Homicide	-.178	-.366	.552	1.000
5. Combined Violent Death	.248	.092	.189	.887

Table 5.6. Correlation Matrix for Dependent Variables, Black Males: Northcentral

	1.	2.	3.	4.
1. Motor Vehicle Acc. Death	1.000			
2. Other Accidental Death	.283	1.000		
3. Suicide	.086	.832	1.000	
4. Homicide	.411	.868	.661	1.000
5. Combined Violent Death	.491	.938	.759	.970

Table 5.7. Correlation Matrix of Dependent Variables, Black Males: South

	1.	2.	3.	4.
1. Motor Vehicle Acc. Death	1.000			
2. Other Accidental Death	.675	1.000		
3. Suicide	-.271	-.455	1.000	
4. Homicide	.194	.020	-.270	1.000
5. Combined Violent Death	.766	.637	-.353	.719

Table 5.8. Correlation Matrix of Dependent Variables, Black Males: West

	1.	2.	3.	4.
1. Motor Vehicle Acc. Death	1.000			
2. Other Accidental Death	.095	1.000		
3. Suicide	-.163	-.125	1.000	
4. Homicide	.285	.226	-.223	1.000
5. Combined Violent Death	.479	.452	.134	.853

disparate. North Dakota recorded no violent deaths, of any type, for black males over the five year period from 1980-1984. South Dakota also had an extremely low rate, 28.43 deaths per 100,000. Most states in the Northcentral region had combined violent death rates near 125. Figure 5.7 demonstrates that the Southern states all had relatively high rates of violent death for black males. Delaware had the lowest death rate (103.28), while Texas had the highest (153.80). The Southern region had the smallest amount of variation for rates of violent death among black males, with all of the states in the region having high rates. The West (Figure 5.8), also had consistently high rates, with the exception of Hawaii (59.89) and Wyoming (85.02). Although some states within each region cluster at a similar level, no clear pattern of continuity emerges. For black males, as well as white males, functional alternative theory does not provide sufficient explanation of variation in the rates of violent death.

Inverse Variation. The bivariate correlations provide interesting data regarding the relationship among the four types of violent death. In the Northeast (Table 5.5), suicide and homicide are positively correlated (.552) for black males, the reverse of the same relationship for white males. Motor vehicle accidents are negatively related to both suicide and homicide, but positively correlated with other accidental deaths. For black males in the Northeast, the relationship of accidental deaths to other forms of

violent death is not clear. In the Northcentral region (Table 5.6), a similar pattern of the positive relationship between suicide and homicide emerges. The relationship between accidental deaths and other forms of violent death are much stronger in the Northcentral region. Motor vehicle accidental deaths are moderately and positively correlated with homicide. Other accidental deaths are positively correlated with both homicide and suicide. In the South and the West (Tables 5.7 and 5.8), however, there is a weak negative association between suicide and homicide, closer to the pattern of white males. The patterns of relationships among the forms of violent death within the four regions for black males is very inconsistent. The highly erratic pattern of correlations is not supportive of functional alternative theory.

White Females

Regional continuity. Figure 5.9 shows that in the Northeast, white female rates of combined violent death have great continuity. The spread between the lowest rate (Rhode Island 27.21) and the highest rate (Pennsylvania 29.78) is a mere 2.57 deaths per 100,000. The other regions, as seen in Figures 5.10 through 5.12, show a similar consistency. Rates in the West and South were highest. White females, as discussed in Chapter four, have the lowest rates of violent death of all the race-sex categories. The West, as seen in Figure 5.12, showed the greatest variation, with a low of 29.81 (Hawaii) and a high of 57.08 (Nevada). The continuity

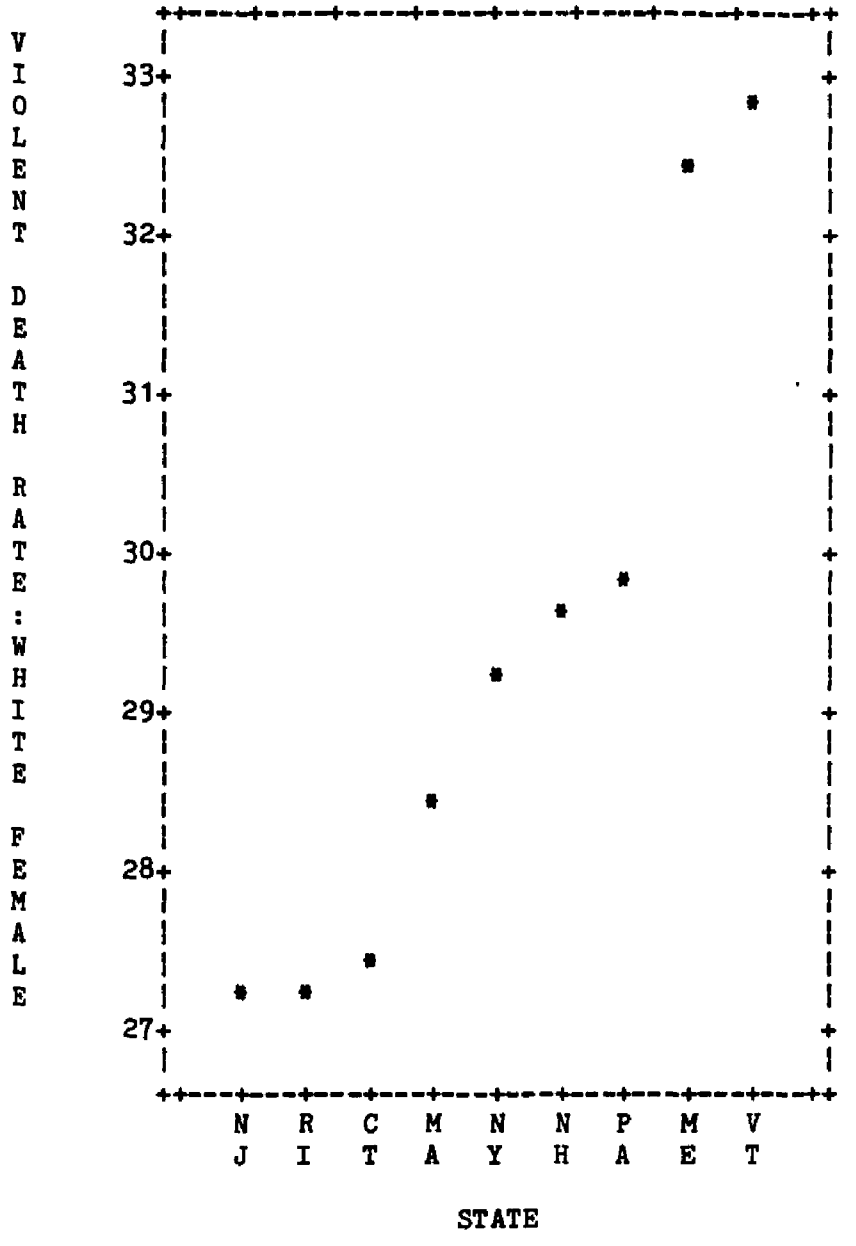

Figure 5.9. Rates of Violent Death for White Females 1980-84: Northeast

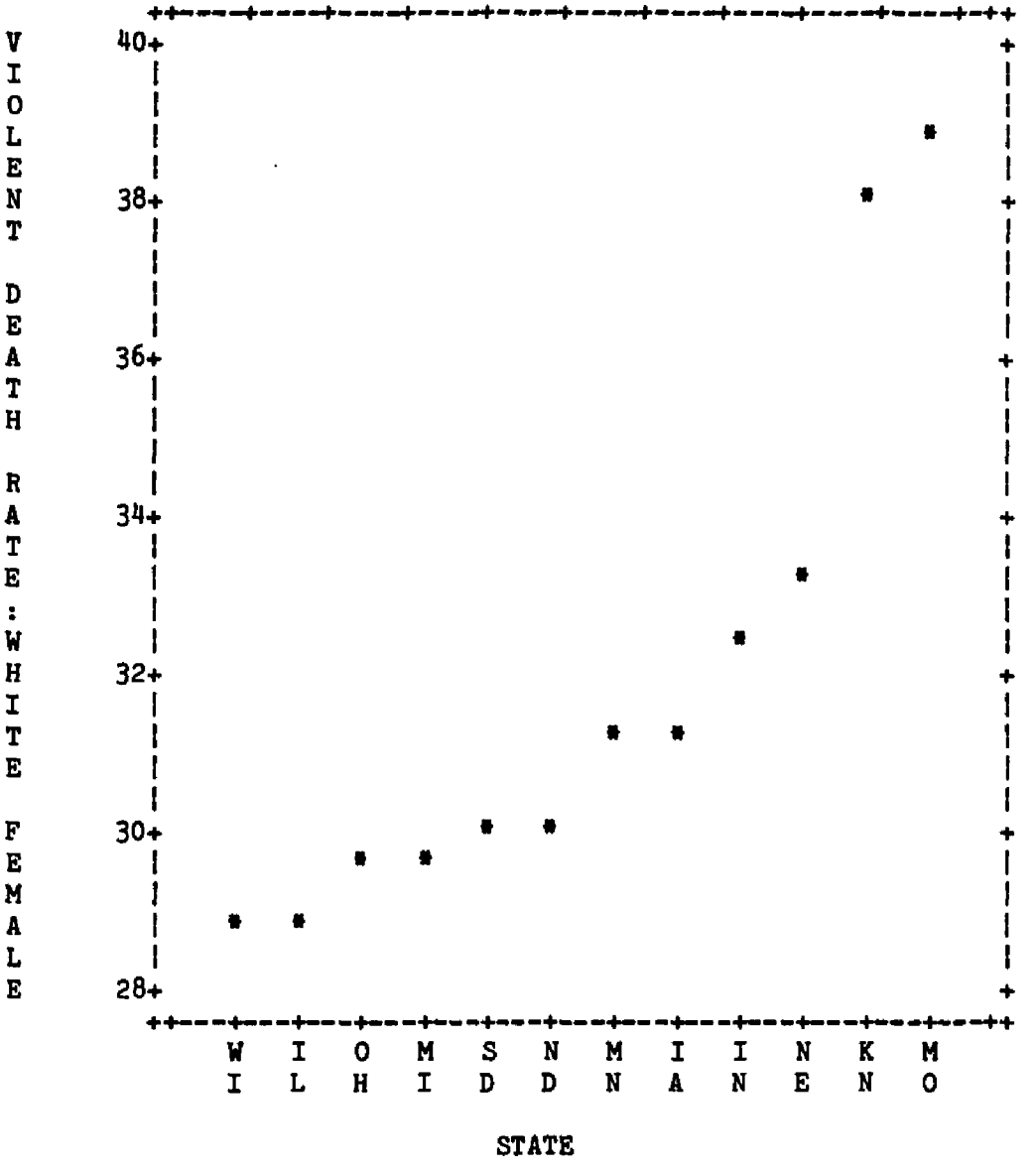

Figure 5.10. Rates of Violent Death for White Females 1980-84: Northcentral

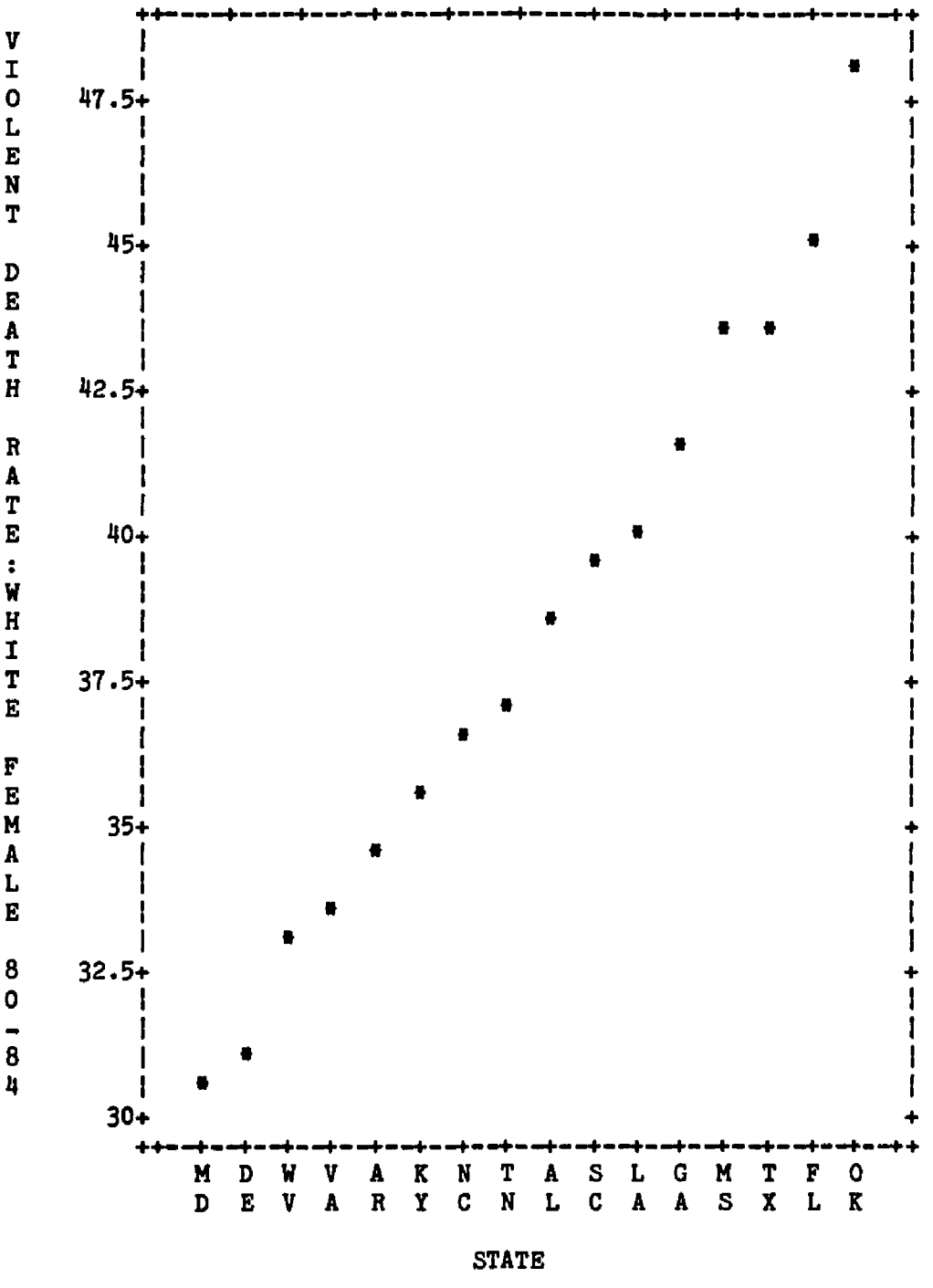

Figure 5.11. Rates of Violent Death for White Females 1980-84: South

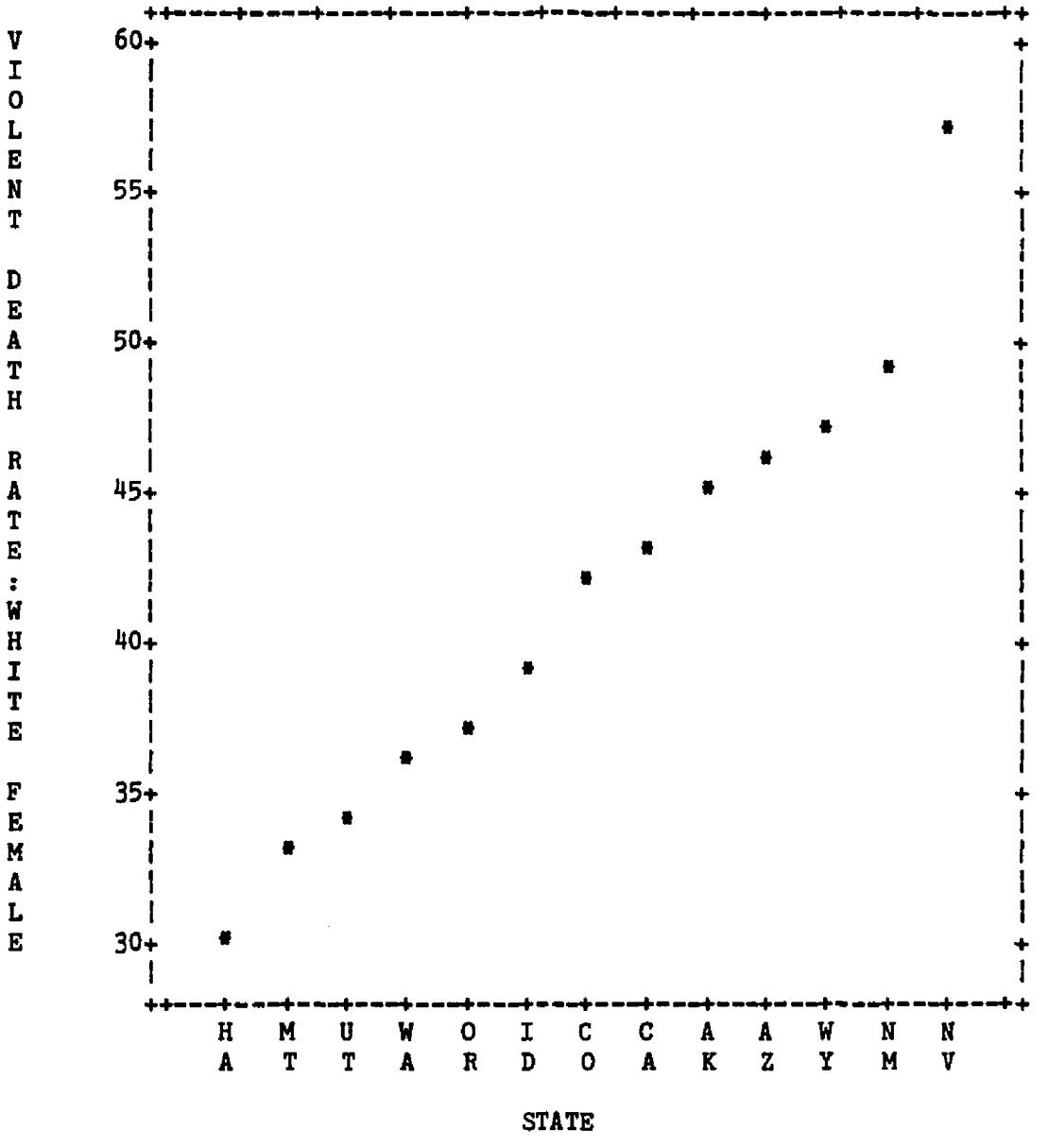

Figure 5.12. Rates of Violent Death for White Females 1980-84: West

Table 5.9. Correlation Matrix of Dependent Variables, White Females:Northeast

	1.	2.	3.	4.
1. Motor Vehicle Acc. Death	1.000			
2. Other Accidental Death	-.332	1.000		
3. Suicide	.546	.124	1.000	
4. Homicide	.041	-.639	-.165	1.000
5. Combined Violent Death	.616	.469	.792	-.317

Table 5.10. Correlation Matrix for Dependent Variables, White Females: Northcentral

	1.	2.	3.	4.
1. Motor Vehicle Acc. Death	1.000			
2. Other Accidental Death	.591	1.000		
3. Suicide	-.267	-.146	1.000	
4. Homicide	.034	.057	.853	1.000
5. Combined Violent Death	.685	.848	.279	.504

Table 5.11. Correlation Matrix of Dependent Variables, White Females: South

	1.	2.	3.	4.
1. Motor Vehicle Acc. Death	1.000			
2. Other Accidental Death	.661	1.000		
3. Suicide	.440	.108	1.000	
4. Homicide	.701	.451	.675	1.000
5. Combined Violent Death	.941	.742	.622	.826

Table 5.12. Correlation Matrix of Dependent Variables, White Females: West

	1.	2.	3.	4.
1. Motor Vehicle Acc. Death	1.000			
2. Other Accidental Death	.468	1.000		
3. Suicide	.706	.088	1.000	
4. Homicide	.576	.148	.867	1.000
5. Combined Violent Death	.907	.543	.854	.805

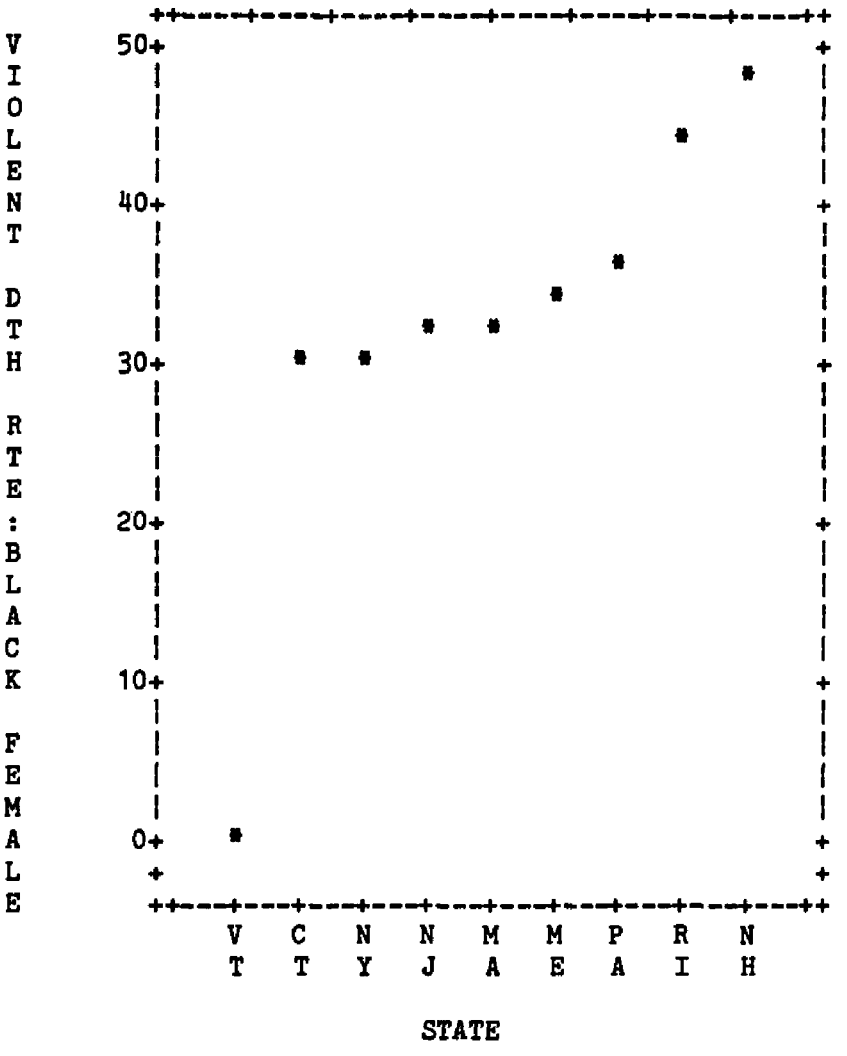

Figure 5.13. Rates of Violent Death for Black Females 1980-84: Northeast

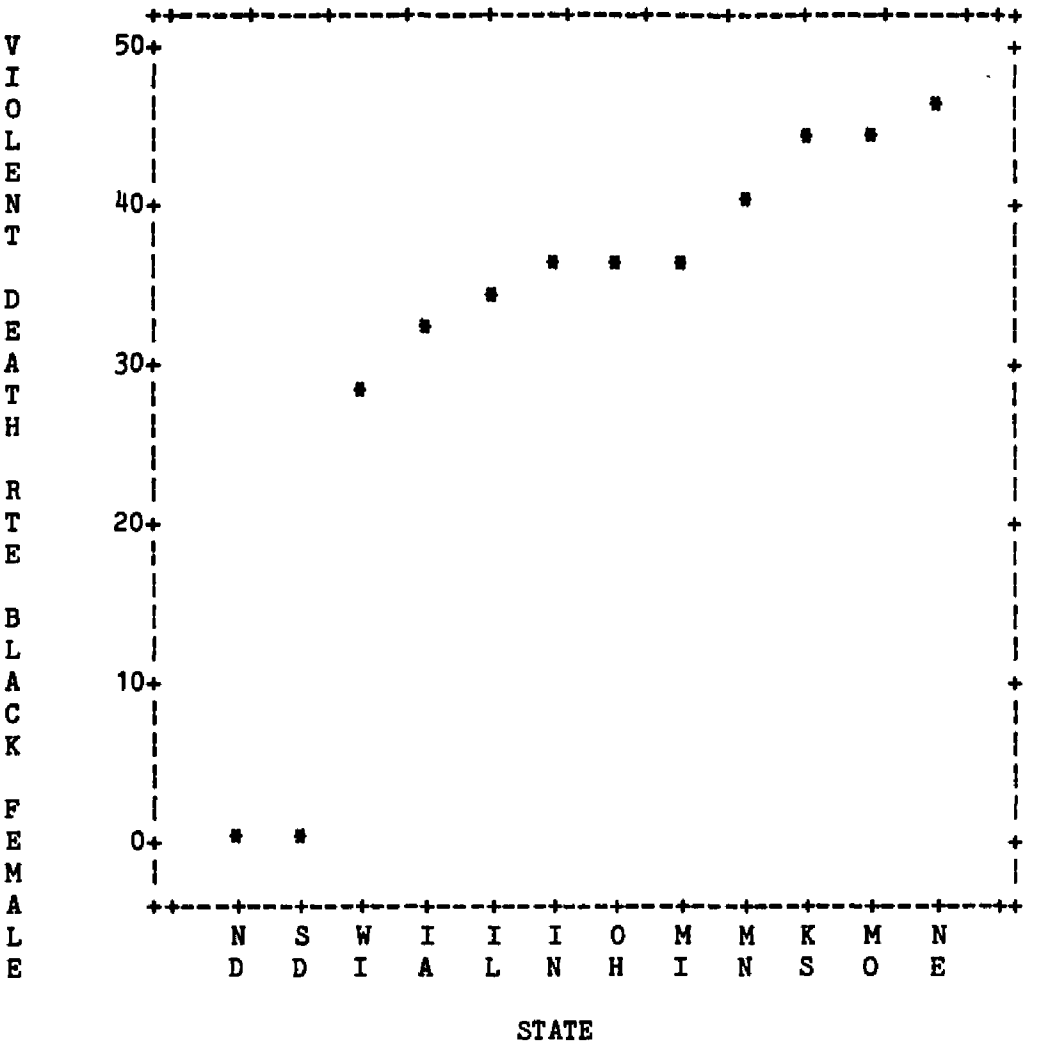

Figure 5.14. Rates of Violent Death for Black Females 1980-84: Northcentral

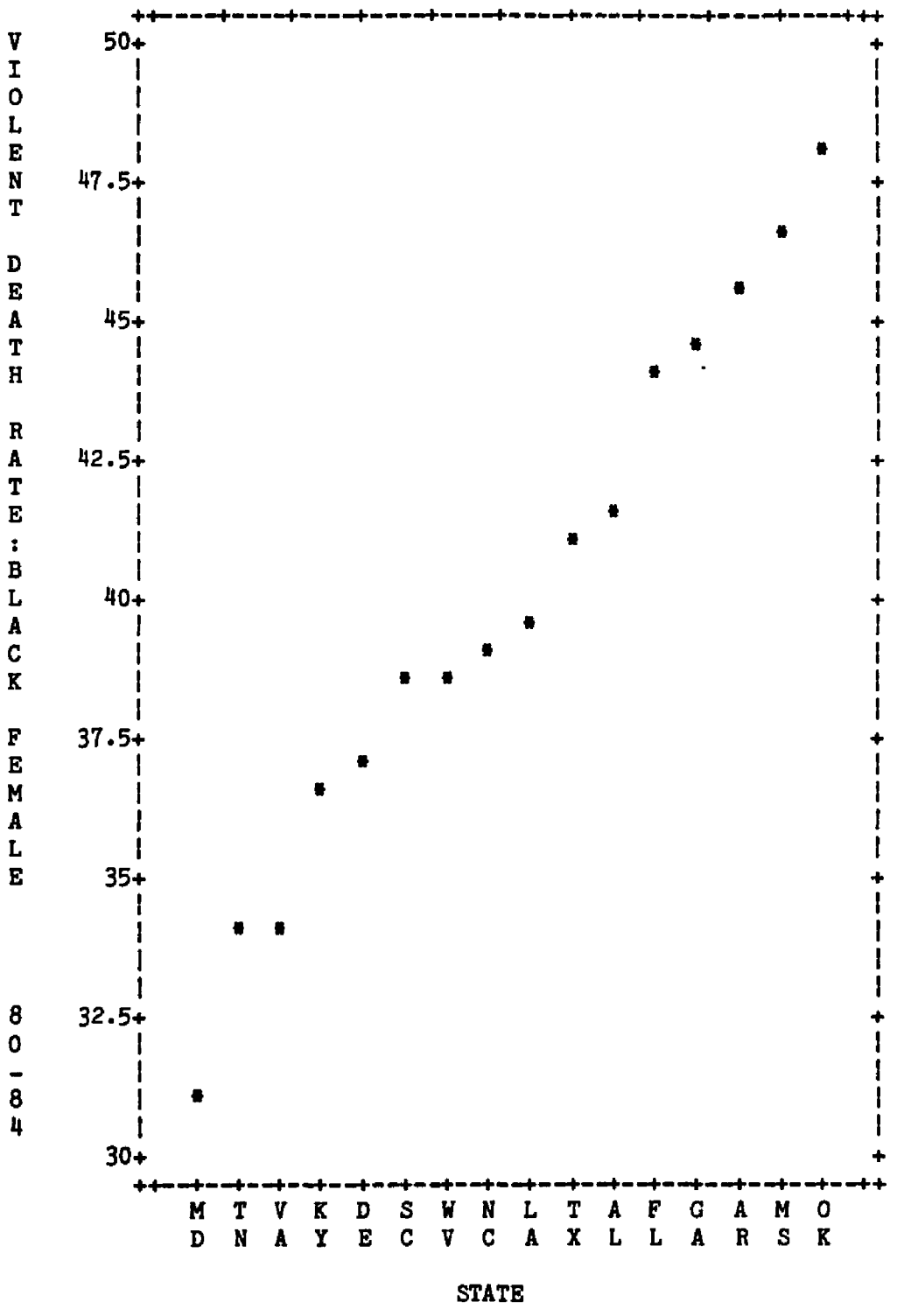

Figure 5.15. Rates of Violent Death for Black Females 1980-84: South

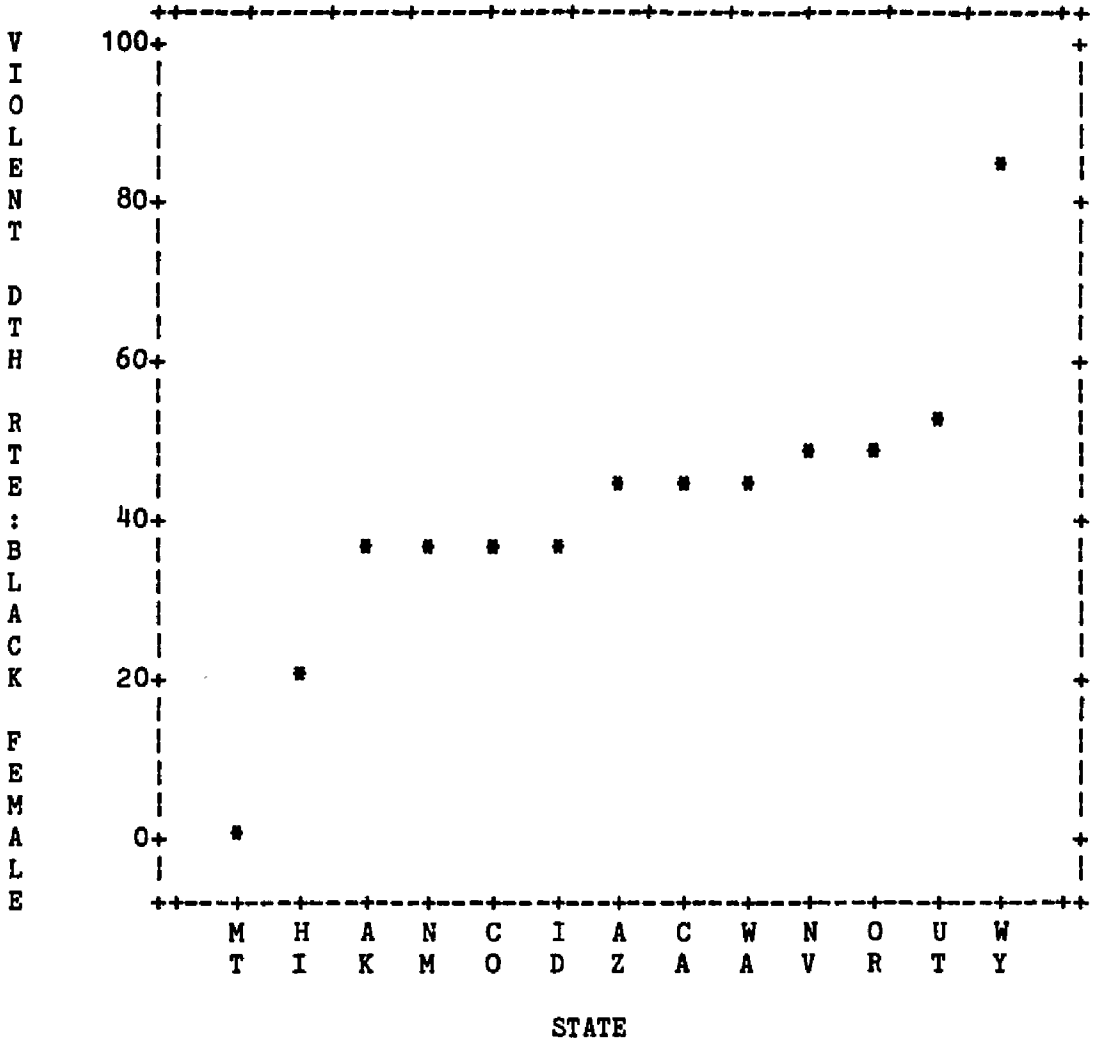

Figure 5.16. Rates of Violent Death for Black Females 1980-84: West

Table 5.13. Correlation Matrix of Dependent Variables, Black Females:Northeast

	1.	2.	3.	4.
1. Motor Vehicle Acc. Death	1.000			
2. Other Accidental Death	.625	1.000		
3. Suicide	.071	.088	1.000	
4. Homicide	.146	.680	.466	1.000
5. Combined Violent Death	.642	.923	.407	.824

Table 5.14. Correlation Matrix for Dependent Variables, Black Females: Northcentral

	1.	2.	3.	4.
1. Motor Vehicle Acc. Death	1.000			
2. Other Accidental Death	.629	1.000		
3. Suicide	.633	.529	1.000	
4. Homicide	.867	.689	.685	1.000
5. Combined Violent Death	.865	.904	.717	.919

Table 5.15. Correlation Matrix of Dependent Variables, Black Females: South

	1.	2.	3.	4.
1. Motor Vehicle Acc. Death	1.000			
2. Other Accidental Death	.139	1.000		
3. Suicide	.107	.051	1.000	
4. Homicide	.123	-.206	-.321	1.000
5. Combined Violent Death	.637	.651	.023	.443

Table 5.16. Correlation Matrix of Dependent Variables, Black Females: West

	1.	2.	3.	4.
1. Motor Vehicle Acc. Death	1.000			
2. Other Accidental Death	-.009	1.000		
3. Suicide	.135	.569	1.000	
4. Homicide	-.035	.789	.252	1.000
5. Combined Violent Death	.558	.795	.592	.712

within each region for white females supports functional alternative theory. The lack of support from other sex-race groupings, however, indicates that functional alternative theory may not provide the best explanation for variation in the rates of violent death within the four regions of the United States.

Inverse Variation. In the Northeast (Table 5.9), the relationship between suicide and homicide for white females is weak and negative (-.165). The only relationships that are highly correlated are suicide and motor vehicle accidental death (.546) and other accidental death and homicide (-.639). The positive relationship between suicide and motor vehicle accidental death is particularly interesting, suggesting that white females may use vehicles to commit suicide. This pattern is similar to that of white males. In the Northcentral, South and West (Tables 5.10-5.12) the relationship between suicide and homicide is both strong and positive, the opposite of what would be expected from a functional alternative perspective. Rates of violent death that are other-directed and self-directed do not vary inversely in the white female sample.

Black Females

Regional Continuity. As can be seen in Figures 5.13-5.16, rates of combined violent death vary widely within each region. Overall, the rates of combined violent death for black females are similar to rates for white females.

The rates are slightly higher in the West. Black females within several states in different regions experienced no deaths from violent causes during the five year period from 1980-1984. For example, Vermont, North Dakota, and Montana all had rates of zero. In the Northeast and North central regions, rates of violent death clustered between 30 and 40 deaths per 100,000, expressing high regional continuity. The South and West had slightly higher, but again consistent rates of violent death. Rates of violent death for females both black and white, best support functional alternative theory.

Inverse Variation. Among the individual forms of death, correlation within each of the four regions is again opposite to the expected pattern of inverse variation among forms of self and other-directed violence. In the Northeast (Table 5.13), suicide and homicide are positively and moderately related (.466). This pattern is repeated in the Northcentral and Western regions. In the South (Table 5.16), however, the expected inverse relationship is evident (-.321) . The relationships among the other forms of violent death are weak in the Northeast, South and West. In the Northcentral region, strong and positive correlations occurred among all forms of violent death, a pattern completely opposite to what would be expected using a functional alternative perspective.

Discussion

The analysis of regional variation in rates of violent death did not lend support to the theory of the functional alternative. Rates of combined violent death varied greatly within each region, particularly for males. For females, the variation was not as great, but there were frequent outliers. Functional alternative theory suggested that rates of combined violent death within a region should be stable, indicating consistent patterns of social control over violent death. The data indicate that this theory is not adequate at predicting patterns of violent death. Functional alternative theory may be best at explaining forms of deviance that are more susceptible to the social control agendas and the carrying capacity of institutions of control. Another possibility is that longitudinal data analysis may be necessary to better determine overall patterns of combined violent death.

A second implication of functional alternative theory would be that as one form of deviance increased, other forms would tend to decrease. This was not supported either. Across all race and sex categories, rates of homicide and suicide were positively correlated in at least two of the regions of the United States. For white males and females, the expected inverse relationship was found only in the Northeast. For all other regions a positive relationship was found between homicide and suicide. For black males, the South and West had inverse relationships between

homicide and suicide, but the Northeast and Northcentral regions showed a positive relationship. For black females, the South was the only region with an inverse relationship. The data show that homicide and suicide are positively related for many regions of the United States. The regional differences in rates of violent death, and the positive correlation between suicide and homicide in the sex-race pairings suggest that a theoretical explanation such as the subculture of violence may be more useful. If the positive correlations between suicide and homicide hold up when all states from each region are correlated together, there will be even more support for a theory that explains both self and other-directed violence.

Chapter six will discuss the results of the regression analyses used to examine the subculture of violence thesis and rates of violent death.

REGRESSION RESULTS: VIOLENT DEATH AND THE SUBCULTURE OF VIOLENCE

CHAPTER VI

This chapter presents the findings from regression analyses of the relationship between the forms of violent death (suicide, homicide, motor vehicle accidental death, other accidental death, and combined violent death) and the subculture of violence. In Chapter four it was hypothesized that the higher a state's level of legitimate violence, the higher the rate of violent death. This chapter will test this hypothesis with each form of violent death.

This chapter is divided into two sections. The first section summarizes the preliminary findings. In this section, the data are examined, checking for possible problems with the use of an ordinary least squares regression model. Two specific problems are examined, the problem of outlying cases among the dependent variables, and multicollinearity among the independent variables. The effects of predictor and control variables on rates of violent death are presented using zero-order correlations.

The second section presents the final regression estimates of each of the twenty models (e.g. white female homicide rate, black male suicide rate, black female other accidental death rate, white male motor vehicle accidental death rate, and white female combined violent death rate). The results of the models are compared and discussed within

the context of the subcultures of self and other-directed violence argument.

Preliminary Findings

The descriptive statistics in Chapter four show that outlying cases are present among the dependent variables. Some of these cases are high due to the large number of deaths (such as white male homicide in Texas) and represent a truly high incidence of violent death. A large number of the extremely high and low scores, however, are caused by random small sample variability. In states with extremely small populations, for example a low number of black females, few or no deaths of a particular type may be recorded during the five year period under study. The small samples cause rates to appear extremely high when a few deaths do occur, and extremely low when no deaths occur.

To control for the problem of outlying cases, each independent variable was examined. Any cases with values greater than two standard deviations from the mean were recoded with values equal to two standard deviations from the mean. This procedure allows the number of cases to stay the same (N=50), while controlling for skewness in the distribution. Each variable was saved as an outlier adjusted version of the original variable. The outlier adjusted versions of the dependent variables were used in all regression analyses.

Correlation Analysis

The zero-order correlations for each type of violent death are displayed in Table 6.1. Examination of the correlations show that several of the independent variables are moderately correlated. Percent below the poverty line has a correlation of .65 with Confederate South, and a correlation of .60 with percent black. Percent black and Confederate South also have a moderate correlation(.77). These correlations indicate the possibility of multicollinearity in multivariate regression analyses. To test for multicollinearity, each of the suspect variables, percent black, percent below poverty and Confederate South, were regressed against all other independent variables. If multicollinearity exists, an extremely high adjusted R^2 is reported in the regression results (Tabachnick and Fidell 1983). The presence of a very high adjusted R^2 would be interpreted as an indication that the independent variable in question does not explain anything in addition to what is being explained by all the other variables. No evidence of multicollinearity was found using this procedure, so all of the independent variables were kept in the original regression model.

Correlation analysis is important in identifying variables which should have an influence on the overall violent death rate. The zero-order correlations indicate which variables influence rates of violent death. The correlation does not, however, control for the effects of

Table 6.1 Zero-Order Correlations

Variable	1.	2.	3.	4.	5.	6.	7.
1. % METROPOLITAN, 1980	1.000						
2. % OF POP. AGED 18-24,1980	-.173	1.000					
3. % OF POP. BELOW POVERTY,80	-.340	-.081	1.000				
4. LEGITIMATE VIOLENCE,1980	-.008	.370	.153	1.000			
5. REGION:1=CONFEDERATE SOUTH	-.023	-.040	.654	.319	1.000		
6. DIVORCE RATE, 1980	-.075	-.017	-.026	.457	.044	1.000	
7. % OF POP BLACK, 1980	.188	-.103	.600	.211	.772	-.097	1.000
8. MV ACC:WHTE MLE,OUTLIER ADJ.	-.415	.180	.467	.562	.374	.620	.154
9. MV ACC:BLK MALE,OUTLIER ADJ.	.035	.084	.479	.514	.559	.333	.486
10.MV ACC:WHTE FEMLE,OUTLR ADJ.	-.307	.163	.411	.570	.345	.703	.166
11.MV ACC:BLK FEMLE,OUTLR ADJ.	.033	-.018	.079	.342	.183	.338	.139
12.OTHER ACC:W ML,OUTLIER ADJ.	-.558	.302	.377	.490	.186	.555	-.049
13.OTHER ACC:B ML,OUTLIER ADJ.	.086	-.171	.400	.184	.562	.272	.574
14.OTHER ACC:W FML,OUTLR ADJ.	-.371	.145	.202	.125	.068	.239	-.058
15.OTHER ACC:B FML,OUTLR ADJ.	.075	-.135	.128	-.091	.313	.072	.387
16.SUICIDE:WHTE MLE,OUTLR ADJ.	-.191	.181	.139	.543	.170	.688	-.085
17.SUICIDE:BLK MLE,OUTLR ADJ.	-.014	.016	-.300	.220	-.291	.282	-.355
18.SUICIDE:WHT FEMLE,OUTLR ADJ.	.203	.112	.116	.497	.263	.615	.166
19.SUICIDE:BLK FEMLE,OUTLR ADJ.	.314	.109	-.237	.069	-.127	.067	-.112
20.HOMICIDE:WHTE ML,OUTLIER ADJ.	.238	.043	.327	.410	.329	.565	.259
21.HOMICIDE:BLK ML,OUTLR ADJ.	.437	-.218	.060	.016	.119	.144	.259
22.HOMICIDE:WHT FEML,OUTLR ADJ.	.230	.164	.177	.540	.306	.649	.251
23.HOMICIDE:BLK FEML,OUTLR ADJ.	.386	-.041	-.195	.069	-.027	.402	-.023
24.VIOLENT DTH:W ML,OUTLR ADJ.	-.341	.249	.347	.590	.278	.724	.050
25.VIOLENT DTH:B ML,OUTLR ADJ.	.252	-.146	.318	.331	.414	.356	.449
26.VIOLENT DTH:W FML,OUTLR ADJ.	-.163	.184	.316	.551	.308	.718	.150
27.VIOLENT DTH:B FML,OUTLR ADJ.	.199	-.092	.005	.154	.188	.355	.189

the other variables. It is therefore, important to exercise caution in the interpretation of the zero-order correlations.

Homicide. Examination of the zero-order correlations between the sex and race-specific rates of homicide show that the Index of Legitimate Violence is moderately associated with white male and female rates, but poorly associated with black male and female rates. The divorce rate is also moderately associated with rates of homicide among all four of the sex and race categories.

For white males, the pattern of bivariate correlations suggests that divorce, cultural support for legitimate violence, poverty and residence in the South all contribute to the increased risk of homicide among white males.

A slightly different combination of social characteristics influence the risk of homicide for white females: high divorce rate, cultural support for legitimate violence and Southern residence.

The patterns for black males and females are vastly different from those for whites. The single most influential variable for black males is urbanization (percent metropolitan). For black females, high divorce rates and a high degree of urbanization are associated with increases in the risk of homicide.

Several variables are identified as important in the increased risk of homicide: divorce rate, percent metropolitan, legitimate violence and Southern residence.

Regression analysis will identify which if any of these variables is significant when the effects of all the other independent variables are controlled.

Motor Vehicle Accidental Death. The correlation between the independent variables and the rates of motor vehicle accidental death are much stronger than those for homicide. The models for white and black males and white females show a strong association between cultural support for legitimate violence and motor vehicle accidental death. For black females, this association is moderate.

The characteristics most closely associated with white male and female motor vehicle accidental death are similar: cultural support of legitimate violence, high divorce rate, poverty and low levels of urbanization.

The risk of motor vehicle accidental death among black males is influenced by a combination of cultural support for legitimate violence, residence in the South, poverty and high concentrations of blacks. The pattern for black females is less clear. Only cultural support for legitimate violence and divorce demonstrate even mild association with the rate of black female motor vehicle accidental death.

Suicide. The associations with suicide, as with homicide, break down along racial lines. The pattern of black suicide is poorly explained by this model. Among black males, only weak negative associations between poverty and percent black are related to suicide at the zero-order level. The pattern for black females is similar. A high

level of urbanization and low levels of poverty increase the risk of suicide.

High rates of divorce and cultural support for legitimate violence increase the risk of suicide for both white females and males. It is hoped that the multiple regression models will be more descriptive than the zero-order correlations.

Other Accidental Death. Other accidental death rates are most similar for males, black or white and for females, black or white. Male rates of other accidental death are better explained than are female rates. This finding is due in large part to the greater involvement by males in more hazardous occupations such as farming, mining and other extractive industries. The male rates of other accidental death, as shown in Chapter four, are significantly higher than female rates. For white males, a combination of rurality, high rates of divorce, and cultural support for violence best explain increases in the risk of accidental death. For black males, dense population by blacks, residence in the South, and poverty constitute a combination of social characteristics that increase the risk of accidental death.

Black and white female rates of other accidental death are both poorly explained by the preliminary model. Closer examination of the state ranks of white and black female other accidental death rates from Chapter four reveals that there is little variation in the rates. The lack of

variation affects the amount of explanation that can be provided by regression analysis, therefore the rates of female other accidental death may not be of much use in this study. The regression analyses will provide further information in order to determine the utility of these rates.

Combined Violent Death. The pattern of correlations that best explain increased risk of violent death for white males includes high rates of divorce, strong cultural support for legitimate violence, greater poverty and lack of urbanization. The combination of social characteristics for black males differs slightly, including residence in the South, large concentrations of blacks, and high divorce rates. For white females, high divorce rates, cultural support for legitimate violence, and poverty best explain increases in the risk of violent death. The model for black female combined violent death, as with the individual forms, is poorly explained by this research model, only divorce rate shows even a moderate zero-order correlation.

Discussion. The zero-order correlations identified several variables which are highly correlated with the rates of violent death at the bivariate level. The divorce rate consistently explained rates of violent death. If this finding is consistent in the multiple regression analyses, the original hypothesis will not be well supported. The Legitimate Violence Index showed moderate correlations with several different types of violent death. The Index was

most strongly correlated with rates of motor vehicle accidental death. The variables percent black, Confederate South, and percent metropolitan were moderately associated with the different forms of violent death. The preliminary analysis with zero-order correlations is only mildly supportive of the original hypothesis that cultural support for legitimate violence increases the risk of violent death.

Interrelationships among the forms of violent death. Table 6.2 shows the correlations between total rates of suicide, homicide, motor vehicle accidental death and other accidental death. As discussed in Chapter five, correlations between the forms of violent death can tell us something about the nature of their relationship to one another. Table 6.2 shows that even with total rates for blacks and whites, males and females, the relationship between suicide and homicide is positive. This finding is contradictory to earlier research such as Henry and Short (1964) which found a negative relationship. In fact, all of the forms of violent death are positively related to one another. These findings support the contention that the forms of violent death are just different expressions of aggression. The relationship between suicide and motor vehicle accidental death is very strong (.708), indicating that these two forms of death are very similar. The relationship between homicide and motor vehicle accidents was moderately positive. The correlations indicate that motor vehicle accidental death may be a free floating type

Table 6.2 Zero-Order Correlations, Total Rates of the Different Forms of Violent Death

Variable	1.	2.	3.	4.
1. TOTAL HOMICIDE RATE, 1980-84	1.000			
2. TOTAL MV ACC. RATE, 1980-84	.465	1.000		
3. TOTAL OTHER ACC. RATE, 1980-84	.409	.612	1.000	
4. TOTAL SUICIDE RATE, 1980-84	.298	.708	.297	1.000

of aggressive behavior where there is little regard for the life of oneself or others. Accidental deaths would fall somewhere in between suicide and homicide on a continuum of the direction of aggression, as contended in Chapter two. The regression equations will further identify if similar social characteristics explain the different forms of violent death. The next section presents the results of the multiple regression analyses for each of the forms of violent death.

Multiple Regression Analyses

Tables 6.3 through 6.7 present the final statistical models of the relationship between rates of violent death and cultural support for legitimate violence. The multiple regression analyses were performed using the backward elimination option of the SPSSX regression program. In the backward elimination procedure, the full set of predictor and control variables (Index of Legitimate Violence, divorce rate, percent poor, percent metropolitan, percent black, Confederate South, and percent aged 18-24) are all entered into the regression equation. After all the variables have been entered, continuous regressions are performed, eliminating variables that fall below a specific level of significance (p=.10). The procedure is repeated until all the variables left in the equation have met the criterion for inclusion. Backward elimination regression provides the best final prediction equation because the model is based

only on significant variables. The results are discussed by the type of violent death. A summary discussion follows.

Results

Homicide. Table 6.3 presents the final regression estimates of the indicators of violent subcultural orientation on sex and race-specific rates of homicide. Glaringly apparent is the observation that support for Legitimate Violence, region, and percent black did not attain significance at the .10 level in any of the four models. These findings are contrary to the proposed hypothesis. The adjusted R^2 for white males and females explain over sixty percent of the state-to-state variation in rates of homicide. Four social characteristics explain this variation: high divorce rates, urbanization, poverty and greater proportions of young people in the population. The divorce rate, an indicator of social disorganization, explained a great deal of the variance in rates of homicide for white males and females. Poverty, often used by researchers as an indicator of structural and economic factors that effect homicide, was also a strong factor. These findings give support to structural theories of violence and fail to support a subcultural perspective.

The final regression models for black females and males explained much less of the state-to-state variation in homicide than did the models for whites. The model for black males explains only twenty-one percent of the variance

Table 6.3 Final Regression Estimates of Measures of Violent Subcultural Orientation on Homicide Rates, 1980-84

	White Male Homicide Victim			Black Male Homicide Victim			White Female Homicide Victim			Black Female Homicide Victim		
	b	s.e.	Beta	b	s.e.	Beta	b	s.e.	Beta	b	s.e.	Beta
Legitimate Violence												
Region Dummy 1=Confederate South												
% Black												
% Poor	.58****	.11	.53	1.49*	.85	.24	.12****	.03	.37			
% Metropolitan	.08****	.02	.49	.49****	.13	.52	.02****	.00	.46	.09****	.03	.42
% Pop. Aged 18-24	.90**	.46	.18				.42***	.13	.28			
Divorce Rate	1.04****	.15	.62				.34****	.04	.70	.97****	.27	.43
Adjusted R^2	.62			.21			.64			.31		

* = p<.10, ** = p<.05, *** = p<.01, **** = p<.001

Table 6.4 Final Regression Estimates of Measures of Violent Subcultural Orientation on Motor Vehicle Accidental Death Rates, 1980-84

	White Male Motor Vehicle Accidental Death			Black Male Motor Vehicle Accidental Death			White Female Motor Vehicle Accidental Death			Black Female Motor Vehicle Accidental Death		
	b	s.e.	Beta	b	s.e.	Beta	b	s.e.	Beta	b	s.e.	Beta
Legitimate Violence	.12***	.04	.29	.21***	.06	.37	.04***	.01	.25	.08***	.03	.34
Region Dummy 1=Confederate South				11.69****	3.07	.44						
% Black												
% Poor	.86****	.21	.35				.32****	.08	.34			
% Metropolitan	-.10***	.03	-.26				-.02*	.01	-.15			
% Pop. Aged 18-24												
Divorce Rate	1.80****	.33	.48				.83****	.12	.59			
Adjusted R^2	.70			.41			.72			.10		

* = p<.10, ** = p<.05, *** = p<.01, **** = p<.001

Table 6.5 Final Regression Estimates of Measures of Violent Subcultural Orientation on Suicide Rates, 1980-84

	White Male Suicide			Black Male Suicide			White Female Suicide			Black Female Suicide		
	b	s.e.	Beta	b	s.e.	Beta	b	s.e.	Beta	b	s.e.	Beta
Legitimate Violence	.07***	.03	.32	.09**	.04	.31						
Region Dummy 1=Confederate South												
% Black	-.13**	.06	-.26	-.26***	.08	-.42						
% Poor	.36**	.16	.26				.14***	.06	.28			
% Metropolitan							.03***	.01	.38	.03**	.01	.31
% Pop. Aged 18-24							.49**	.24	.21			
Divorce Rate	1.10****	.23	.52				.50****	.08	.65			
Adjusted R^2	.55			.18			.50			.08		

* = p<.10, ** = p<.05, *** = p<.01, **** = p<.001

Table 6.6 Final Regression Estimates of Measures of Violent Subcultural Orientation on Other Accidental Death Rates, 1980-84

	White Male Other Accidental Death			Black Male Other Accidental Death			White Female Other Accidental Death			Black Female Other Accidental Death		
	b	s.e.	Beta	b	s.e.	Beta	b	s.e.	Beta	b	s.e.	Beta
Legitimate Violence										-.09**	.05	-.31
Region Dummy 1=Confederate South												
% Black				.76****	.14	.61				.32****	.09	.48
% Poor	.57***	.18	.29									
% Metropolitan	-.11****	.03	-.37				-.03***	.01	-.37			
% Pop. Aged 18-24	2.45***	.77	.27									
Divorce Rate	1.64****	.25	.54	1.71***	.57	.33				.71*	.41	.26
Adjusted R^2	.67			.41			.12			.18		

* = p<.10, ** = p<.05, *** = p<.01, **** = p<.001

Table 6.7 Final Regression Estimates of Measures of Violent Subcultural Orientation on Combined Violent Death Rates, 1980-84

	White Male Combined Violent Death			Black Male Combined Violent Death			White Female Combined Violent Death			Black Female Combined Violent Death		
	b	s.e.	Beta	b	s.e.	Beta	b	s.e.	Beta	b	s.e.	Beta
Legitimate Violence	.22**	.11	.19									
Region Dummy 1=Confederate South												
% Black	-.45**	.23	-.19									
% Poor	3.04****	.59	.46	4.25****	1.07	.48	.66****	.16	.35			
% Metropolitan				.59****	.16	.45				.11*	.07	.23
% Pop. Aged 18-24	6.17***	2.46	.21				1.93***	.72	.23			
Divorce Rate	6.34****	.86	.63	5.42****	1.54	.40	2.10****	.24	.73	1.87***	.67	.37
Adjusted R^2	.75			.37			.66			.14		

* = p<.10, ** = p<.05, *** = p<.01, **** = p<.001

in homicide victimization. Only two variables attained significance, percent poor and percent metropolitan. Again the final model supports a structural rather than a cultural explanation of homicide, contrary to the original hypothesis. The model for black females explains thirty-one percent of the state-to-state variation in homicide, but again only two variables, percent metropolitan and divorce rate have any significant effect.

Each of the final models indicates that structural, not cultural factors best explain increased risk of homicide victimization. Three variables that have been used in past research to measure cultural support for violence (the Legitimate Violence Index, percent black, and location in the Confederate South) did not explain significant percentages of the variation in sex and race-specific rates of homicide victimization. Past research using the Legitimate Violence Index has reported positive results as to the significance of the Index in explaining homicide (Baron and Straus 1985, 1986; Baron, Straus and Jaffe 1986). Baron and Straus (1986, p. 15) report that cultural support for legitimate violence, poverty and economic inequality are all significant factors in explaining state-to-state variation in the <u>total</u> homicide rate. Several explanations for the lack of correlation between homicide and cultural support for legitimate violence are possible. One explanation is that competing theories of homicide, such as a social stress model or an economic deprivation model prove

to be better models for explaining homicide than cultural explanations.

Another possible explanation is that breaking the homicide rate into sex and race-specific categories takes away the effect the Legitimate Violence Index has on the state-to-state variation of the total homicide rate. For example, if the rate of black male homicide is strongly correlated with the Legitimate Violence Index, the white male rate is moderately correlated and the white female rate is weakly correlated, when the total homicide rate is correlated with the Index, a strong positive correlation would occur based on the separate effects. If this is the case, the Index of Legitimate Violence is not an adequate measure of cultural support for violence. To test this assumption, a regression model using the total 1980-84 homicide rate as the dependent variable was run. If the results using a total homicide rate are similar to the findings of Baron and Straus, then the current research is supported. The regression equation of the total one-on-one homicide rate for the years 1980-84 had an adjusted R^2 of .78. The Index of Legitimate Violence and Confederate South, however, did not attain significance. High rates of divorce, greater proportions of young and black persons, urbanization and poverty best explain the total homicide rate. These findings are similar to the sex and race-specific rate findings of the current study, not the findings by Baron and Straus (1986). The homicide rate used

by Baron and Straus was based on the number of homicides known to the police in 1980 and was computed per 100,000 population. The rates of homicide used in the current study, as discussed in Chapter four are averaged rates for the years 1980-84 expressed on a per year basis. This type of rate calculation serves to stabilize random fluctuations in the yearly rate. It is possible that by using an averaged rate, random fluctuations causing the significant findings by Baron and Straus were removed. Further research will be necessary to determine if this is the case.

Motor Vehicle Accidental Death. The final regression models explaining state-to-state variation in the rates of motor vehicle accidental death are quite different from the final homicide models. The ability of the model to explain variation, however, is again broken down along racial lines. White male and female death rates are best explained by the model with adjusted R^2's of .70 and .72, respectively. Black rates are less well explained (R^2=.41 for black males and .10 for black females). Table 6.4 shows that the Index of Legitimate Violence attains significance in all four models. The final models for white females and males are best explained by a combination of social characteristics: high rates of divorce, poverty, cultural support of legitimate violence, and rurality in a state. Both cultural and structural social characteristics effect the state-to-state variation. The combination of effects supports the suggestion in Chapter two that motor vehicle accidental

deaths may represent a more generalized act of aggression. If aggression expressed in the form of motor vehicle accidental death is somewhere between self and other-directed, then the social characteristics that explain motor vehicle accidental death will represent a combination of the characteristics that explain both homicide and suicide. Examination of Tables 6.3, 6.4 and 6.5 reveals that there are common elements among the three forms of violent death. It is difficult to say, however, that the factors explaining motor vehicle accidental death are a true mixture of the factors that explain suicide and homicide. The best explanation for variation in white rates of motor vehicle accidental death is a social climate where social disorganization is high, legitimate violence is accepted, and poverty prevails.

The best models explaining variation in black male and female motor vehicle accidental deaths are less informative. Table 6.3 shows that the model for black males, which explains less than half the variation, is a combination of two characteristics: residence in the Confederate South and cultural support for legitimate violence. This is the only model of all twenty models being examined where region explained a significant percentage of the variance. It is possible that for black males in the South, the motor vehicle is a tool used in the expression of aggression. The research findings of Whitlock (1971) suggest that the motor vehicle is frequently used as an outlet for aggression.

The model for black females is poorly explained by the social characteristics used in this study. Only one variable, the Legitimate Violence Index, manages to achieve significance, explaining a mere ten percent of the variance. The problem of small sample variability is probably the best explanation for the poor fit of the research model. It is possible that a much longer time span would have to be covered to provide large enough samples for meaningful analysis of black female rates of violent death.

The final models of motor vehicle accidental death provide strong support the original hypotheses. Cultural support for legitimate violence is a significant characteristic in each model. Social disorganization, however, also plays a strong part in explaining motor vehicle accidental death. An interesting finding is the strong association between poverty and white rates of motor vehicle accidental death. Several explanations are possible. Individuals in a state where poverty prevails may use the automobile as a way of expressing aggression at the frustration built up by economic conditions. It may also be that states with greater poverty have more motor vehicles in poor condition, causing more accidents based on vehicular malfunction. If this were the case, however, it would seem likely that percent poor would be a significant factor in all four equations. Another possibility is that the relationship between legitimate violence and motor vehicle accidental death is spurious due to the variation in driving

patterns across the United States. States with low population density necessitate patterns of greater motor vehicle use, which increases the risk of death. The only way to control for this possibility is to obtain accurate data on the number of motor vehicle miles driven and adjust the data accordingly. This type of data is often only an estimate of the number of motor vehicle miles driven, which is less than ideal. Overall, the rates of motor vehicle accidental death seem best explained by a cultural perspective, supporting the original hypothesis.

Suicide. Table 6.5 shows the final regression estimates of suicide for each of the four race and sex combinations. Even more evident in these models, than in past models, is the lack of explanatory power of the models for black rates of violent death. The final model for black males explains only eighteen percent of the variance, with only two variables attaining significance, legitimate violence and percent black. For black males, cultural support for violence and lower percentages of black persons in a state increase the risk of suicide. In the model for black females, only one social characteristic, urbanization, predicts any significant amount of the state-to-state variation in suicide, a mere eight percent.

The models for white females and males explain at least fifty percent of the state-to-state variance in suicide. Four social characteristics describe the increased risk of white male suicide: high divorce rates, cultural support for

legitimate violence, poverty and small concentrations of black persons in a state. This combination of social characteristics is interesting. The association between divorce rates and suicide rates is well known (Gibbs and Martin 1964). The finding that suicide rates are influenced by cultural support for legitimate violence in both male regression models is also important. High suicide rates have previously been associated with the upper socioeconomic classes, in contrast with the association between homicide and lower socioeconomic classes. The association between legitimate violence and suicide supports the research hypothesis. It also supports the suggestion that self directed violence is culturally learned behavior, for males in particular. A climate where legitimate violence is accepted increases the risk of both suicide and motor vehicle accidental deaths. These findings also support the suggestion by some researchers that motor vehicle accidental deaths are hidden suicides (Tabachnick 1973). The finding that states with larger percentages of the population living below the poverty line have increased rates of white male and female suicide is also interesting. How does living in an environment where poverty prevails affect the suicide rate of white males, the least likely group to be living in absolute poverty? It is possible that poverty is a representation of the overall economic condition of the state, reflecting a depressed economy. Economic depression has been linked to high rates of suicide, particularly among

white males (Henry and Short 1964). This finding supports a structural explanation of suicide.

The final model explaining white female suicide defines four social characteristics as significant: high rates of divorce, urbanization, poverty and large concentrations of young people. The significance of the age variable is the most surprising finding. Although there has been some recent attention regarding suicide among the young, the majority of suicides occur in the older age groups. For white females it may be that a combination of social and economic disorganization and large concentrations of young people, represent frustrating life situations which bring about suicide.

The final research models of suicide indicate that a combination of cultural and structural conditions lead to increased risk of suicide. The models of white and black males support the research hypothesis that cultural support for legitimate violence leads to increased suicide. These findings are particularly encouraging because little research has been done to support the contention that suicide, as a violent act, is influenced by cultural factors.

Other Accidental Death. The fit of the research model to the other accidental death rate, is divided along gender lines unlike the previous forms of violent death. The model for white males explains sixty-seven percent of the state-to-state variation in other accidental death. A combination

of social characteristics: high divorce rates, rurality, poverty, and youth, best explain increased risk of other accidental death. These social characteristics are indicative of states where farming and extractive industries such as mining and oil drilling are primary employers. Frequently the young and impoverished populations make up the work force for these industries, contributing to their representation in higher accidental death rates. Conditions of social disorganization, as reflected in the divorce rate, have a significant effect on accidental death across gender lines, but its effect is strongest in the male regression models.

The final research model for black males, despite having only two significant variables, explains forty-one percent of the variance. States with greater percentages of blacks in the population, and high rates of divorce, increase the risk of accidental death for black males. The observation that percent black is a significant factor in both female and male black research models may indicate that in states with high percentages of blacks, it is this population that is employed in the more hazardous occupations, placing them at greater risk of death.

The model for black females explains only eighteen percent of the state-to-state variation in accidental death. One significant finding is particularly interesting. States with <u>less</u> cultural support for legitimate violence have higher rates of black female accidental death. This is the

only model of all twenty where a negative association between legitimate violence and violent death explained a significant amount of the variance in risk of death. It is possible that for black females, different types of accidents account for the greatest risk of death, for example, factory accidents. The composition of the other accidental death category makes it difficult to determine why lack of cultural support for violence might effect accidental death rates among black females.

The model for white females is a very poor fit (R^2=.12). A single factor, rurality, accounts for the twelve percent variance. Farming or similar types of accidents may be one of the few factors influencing variation in white female accidental death. Examination of the state ranks from Chapter four reveals that there is little state-to-state variation in the rate of other accidental death for white females. This lack of variance may indicate that the deaths that are being measured, for the most part, are truly random accidental deaths.

The category of other accidental death seems to be too broad a category to measure the effects of social characteristics. The possibility of this problem was noted in Chapter two. A better measure of accidental death would have to further break down this category to provide more meaningful analyses.

Combined Violent Death. Table 6.7 presents the final regression models than best explain variation in rates of

combined violent death. The measure of combined violent death, as described in Chapter four, was created as a composite measure encompassing all four of the individual forms of violent death. This composite measure allows the examination of social characteristics that effect rates of violent death in an overall way.

The combined violent death rate for white males is particularly well explained by the regression model with an adjusted R^2 of .75. Five variables attained significance: divorce rate, percent poor, population aged 18-24, the Index of Legitimate Violence, and percent black. States that are characterized by social disorganization, are supportive of legitimate violence, and have large young and poor populations, increase the risk of violent death for white males. The white male regression model is the only one of the four models in which cultural support for violence explained a significant proportion of the variance. The research model chosen for this study best explains white male rates of violent death.

The model for white females is also well explained with an adjusted R^2 of .66. A combination of three social characteristics increase the risk of violent death: high rates of divorce, youthful and impoverished populations. This model does not support the original hypothesis. Structural factors seem to best explain the overall rate of violent death among white females.

The final regression models for black males and females, explain much less of the state-to-state variation in violent death than do the white regression models. For black males, poverty, urbanization, and high rates of divorce best explain increases in the rate of violent death. The model for black females is similar to that of black males, however, poverty is not a significant factor. Structural, rather than cultural characteristics seem to best explain rates of violent death among blacks.

These findings are contrary to those expected. With the exception of the white male regression model, cultural support for legitimate violence had no significant effect. Severely stressful social conditions such as dissolved families, crowded living conditions, and poverty best explain increased risks in violent death.

Discussion

The final twenty regression models demonstrate only mild support for a culture of violence thesis. Most striking was the lack of support for this hypothesis in the homicide models. The Legitimate Violence Index, Confederate South and percent black, all variables that have been positively correlated with homicide in past research, were not significantly associated with sex and race-specific rates of homicide. These findings are particularly important because the majority of research on the culture of violence thesis has tried to explain variation in the rate

of homicide. The research findings indicate that if cultural support for violence does influence risk of homicide, these three measures are not adequate predictors.

The Legitimate Violence Index did, however, significantly predict increased rates of motor vehicle accidental death, white male suicide and combined violent death. These findings indicate that cultural support for violence affects rates of self-directed violence. These findings support Humphrey and Palmer's thesis of a growing subculture of self-violence. The automobile, in particular seems to be used in American society as a tool for the expression of aggression. The ready availability of the automobile and the deadly consequences that its misuse can bring make it an easy choice for the expression of suicidal or homicidal aggression.

Structural and economic explanations of violent behavior are more strongly supported by the research findings. Previous research on the individual forms of violent death have support these findings. The present research shows that a combination of structural and cultural factors affect rates of violent death.

The social characteristics that best explain combined violent death are poverty, youth and social disorganization. These social structural characteristics indicate that stability and economic equality would lower the overall rate of violent death.

The regression results indicate that cultural support for violence does increase some forms of violent death. The research findings best explain rates of white violent death, particularly males. Much longer periods of study will be needed to better determine what social characteristics best explain black rates of violent death. The use of sex and race-specific rates of violent death is important in understanding how each of these groups differs or is similar to one another. The findings indicate that rates of violent death are most often similar along racial lines. This finding is contrary to expectations. Based on the greater incidence of violence among males, it was expected that rates would be similarly explained along gender lines. The cultural differences between black and white populations in the United States are strong enough to require different research models in the explanation of rates of violent death.

The final chapter will discuss the implications of the research for the subcultures of self and other-directed violence thesis.

CONCLUSION

CHAPTER VII

This study examined suicide, homicide, and accidental death as forms of death sharing common characteristics which enable their study under the category of violent death. Two concepts were explored for their theoretical applicability in the explanation of violent death rates, the theory of the functional alternative and the subculture of violence thesis. This study examined several factors predicted to be related to violent death and assessed their influence on the rates of the different forms of violent death. The subculture of violence framework was utilized in the interpretation of the research findings. This chapter is divided into four sections. The first section reviews the characteristics of the forms of violent death which theoretically tie them together. The second section reviews the theoretical contexts used to examine rates of violent death. The third section reviews the research findings. The final section is an interpretation and conclusion of the research findings.

Definition of Violent Death

The observation that suicide, homicide, and accidental death are all caused by forces from outside the body is identified as a common link among the forms of violent

death. A working definition of violent death was developed from research by Holinger (1987) and Lane (1979). Violent death is defined as physically reckless, aggressive, or destructive actions which result in death. This definition allowed the separate forms of death to be studied under the single concept of violent death.

Three important characteristics were identified that provide the rationale for studying violent death in aggregate form: 1) the intent of the action, 2) aggression, and 3) self destructiveness and risk taking. It was shown that the degree of intent, and the direction of the aggression, whether toward the self or others, vary with the type of violent death being examined, as if along a continuum. All three forms of violent death were shown to contain elements of self destructiveness and risk taking.

Theoretical Context for the Study of Violent Death

Two theoretical explanations were used in the examination of violent death rates. The theory of the functional alternative was used to explore the relationship among the different forms of violent death. The theory of the subculture of violence was used to explain the combinations of social characteristics which statistically best predicted increased risk of violent death.

Theory of the Functional Alternative

The theory of the functional alternative contends that the total volume of deviant behavior in a population remains stable over time, but the form that the deviant behavior takes, changes. The volume of deviant behavior remains constant because the capacity of social control mechanisms to handle the deviant behavior remains constant. This tradition of research suggests that the rates of the different forms of violent death move in opposite directions, based on structural factors. This theory was applied, in an exploratory fashion, to the examination of regional variation among the different forms of violent death.

Subcultures of Violence

The subculture of violence thesis suggests that a lot of deviant behavior is a reflection of normative support for deviant values by a subgroup within a culture. Researchers proposed that some subgroups within a population have higher rates of violent behavior because the culture has passed on values which support the use of violence as a problem solving technique. This theory, for the most part has been used to explain other-directed violence. The concept was expanded upon by Humphrey and Palmer (1980) who suggest that self-directed violence, in addition to other-directed violence, is culturally learned and passed on. Customs such as drug abuse and alcoholism teach members of the culture

that self destructive behavior is an acceptable way to deal with frustration. The contention that there are subcultures of both self and other-directed violence can be expanded to a more generalized cultural acceptance of violent and risk taking behavior in the United States. The subculture of violence perspective was used to explain the research results which identified the combinations of social characteristics best predicting increased risk of violent death.

Research Results

Chapter five presented the results of regional analysis of the combined violent death rate. The rates were examined, by region, for each of the sex-race pairings. The results were discussed with regard to the applicability of the theory of the functional alternative as a means to explain variation in the rates of violent death. Two concepts in particular were examined: regional continuity and inverse variation among the separate forms. The analysis of regional continuity in rates of violent death did not lend support to the theory of the functional alternative. Rates of combined violent death varied greatly within each region, particularly for males. It was concluded that the lack of regional continuity did not support functional alternative theory. Examination of bivariate correlations between the different forms of violent death (suicide, homicide, motor vehicle accidental

death, and other accidental death) found that there were frequent positive correlations between suicide and homicide within the four regions. This finding was opposite to what was expected according to functional alternative theory. Violent deaths as forms of deviance, may not be as controllable as other forms of deviance such as the witch hunts studied by Erikson. Therefore, violent deaths may not fit the Erikson format as well as other forms of deviance. However, there is some cultural element involved in the control of rates of violent death. Regional attitudes towards the amount of risk that is acceptable or the amount of importance that is given to personal well-being may differ. Future research on the application of the theory of the functional alternative to the study of violent death should include any possible indicators of differences in the social control of violent death that are available. Based on the current research findings it was concluded that functional alternative theory is not adequate in predicting patterns of violent death.

Chapter six discussed the results of multiple regression analyses which examined the relationship between rates of violent death and measures of cultural support for violence. Sex and race-specific rates of violent death were regressed on the predictor and control variables (Index of Legitimate Violence, divorce rate, percent poor, percent metropolitan, percent black, Confederate South/Nonsouth and percent aged 18-24). The final twenty regression models

demonstrated only mild support for the subculture of violence thesis. The most striking lack of support for this hypothesis was demonstrated in the homicide models. The Legitimate Violence Index, Confederate South, and percent black, all variables that have been positively correlated with homicide in past research, were not significantly associated with sex and race-specific rates of homicide. These findings bring into question the utility of these three measures as predictors of cultural support for violence.

The models for motor vehicle accidental death were, in contrast to the homicide models, very well explained by the subculture of violence argument. The Legitimate Violence Index significantly predicted rates of motor vehicle accidental death. The Index was also significantly associated with black and white male suicide, and white male combined violent death. Cultural support for violence does effect rates of self-directed violence. These findings support Humphrey and Palmer's thesis of a growing subculture of self-violence.

Structural theories of violence are strongly supported by the research findings. Poverty and social disorganization were significant factors in most of the research models. The findings indicate that a combination of both cultural and structural factors affect rates of violent death.

Interpretation and Conclusions

This study sought to better understand the relationship among three types of death. Suicide, homicide, and accidental death are all forms of death brought about by non-degenerative forces external to the body. All three forms of death may be viewed as outcomes of responses to frustration, this frustration is expressed as aggression. The direction of the aggression differs for the three forms of death, from self-directed (suicide) to other-directed (homicide). Cultural support for violence influences the rate of motor vehicle accidental death and suicide as this study has shown. Certain groups within the population have learned to direct their aggression inward. The willingness of these groups to engage in risk taking and self destructive behavior is learned within the culture. It is possible that cultural support for violence has become more widespread, increasing the involvement in violence for groups which were less affected in the past.

The rates of violent death were divided into sex and race-specific categories to determine if any patterns of inward or outward aggression could be identified for these groups. Race and sex-specific rates are important because there is so much variation in the participation in violence by these groups. The findings show that overall, white rates of violent death were better explained by the research model than black rates of violent death. This finding was somewhat unexpected because rates of violence are for the

most part highest for males of both races. It could be that other social characteristics not measured in this study would better explain black rates of violent death.

The lack of support for the proposed hypothesis was surprising, particularly the findings for homicide. The use of sex and race-specific and averaged rates seems to have affected the utility of the Index of Legitimate Violence as a measure of cultural support for violence. It is difficult to determine which factor or combination of factors led to these findings. It will be important for future research to determine if similar findings occur with other data sets or over longer time spans.

A combined violent death rate was computed to determine what social characteristics best explain all types of violent death. Cultural support for violence was shown to be influential in only one of the four models, the white male rate. Social structural factors such as poverty and social disorganization were significant in the majority of the models of violent death, lending support to economic and structural theories of violence. The combined rate of violent death is a useful tool in determining the overall level of violence in a state. Many of the deaths that occur violently are deaths that could be prevented. A better understanding of which social characteristics effect the total rate of violent death may target areas for future social action.

The research findings suggest several avenues of future research. First, it will be important to examine sex and race-specific rates of violent death over longer time periods, particularly the rates for black males and females. The use of an expanded time frame would solve some of the problems of small sample variability that were evident in this study. Another possibility is to use rates disaggregated by race but not by sex. The results of the current research show that rates of violence were best explained by similar models for black males and females and for white males and females. It seems that racial rather than gender differences are most important in determining variation in rates of violent death.

A second suggestion for future research is to use different measures of cultural support for legitimate violence. Williams and Flewelling (1988) for example, developed a justifiable homicide ratio to measure cultural support for legitimate violence. The justifiable homicide ratio is based on the assumption that justified killings express cultural approval of violence. This measure and others like it may be better measures of cultural support for violence than the Legitimate Violence Index. The development of other measures of cultural support for violence at the state, city, and SMSA levels is important for future research on the theoretical issue of cultures or subcultures of violence.

A final suggestion for future research is to further examine the relationship between suicide, homicide and accidents. It is possible that by breaking homicide down by victim-offender relationship, there would be a better understanding of self and other-directed violence. For example, it is possible that primary homicide is best explained by social characteristics that explain suicide and motor vehicle accidental deaths. These three types of violent death may be very similar. Stranger and acquaintance homicide, on the other hand, may be the types of violence that are best defined as other-directed.

This study provided several contributions to the study of violent death. The use of sex and race-specific rates provided important findings as to the utility of past predictors of cultural support for violence. The research explored the relationship between suicide, homicide, and accidents, which have rarely been studied together using a sociological analysis. The study of these forms of violent death together is important because the nature of the causes of these three forms of death are so similar. Motor vehicle accidents in particular are a category of death which often masks deaths which might otherwise be categorized as suicides, and occasionally as homicides. Cultural definitions surrounding the use of motor vehicles are important to ascertain given the high rate of motor vehicle accidental death in the United States.

The research findings indicate that better indicators of cultural support for violence are still needed. The vast body of research on subcultures of violence has not come up with an adequate measure of violent subcultural orientation. New indicators are sorely needed if this line of research is to be continued. Current research on violence has shown that disaggregated rates provide more meaningful analyses (Williams and Flewelling 1988). This dissertation has shown that traditional indicators of violence such as percent poor and divorce rate a much better at explaining white rates of violence than black rates of violence. Given the much higher participation by blacks in violent activities, it will be important in future research to better identify social characteristics that can explain these high rates. The findings show strong support for the structural and economic perspectives of violence, indicating that social structural indicators are very important in understanding variation in rates of violence. This study adds to the growing body of research that has identified poverty and social disorganization as major factors in the explanation of violence. This dissertation shows that it is most likely a combination of cultural and structural factors that best explain increased rates of violence. A reduction in the disparate income distribution in the United States along with changes in cultural attitudes regarding the use of violence would reduce the amount of violent death in this country. The research findings regarding the social

characteristics surrounding violent death provide a better understanding of the causes of this type of death and will hopefully lead to a reduction of violent death in the United States.

APPENDIX

DATA SOURCES

Bureau of the Census. 1982. State and Metropolitan Area Data Book, 1982. Washington, D.C. U.S. Department of Commerce.

Percent Below the Poverty Line, 1980
Percent Black Population, 1980
Percent Metropolitan, 1980

Bureau of the Census. 1987. State and Metropolitan Area Data Book, 1982. Washington, D.C. U.S. Department of Commerce.

Divorce Rate per 1,000 Population, 1980

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Motor Vehicle Accidents, each State, 1980, black male
Motor Vehicle Accidents, each State, 1980, black female
All Other Accidents, each State, 1980, white male
All Other Accidents, each State, 1980, white female
All Other Accidents, each State, 1980, black male
All Other Accidents, each State, 1980, black female
Suicide, each State, 1980, white male
Suicide, each State, 1980, white female
Suicide, each State, 1980, black male
Suicide, each State, 1980, black female

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Motor Vehicle Accidents, each State, 1981, black male
Motor Vehicle Accidents, each State, 1981, black female
All Other Accidents, each State, 1981, white male
All Other Accidents, each State, 1981, white female
All Other Accidents, each State, 1981, black male
All Other Accidents, each State, 1981, black female
Suicide, each State, 1981, white male
Suicide, each State, 1981, white female

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Motor Vehicle Accidents, each State, 1982, black female
All Other Accidents, each State, 1982, white male
All Other Accidents, each State, 1982, white female
All Other Accidents, each State, 1982, black male
All Other Accidents, each State, 1982, black female
Suicide, each State, 1982, white male
Suicide, each State, 1982, white female
Suicide, each State, 1982, black male
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Motor Vehicle Accidents, each State, 1983, black female
All Other Accidents, each State, 1983, white male
All Other Accidents, each State, 1983, white female
All Other Accidents, each State, 1983, black male
All Other Accidents, each State, 1983, black female
Suicide, each State, 1983, white male
Suicide, each State, 1983, white female
Suicide, each State, 1983, black male
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Motor Vehicle Accidents, each State, 1984, black female
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All Other Accidents, each State, 1984, white female
All Other Accidents, each State, 1984, black male
All Other Accidents, each State, 1984, black female

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