FAITH BEHIND BARS: THE SOCIAL ECOLOGY OF RELIGION AND DEVIANCE IN THE

PENITENTIARY

_____

A Dissertation

presented to

the Faculty of the Graduate School

at the University of Missouri-Columbia

_____

In Partial Fulfillment

of the Requirements for the Degree

Doctor of Philosophy

_____

by

PAUL W. STURGIS

Dr. John Galliher, Dissertation Supervisor

MAY 2008

The undersigned, appointed by the dean of the Graduate School, have examined the dissertation entitled

FAITH BEHIND BARS: THE SOCIAL ECOLOGY OF RELIGION AND DEVIANCE IN THE

PENITENTIARY

presented by Paul W. Sturgis,

a candidate for the degree of doctor of philosophy,

and certify that, in their opinion, it is worthy of acceptance.

Professor John Galliher

_____

Associate Professor Wayne Brekhus

_____

Associate Professor David Brunsma

_____

Professor Edward Brent

_____

Professor Greg Casey

_____

ACKNOWLEDGEMENTS

I would like to take this opportunity to thank all of the members of my committee both for their assistance with this project, and for their help in other areas as well. Although I certainly don't want to marginalize the contributions that any of my committee members made to this project, I feel that two members of my committee deserve special recognition. I would like to thank my advisor, Dr. John Galliher, for all of his assistance over the years. In addition, I would like to thank the outside member of my committee, Dr. Greg Casey, for his willingness to help me with this project when he was certainly under no obligation to do so.

TABLE OF CONTENTS

LIST OF TABLES

FAITH BEHIND BARS:

THE SOCIAL ECOLOGY OF RELIGION AND DEVIANCE IN THE PENITENTIARY

Paul W. Sturgis

Dr. John Galliher, Dissertation Supervisor

ABSTRACT

The relationship between religiosity and institutional misconduct among prison inmates is examined using survey data collected from a large sample of state and federal prison inmates in the United States. It was determined that religiosity was not significantly related to institutional misconduct on the individual level. In addition, aggregate level religiosity did not influence the individual level relationship between religiosity and misconduct. The theoretical implications of this line of research are also discussed

Chapter One: Introduction

Religion and the penitentiary have been historically interconnected in the United States since the origins of the penal system. In the United States, the penitentiary began to replace earlier, typically physical forms of punishment in the later part of the 18th century. These early prisons were strongly influenced by humanitarian and religious ideology. These early prisons attempted to reform deviants by confining inmates in total silence and solitude, so that they would have ample time for inner reflection (Friedman, 1993; Rothman, 1995). Even the very term "penitentiary" has religious overtones, as the penitentiary was originally intended to be a place where inmates would become penitent.

Although religion and the penitentiary are historically interconnected, and despite the fact that a great deal has been written about religion and the penitentiary separately, surprisingly little has been written about the practice of religion in the prison system. As will be discussed in the literature review chapter, only a handful of studies have directly investigated either the practice of religion in prison, or the effect of religious participation on inmate behavior.

This study will attempt to remedy some of that deficiency. This study will examine the relationship between religiosity and institutional misbehavior among prison inmates in the United States. The overall goal of this study is to answer the following two interrelated research questions:

1. What is the relationship between religiosity and institutional misconduct among prison inmates?

2. Is the relationship between religiosity and misconduct on the individual level affected by the social ecology of the correctional institution that the individual inmate is incarcerated in?

Based upon the existing literature that has examined the relationship between religiosity and deviance, the following hypotheses are advanced:

1. There is an inverse relationship between religiosity and institutional misconduct among individuals incarcerated in the correctional system.

2. The inverse relationship between religiosity and misconduct will be stronger among individuals incarcerated in institutions that are marked by higher levels of aggregate religiosity.

3. The inverse relationship between religiosity and misconduct will be stronger in magnitude for minor forms of misconduct as compared to serious forms of misconduct.

This study will proceed by first examining the relevant literature that has examined the relationship between religiosity and deviance among the general population, and among prison inmates. Special attention will be devoted to explaining how the existing literature led to the formation of the hypotheses that are presented above. The methodology that was used to examine these hypotheses will then be briefly outlined. This will be followed by a discussion of the results of the statistical analysis that was used in the study. Finally, a discussion of the theoretical implications of the research will be presented.

Chapter Two: Literature Review

The relationship between religiosity and deviance has been empirically evaluated in a variety of ways. This review of the literature is organized around studies that have examined the relationship between religiosity and deviance in the following ways:

1. Studies focusing on the relationship on the individual level primarily with non-prisoners.

2. Studies focusing on the relationship on the aggregate level with non-prisoners.

3. Studies that have combined the individual and the aggregate level of analysis.

4. Studies that have focused on prisoners, and have used recidivism as their dependent variable.

5. Studies that have focused on prisoners, and have used institutional deviance as their dependent variable.

Religiosity and Deviance on the Individual Level[1]

Any discussion of the relationship between religiosity and deviance would be incomplete without discussing Hirschi and Stark's famous 1969 paper on the subject. Hirschi and Stark argued that although the hypothesis that religiosity was an inhibitor of crime and deviance was entirely consistent with the functionalist perspective, the existing research in the area was inconclusive (1969, p. 202-203). Therefore, Hirschi and Stark decided to test what came to be known as the "hellfire" hypothesis by administering a lengthy questionnaire to a random sample of 4,077 junior high and high school age students residing in Western Contra Costa County, California. Hirschi and Stark utilized a multi-dimensional measure of both religiosity and delinquency in their questionnaire, and they reported the results of the relationship between religiosity and delinquency in

---

[1] The literature that has examined the individual level relationship between religiosity and deviance among non-prisoners is summarized in table three.

the form of gamma[2]. The results of the analysis demonstrated that religiosity and delinquency were unrelated. Hirschi and Stark argued, "*Students who believe in the Devil and in a life after death are just as likely to commit delinquent acts as are students who do not believe in a supernatural world*" (1969, p. 210).

Hirschi and Stark's 1969 paper had a profound effect on the subsequent research that addressed the relationship between religiosity and deviance. Because the results of Hirschi and Stark's research were so surprising, the research studies that were conducted immediately following the publication of their 1969 paper were primarily aimed at replication, in order to determine if Hirschi and Stark's surprising conclusions were in fact accurate.

The first replication of Hirschi and Stark's study (Burkett & White, 1974) was conducted in order to determine if religiosity was related to forms of delinquency less serious in nature than those examined by Hirschi and Stark. In order to test the hypothesis, Burkett and White administered questionnaires to a non-random sample of 855 high school students. The results of the analysis supported their hypothesis; they determined that there was a moderately strong inverse relationship between religiosity and the use of illegal substances such as beer and marijuana.

A second replication (Higgins & Albrecht, 1977) of Hirschi and Stark's study was conducted a few years later in order to determine if religiosity was positively related to respect for the juvenile court system, which in turn was inversely related to committing delinquent acts. Data was collected using a questionnaire that was administered to 1,410 tenth grade students from six high schools in Atlanta. The results of the analysis

---

[2] Gamma is a measure of association similar to a correlation that is used with ordinal level data (Hickey, 1986, p. 252).

demonstrated that there was an inverse relationship between religiosity and delinquency. In addition the hypothesis that respect for the juvenile justice system was the causal link between religiosity and delinquency was also supported.

A third replication (Jenson & Erickson, 1979) cast further doubt on the veracity of Hirschi and Stark's original findings. Jenson and Erickson also utilized a questionnaire, which was administered to a non-random sample of 3,268 high school students. The results of their analysis also demonstrated the presence of an inverse relationship between religiosity and delinquency approximately equal in magnitude to the relationship between the strength of familial relations and delinquency.

As the above discussion demonstrates, the research conducted immediately following the publication of Hirschi and Stark's surprising findings was not working from a well defined theoretical perspective. The research aimed at testing the "hellfire" hypothesis was largely focused on determining if there was a relationship between religiosity and deviance, and not exploring the theoretical significance of the relationship. After the early research demonstrated the presence of a relationship between religiosity and deviance, the subsequent research attempted to explain the theoretical basis of this relationship. The research conducted on the relationship between religiosity and deviance in the post circa 1980 period has offered a number of theoretical reasons to either explain why religiosity is an inhibitor of deviance, or to address the nature of the relationship between the two variables. These theoretical perspectives include: arousal theory, control theory, social learning theory, a combination of control theory and social learning theory, reference group theory and the denominational proscriptiveness hypothesis, the antiasceticism hypothesis, and a variety of contemporary perspectives

such as the general theory of crime, and age graded theory. The following sections will briefly discuss these perspectives, as well as the empirical research that has been conducted in these areas.

Arousal Theory

Arousal theory, which is also known as optimal stimulation theory, argues that individuals vary in the degree to which they desire a highly stimulated environment, and that individuals who commit crime or deviance are attempting to temporarily raise their level of neurological arousal to their preferred level by engaging in "excitement-seeking" behavior. Arousal theory is applicable to the study of the relationship between religiosity and deviance, because it has been argued that the majority of individuals that are sub-optimally aroused in a normal environment (and thus more prone to commit crime) would not voluntarily attend most religious services, thus explaining the inverse relationship between religiosity and deviance that has been documented in the literature (Ellis, 1987).

Arousal theory as an explanation for the relationship between religiosity and deviance has been the focus of only two research articles in recent years. Ellis and Thompson (1989) constructed a scale of "church services boredom" by administering questionnaires to a convenience sample of 216 female and 138 male undergraduate students. Ellis and Thompson determined that when the effect of boredom with church services was controlled for, the relationship between religiosity and deviance disappeared. They argue that this finding supports the assertion that the relationship between religiosity and deviance is largely spurious, as an individual's preferred level of

neurological arousal is causally related to both their level of religiosity and their propensity to engage in deviant behavior.

Cochran, Wood, and Arneklev (1994) conducted a similar study by administering questionnaires to 1,591 high school students from Oklahoma. They included controls derived from both arousal theory and social control theory, and the results of their multivariate analysis also support the assertion that the relationship between religiosity and deviance is primarily spurious.

Control Theory and Social Learning Theory

Control theory argues that deviance occurs as a result of an individual's bond to society being either "weak or broken" (Hirschi, 1969, p. 16). Hirschi (1969) discussed four elements of the bond to society: attachment, commitment, involvement, and belief.

Attachment can be thought of as the extent to which individuals are integrated into society through their relationships with significant people in their lives. Hirschi referred to commitment as the "rational component in conformity" (1969, p. 20), and used the example of how most people would not consider robbing a liquor store because of the risks involved to illustrate how commitment serves a form of social control. Hirschi's concept of involvement implies that individuals who are heavily involved in the routines of society simply have less time to engage in deviant activities. Finally, Hirschi argued that a variation exists in the extent to which individuals believe that they should follow societies' norms, and "that the less a person believes he should obey the rules, the more likely he is to violate them" (1969, p. 26) in order to explain how belief in the conventional norms of society leads to conformity.

Individuals who have applied control theory in order to explain the inverse relationship between religiosity and deviance typically focus on the elements of attachment, involvement, and belief. They argue that adolescents who are heavily attached to their parents typically refrain from committing deviant acts because of the fear of disappointing their parents. Similarly, they argue that individuals who are heavily involved in the routines of their churches simply have less time to commit deviant acts. Furthermore, they argue that religiosity impedes deviance because the tenets of most major religious groups are heavily compatible with the general normative climate in the United States (see Grasmick, Kinsey, & Cochran 1991, pp. 101-102).

Individuals who draw upon social learning theories in order to explain the relationship between religiosity and deviance draw heavily upon Sutherland's (1947) concept of "differential association." Theorists in this area argue that deviance is a learned behavior, and that individuals who associate with other people who frequently commit deviant behavior are prone to engaging in this behavior themselves.

The studies which use either control theory or social learning theory in order to explain the religiosity-deviance relationship can be divided into three broad categories: studies that primarily draw from control theory, studies that primarily draw from social learning theory, and studies that draw from both theoretical perspectives. The following sections will briefly describe the research that has been conducted on the relationship between religiosity and deviance using control theory, social learning theory, or a combination of the two perspectives as their primary theoretical framework.

Control Theory

The studies that have been conducted on the relationship between religiosity and deviance using control theory as their primary theoretical framework can be classified into four broad categories: studies that utilize control theory holistically, studies that primarily focus on belief as a deterrent to deviance, studies that primarily focus on involvement in church activities as a deterrent to deviance, and studies that focus on the impact of parental behavior on the delinquency of juveniles.

It should be noted that the first study to draw from control theory in order to explain the relationship between religiosity and deviance would be Hirschi and Stark's 1969 paper that was discussed earlier. Hirschi and Stark used the same data in their 1969 paper that Hirschi used in *Causes of Delinquency* (1969), which outlined the basic principles of control theory. However, although control theory was the impetus for the 1969 paper by Hirschi and Stark, the primary significance of their paper was the surprising finding that religiosity was not an inhibitor of delinquent behavior. Since their empirical results were the most significant aspect of their study, Hirschi and Stark (1969) did not discuss their results in terms of any particular theoretical framework, largely because there was no relationship to explain.

Ross (1991) conducted a replication of Hirschi and Stark's 1969 study by utilizing questionnaire data with a more extensive measure of religiosity in order to test the same hypotheses that Hirschi and Stark had examined in 1969. The most significant finding from Ross's study was that religiosity was an inhibitor of deviant behavior, which was contrary to Hirschi and Stark's original findings.

Free (1994) also conducted an examination of the religiosity-deviance relationship using a theoretical model drawn from control theory. Free used questionnaire data from a non-random sample of college students in order to investigate the relationship between religiosity, delinquency, and substance abuse. Free determined that there was a direct inverse relationship between religiosity and several forms of delinquency such as minor delinquency, alcohol use, marijuana use, and hard drug use. Free also determined that there was an indirect relationship between religiosity and serious delinquency through the mediating variable minor delinquency.

Grasmick, Bursik, and Cochran (1991) conducted a study using control theory as their primary theoretical framework in order to investigate belief as an element of the bond to society that prevents individuals from committing deviant behavior. They conducted interviews with a random sample of 304 adults in order to investigate the relationship between religiosity and propensity to cheat on income taxes in the future. Grasmick, Bursik, and Cochran determined that there was an inverse relationship between both religious salience and religious participation and the individual's propensity to cheat on income taxes, and that the relationship between salience and tax cheating was attributable to the effect of experiencing shame as a result of engaging in tax evasion.

Amey, Albrecht, and Miller (1996) focused on involvement in religious activities as an element of the bond to society in their study of the religiosity-deviance relationship. They used data from the Monitoring the Future study of high school seniors in order to investigate racial differences in adolescent drug use. They determined that although religious participation was higher among African-Americans, the inverse relationship between religiosity and deviance that existed for whites was almost totally absent among

10

African-Americans. Amey, Albrecht, and Miller argue that the "multiple social, psychological, and political roles" (1996, p. 1327) of the contemporary black church may override its role as an institution of social control, which may partially explain this paradoxical finding.

A great deal of the research that uses control theory as its primary theoretical framework in order to explain the religiosity-deviance relationship focuses on the impact of parental behavior on the delinquency of their children. For example, Burkett (1977) administered questionnaires to a non-random sample of white high school students in order to determine if the religious participation of adolescents and or their parents was related to the adolescents' use of alcohol or marijuana. Burkett determined that although there was an inverse relationship between frequency of attending religious services and the use of alcohol and marijuana among the adolescents, the frequency of their parents' attendance at religious services was essentially unrelated to the adolescents' use of alcohol and marijuana.

Brownfield and Sorenson (1991) investigated the religiosity-deviance relationship by combining measures of religiosity and parental communication in order to construct the latent variable "social support." The results of their analysis demonstrated that there was an inverse relationship between the latent variable social support and the use of drugs by the adolescents in their study.

Litchfield, Thomas, and Li (1997) utilized longitudinal data collected from 992 adolescents who were members of the Church of the Latter-Day Saints in order to examine the relationship between various factors related to parental style, religiosity, and adolescent delinquency. They determined that the parental behaviors of connection and

regulation were positively associated with adolescent religiosity, which was inversely related to adolescent delinquency.

Regnerus (2003a) utilized data from the National Longitudinal Study of Adolescent Health in order to investigate the relationship between religiosity and serious delinquency. Regnerus determined that the relationship between religiosity and serious delinquency was complex, in that the relationship between parental religiosity and adolescent delinquency was indirect for every religious group except conservative Protestants, where the relationship was entirely direct. Regnerus also determined that adolescent religiosity, which was primarily a product of parental religiosity, was inversely related to delinquency, and that there were significant differences in this relationship between males and females, and for different age groups.

Pearce and Haynie (2004) investigated a similar research question, also using data from the National Longitudinal Study of Adolescent Health. They also determined that the relationship between adolescent religiosity and delinquency was affected by the religiosity of the adolescent's parents, specifically the religiosity of their mother. Pearce and Haynie also determined that factors related to the well being of the adolescent's family partially explained the relationship between adolescent religiosity and delinquency, and that the risk of adolescent delinquency was highest when the level of religiosity between the adolescent and their mother was very dissimilar.

Caputo (2004) investigated research questions very similar to Regnerus (2003a) and Pearce and Haynie (2004), also using data from the National Longitudinal Study of Adolescent Health. Caputo determined that parental religiosity was inversely related to substance abuse among adolescents, but not to general delinquency.

12

It should be noted that although the majority of the research that has been conducted on the religiosity-deviance relationship using control theory indicates the presence of an inverse relationship between the two variables, two studies conducted in recent years provide contrary evidence. For example, Ross (1994) utilized questionnaires administered to a random sample of 271 undergraduate students in order to investigate the relationship between religiosity and serious deviance. Ross determined that the two variables were unrelated. However, it should be noted that scale used in the study to measure deviance excluded victimless crimes, and that bulk of the literature indicates that religiosity is a more effective inhibitor of victimless crimes and substance abuse than it is of serious crimes (see discussion of the antiasceticism hypothesis below), which may partially explain Ross' findings.

Similarly, Cretacci (2003) also determined that religiosity and deviance were essentially unrelated. However, three methodological problems plague Cretacci's study, which may explain his anomalous results. Cretacci limited his analysis to serious forms of delinquency such as fighting and the use of a weapon, and as discussed earlier, religiosity is a more effective inhibitor of minor delinquency than it is of serious delinquency. In addition, Cretacci used multiple regression as his analysis technique, which is not entirely appropriate when using data that is inherently nested[3]. In addition, some elements of Cretacci's dependent variable, such as using a weapon, could be considered "rare events," and Cretacci does not account for this in his analysis (see King & Zeng, 2000).

---

[3] It should be noted that several of the studies discussed earlier that report the existence of an inverse relationship between religiosity and deviance that also used the National Longitudinal Study of Adolescent Health also use analysis techniques that are not entirely appropriate for nested data.

Social Learning Theory

Although control theory has been used extensively to explain the relationship between religiosity and deviance, social learning theory has been used much less frequently. In fact, social learning theory has been used as the primary theoretical framework in only two studies that have investigated the religiosity-deviance relationship in recent years.

Turner and Willis (1979) administered questionnaires to a random sample of 379 college students in order to investigate the relationship between religiosity and drug use. They determined that there was an inverse relationship between religiosity and the use of a number of different types of drugs. Furthermore, they argue that the relationship between religiosity and drug use is largely indirect, and that the mediating variable is the influence of parents and peers. Similarly, Burkett (1993) administered questionnaires to high school students in order to study the relationship between religiosity and the use of alcohol. Burkett determined that the relationship between religiosity and alcohol use was largely indirect through the selection of peers with similar patterns of drinking behavior. Burkett also determined that the adolescents' perceptions of their parents' religious behavior was relatively unimportant to their use of alcohol.

Integrated Perspective

There has been a significant amount of research that has drawn elements from both control theory and social learning theory in order to further elucidate the nature of the complex relationship between religiosity and deviance. These studies can be classified into three broad categories: studies that have attempted to specify the nature of the causal relationship between religiosity and deviance, studies that have attempted to

determine if the relationship between religiosity and deviance is reciprocal, and studies that have investigated whether or not the relationship is spurious.

Marcos, Bahr, and Johnson (1986) administered questionnaires to 2,626 high school students in order to investigate the relationship between religiosity and the use of drugs. They determined through path analysis that the model that best explained the relationship between religiosity and the use of drugs drew elements from both control theory and social learning theory. For example, Marcos, Bahr, and Johnson determined that there was an inverse relationship between attachment to a religious institution and the use of drugs, and that part of this relationship was mediated by constructs drawn from social learning theory, such as having friends that use drugs. Adeseum (1993), Simons, Simons, and Conger (2004), and Harrison (2005) conducted similar studies, and they all determined that the model that best explained the relationship between religiosity and various forms of deviance was derived from elements of both control theory and social learning theory.

These results stand in contrast to those of Burkett and Warren (1987), who investigated the relationship between religiosity and marijuana use among high school students using longitudinal data. Burkett and Warren were interested in determining if the relationship between religiosity and marijuana use was best explained through models derived from either control theory or social learning theory. The results of their analysis demonstrated that the model derived from control theory offered the better explanation.

Other researchers that have utilized an integrated perspective have primarily been interested in determining if the relationship between religiosity and deviance is reciprocal. For example, Benda (1997) argued that the relationship between religiosity

15

and deviance is reciprocal, and that the analysis technique used in the majority of the previous research, OLS regression, obscured this reciprocal relationship. Benda (1997) investigated this hypothesis by utilizing two-stage least squares regression on a data set that he had used in a previous article (Benda, 1995), which was designed to investigate the religiosity-deviance relationship among adolescents. Benda (1997) determined that there was a reciprocal relationship between religiosity and alcohol use, but not between religiosity and drug use or criminal behavior. Benda and Corwyn (1997b) examined a similar research question using the same data, and they concluded that the relationship between religiosity and various forms of deviance was reciprocal.

Benda and Toombs (2002) investigated the relationship between religiosity and drug use among prison inmates in a boot camp facility in order to determine if the relationship between religiosity and drug use was reciprocal. They determined that the relationship was largely indirect, there was a reciprocal inverse relationship between religiosity and the selection of peers that use drugs, and also a positive reciprocal relationship between having peers that use drugs, and use of drugs by the subject.

Additional research that has drawn from both control theory and social learning theory in order to examine the religiosity-deviance relationship has been designed to determine if the relationship is spurious. For example, Benda and Corwyn (1997a) examined the relationship between religiosity and various forms of deviance among a non-random sample of 724 high school students while controlling for factors known to be associated with deviance that were derived from both control theory and social learning theory. They determined that when these factors were controlled for, there was no relationship between religiosity and status offenses, however there was a significant

relationship between religiosity and more serious forms of criminal behavior. A similar study conducted by Johnson, Jang, Larson, and De Li (2001), using a nationally representative sample of adolescents, concluded that the relationship between religiosity and deviance was not spurious, and that the relationship persisted even when constructs derived from both control theory and social learning theory were included in the multivariate analysis.

Reference Group Theory and the Denominational Proscriptiveness Hypothesis

Reference group theory argues that when there is a conflict between the norms of a group (such as a religious group) and a collectivity (such as a social class) that an individual is attached to, the individual is more likely to follow the norms of the group than the collectivity. This is applicable to the study of the religiosity-deviance relationship because previous research has demonstrated that there is a negative relationship between religiosity and alcohol use, a positive relationship between religiosity and social class, and yet a positive relationship between social class and alcohol use (see Clarke, Beeghley, & Cochran, 1990).

Thus, when applied to the religiosity-deviance relationship, reference group theory seeks to determine if individuals are more likely to align their drinking behavior to that of the members of their social class, or to the behavior of the members of their religious group. Clarke, Beeghley, and Cochran (1990) investigated this question using General Social Survey data from 1977-1986, and determined that individuals were more likely to align their drinking behavior to the members of their religious denomination than to the members of their social class.

The denominational proscriptiveness hypothesis draws heavily from reference group theory's assertion that individuals typically align their own behavior to that of the members of the groups that they are attached to. The denominational proscriptiveness hypothesis argues that there will be a stronger relationship between religiosity and certain forms of deviance such as the use of alcohol among individuals who are members of denominations that strongly prohibit the behavior in question[4].

The empirical research that has investigated the denominational proscriptiveness hypothesis is largely supportive of the assertion that there are denominational differences in the religiosity-deviance relationship. For example, Preston (1969), Perkins (1985), Bock, Cochran, and Beeghley (1987), and Ford and Kadushin (2002), all determined that there were denominational differences in the strength of the relationship between religiosity and alcohol use. Similarly, Krohn, Akers, Radosevich, and Lanza-Kaduce (1982), and Amoateng and Bahr (1986) both determined that there were denominational differences in the relationship between religiosity and the use of alcohol and marijuana. Likewise, Free (1992) determined that there were denominational differences in the relationship between religiosity and both minor and serious forms of deviance.

A number of additional studies provide at least partial support for the denominational proscriptiveness hypothesis. For example, McIntosh, Fitch, Wilson, and Nyberg (1981) determined that there were denominational differences in the strength of the religiosity-deviance relationship for tobacco and alcohol use, but not for marijuana or hard drug usage. In addition, Nelson and Rooney (1982) determined that there were

---

[4] The most common finding in the denominational proscriptiveness literature is that affiliation with a conservative Protestant denomination serves as a greater deterrent to deviance than affiliation with either a liberal Protestant denomination or as a Catholic. The terms conservative and liberal are used to refer to the relative exclusivity or ecumenism of the denomination.

denominational differences in the strength of the relationship between religiosity and

alcohol use, but no differences for marijuana or hard drug usage. Likewise, Hadaway,

Elifson, and Peterson (1984) determined that there were denominational differences in

the strength of the relationship between religiosity and alcohol and marijuana use, but no

differences for hard drug usage.

Although the majority of the research supports the denominational

proscriptiveness hypothesis, two studies that have been conducted in recent years do not

support the denominational proscriptiveness hypothesis. For example, McLuckie, Zahn,

and Wilson (1975) determined that there were no denominational differences in the

strength of the relationship between religiosity and the use of drugs. Similarly, Cochran,

Chamlin, Beeghley, and Fenwick (2004) investigated denominational differences in the

strength of the relationship between religiosity and various forms of sexual behavior such

as homosexuality and pre-marital sexual behavior using General Social Survey data from

1988-1996. They determined that the relationship between religiosity and the various

forms of sexual behavior were not always statistically significant, which prevented them

from determining how the relationship varied across denominations.

Antiasceticism Hypothesis

The antiasceticism hypothesis, which is also known as the type of crime

hypothesis, argues that religiosity is more effective at deterring minor, victimless forms

of crime or deviance than it is at deterring serious forms of crime that have a clear victim.

Albrecht, Chadwick, and Alcorn (1977) are fairly typical in their use of these concepts,

and they use smoking cigarettes, drinking alcohol, "petting," and engaging in pre-marital

sexual relations as examples of minor, victimless acts of crime or deviance, and theft, shoplifting, and fighting as examples of serious forms of crime that have a clear victim.

The research that has examined the antiasceticism hypothesis is largely supportive of its central assertion. For example, Middletown and Putney (1962), in a test of what later became known as the antiasceticism hypothesis, constructed a typology of ascetic versus social forms of deviance. They classified behavior such as gambling, smoking, and drinking as "ascetic," and behavior such as theft, shoplifting, and fighting as "social." Middletown and Putney determined that religiosity was inversely related to ascetic forms of deviance, but not to social forms of deviance.

The majority of the research on the antiasceticism hypothesis argues that although religiosity is inversely related to both minor and serious forms of deviance, the relationship between religiosity and minor forms of deviance is stronger than the relationship between religiosity and serious forms of deviance. For example, Albrecht, Chadwick, and Alcorn (1977), Free (1992), and Fernquest (1995), all examined the antiasceticism hypothesis by using questionnaire data to compare the strength of the relationship between religiosity and minor, victimless forms of deviance and the relationship between religiosity and serious forms of crime or deviance. The results of these three studies all support the antiasceticism hypothesis, in that the relationship between religiosity and minor forms of crime was stronger than the relationship between religiosity and serious forms of crime.

Baier and Wright (2001) provided additional support for the antiasceticism hypothesis. They conducted a meta-analysis of 60 studies that had examined the religiosity-deviance relationship, and determined that studies that had examined the

relationship between religiosity and non-violent crime reported significantly larger

relationships than did studies that had examined the relationship between religiosity and

violent crime.

Although the majority of the empirical research on the religiosity-deviance

relationship clearly supports the antiasceticism hypothesis, two recent studies present

results contrary to what would be predicted by the antiasceticism hypothesis. However,

both of these studies are plagued by methodological problems that cast doubt on the

veracity of their findings. For example, Cochran (1988) administered questionnaires to

3,065 students in grades seven through twelve in order to examine the antiasceticism

hypothesis, and determined that the inhibiting power of religiosity was more generalized

than what would be predicted by the antiasceticism hypothesis. However, Cochran

(1989) analyzed the same data using more advanced statistical techniques, and

determined that the results were generally consistent with the antiasceticism hypothesis,

in that the relationship between religiosity and minor forms of delinquency was

significantly greater in magnitude than the relationship between religiosity and serious

forms of delinquency.

Fernander, Wilson, Staton, and Luekfield (2005) also present findings that they

argue are inconsistent with what would be predicted by the antiasceticism hypothesis.

Fernander et al. conducted interviews with prison inmates in order to determine if there

was a relationship between the prisoner's religiosity, and the type of crime that they had

been convicted of. They argue that their results do not support the type of crime

hypothesis. However, there is a major problem with Fernander et al.'s study that is

readily apparent. Essentially, Fernander et al. examined the relationship between current

religiosity and crime that had been committed in the past, whereas the type of crime hypothesis would argue that there is a relationship between current religiosity and the probability of committing various forms of crime in the future.

Contemporary Perspectives

In recent years, a number of contemporary theoretical perspectives have been utilized in order to explain the relationship between religiosity and deviance. These perspectives include: general strain theory, the general theory of crime, age-graded theory, and a contemporary derivative of the hellfire hypothesis known as the this-worldly supernatural sanctions thesis. The following section will briefly describe the research that has been conducted using these perspectives.

Agnew's (1992) version of strain theory argues that there is a causal relationship between interpersonal difficulties (strain) and negative emotions, and a causal relationship between negative emotions and various forms of deviance, as deviance is often used a coping mechanism against these negative emotions. The utility of strain theory as an explanation for the relationship between religiosity and deviance has been analyzed in two recent research articles. Jang and Johnson (2003), used interview data from the National Survey of Black Americans to determine if religiosity mediated the relationship between strain and deviance. They determined that religiosity did mediate the relationship between strain and deviance by weakening the effect of negative emotions on deviance as a coping strategy. In a related article, Jang and Johnson (2005) also used data from the National Survey of Black Americans in order to determine why although African-American women are more distressed than African American men, they are less likely to engage in deviant behavior. They determined that the distress buffering

effect of religiosity was larger for women than it was for men, which led the women to commit less deviance than their male counterparts.

According to the general theory of crime (Gottfredson & Hirschi, 1990), an individual's propensity to engage in crime or deviance is largely a result of their level of self-control, or their ability to refrain from the "temptations of the moment" (Gottfredson & Hirschi, 1990, p. 87). The general theory of crime has been used as the theoretical framework for two recent articles that have examined the religiosity-deviance relationship. Longshore, Chang, Hsieh, and Messina (2004) utilized interview data from 1,036 adult male offenders in order to test a theoretical model that combined elements from control theory, the general theory of crime, and social learning theory. They were interested in determining if the relationship between self-control and drug use was mediated by elements of the social bond such as moral beliefs and religious commitment. Longshore et al. determined that the only element of the social bond that mediated the relationship between self-control and drug use was the individual's belief in the moral code of society. In a similar article, Welch, Tittle, and Grasmick (2006) investigated the relationship between religiosity, self-control, and projected future deviance using interviews that had been conducted with a simple random sample of 343 adults from Oklahoma. They determined that although self-control and religiosity were both inversely related to deviance, there was not a significant interaction between self-control and religiosity.

Sampson and Laub's (1993) age-graded theory argues that the probability of desisting from crime increases among individuals' who are able to form strong bonds to conventional society during their adult years through stable marriage and employment

patterns. Chu (2003) examined the utility of age-graded theory as an explanation for the relationship between religiosity and desistance from crime using longitudinal data from the National Youth Survey. Chu determined that religiosity directly influenced desistance from drug use, and indirectly influenced desistance from criminal behavior through increasing the individual's acceptance of conventional values. However, religiosity did not strengthen the individual's bond to either marriage or employment, thus age-graded theory was not supported in the analysis.

As discussed previously, the "hellfire" hypothesis argues that individuals' who believe in the devil and life after death are less likely to engage in deviant behavior because of their fear of supernatural sanctions. In a recent article, Harris (2003) argued that if a fear of supernatural sanctions after death could deter deviant behavior, then a fear of supernatural sanctions during this lifetime could similarly deter individuals' from engaging in deviance. Harris tested the "this-worldly supernatural sanction hypothesis" by collecting questionnaire data from 1,393 adolescents who were affiliated with the Church of the Latter-Day Saints. Harris determined that individuals' who believed in an all powerful, all knowing god who punishes individuals' for their transgressions while they are still living were less likely to plan on committing deviance in the future, thus supporting the this-worldly hypothesis.

Religiosity and Deviance on the Aggregate Level

Although there have been many studies that have examined the relationship between religiosity and deviance on the individual level, the aggregate level of analysis has been employed much less frequently. The following section will briefly discuss the

research that has examined the religiosity-deviance relationship using an aggregate level of analysis.

The research on the aggregate level relationship indicates that the inverse relationship between religiosity and deviance that has been documented on the individual level also exists on the aggregate level. For example, Bainbridge (1989) demonstrated the presence of an inverse relationship between the rate of church membership and the crime rate in the United States, Pettersson (1991) demonstrated the presence of a similar relationship in Sweden, and Ellis and Peterson (1996) demonstrated the presence of an inverse relationship between the rate of church membership and the crime rate in thirteen industrialized nations. Bainbridge (1989) and Ellis and Peterson (1996), consistent with the antiasceticism hypothesis, determined that the relationship was stronger in magnitude for minor offenses such as property crimes than it was for serious crimes such as murder or rape. However, Pettersson (1991) determined that the relationship was not as consistent as the antiasceticism hypothesis would predict. Pettersson determined that there was an inverse relationship for offenses such as violent crimes, public order crimes, and driving while intoxicated. However, the relationship for offenses such as property crimes, rape, moral offenses, and drug offenses was either non-significant or slightly positive.

In recent years, researchers have begun to attempt to refine our understanding of the aggregate level relationship between religiosity and deviance. For example, Olson (1990), building upon the denominational proscriptiveness hypothesis, investigated the aggregate level relationship between religiosity and deviance in the United States in order to determine if there were denominational differences in the relationship. Olson

determined that although the relationship between religiosity and deviance was stronger for Protestants than it was for Catholics, there were no differences between conservative and liberal Protestants, thus only partial support was found for the denominational proscriptiveness hypothesis.

The most contemporary research in this area has attempted to refine our understanding of why there are denominational differences in the aggregate level religiosity-deviance relationship. For example, Lee and Bartkowski (2004) investigated the possibility that denominational differences in the religiosity-deviance relationship may not be a result of differences in religious ideology so much as they are a result of differing levels of involvement in the civic life of the community by the different denominations. Lee and Bartkowski determined that there was an inverse relationship between the proportion of a counties' population that was associated with a civically engaged religious denomination and the county's juvenile homicide rate in rural, but not urban areas.

In a related article, Beyerlein and Hipp (2005) proposed that denominational differences in the crime rate are due to the type of social capital that the different denominations foster. They argued that evangelical Protestant denominations foster "bonding" social capital because of their exclusivity and the fact that their members typically do not participate in other types of civic groups. In contrast, mainline Protestant denominations and Catholic parishes foster "bridging" social capital because of their ecumenical nature and the fact that their members participate in civic groups at a higher rate than do evangelical Protestants. Based upon their analysis of county level data in the United States, Beyerlein and Hipp determined that there was a positive relationship

between the percentage of the population that was affiliated with an evangelical

Protestant denomination and the crime rate, and an inverse relationship between the

percentage of the population that was affiliated with either a mainline Protestant

denomination or a Catholic parish and the crime rate. Similarly, Lee (2006) in an

analysis of 902 rural counties in the United States, also determined that there was a

positive relationship between the percentage of the population that was affiliated with a

conservative Protestant denomination and the crime rate, and an inverse relationship

between the percentage of the population that attended civically engaged denominations

and the crime rate.

Integrating the Individual and Aggregate Levels of Analysis

As noted earlier, Hirschi and Stark's 1969 paper is unusual in that they did not

find a relationship between religiosity and deviance. In 1982, Stark, Kent, and Doyle

proposed a hypothesis, which came to be known as the moral communities hypothesis, in

order to explain the apparent contradiction between the early work, which argued that

there was no relationship between religiosity and deviance, and the later replications that

argued that there was a moderately strong inverse relationship between religiosity and

deviance. Stark et al. argued for a move away from an individualistic explanation of why

religiosity does or does not inhibit deviant behavior. Stark et al. argued that religiosity

should be considered in a social context, and that one should only expect to find a

relationship between religiosity and deviance in ecological areas in which religiosity

pervades the cultural landscape (1982, pp. 5-7).

Therefore, Stark et al. (1982) argued that the apparent contradiction between the

early research, which found no relationship between religiosity and deviance, and the

later research, which demonstrated the presence of a moderately strong inverse relationship between religiosity and deviance, could be explained by the religious ecology of the individuals in the respective studies. Stark et al. argued that the studies that found no relationship between religiosity and deviance drew their samples from the Pacific region, whereas the studies that found a significant relationship between religiosity and deviance drew their samples from outside of the Pacific region. Stark et al. also demonstrated that the average level of church membership in the Pacific region was significantly lower than it was in the rest of the country, which they used as an explanation for why the early research on the religiosity-deviance relationship varied so much in its estimation of the relationship between religiosity and deviance (1982, pp. 8-9).

Tittle and Welch (1983) presented an opposing theoretical viewpoint to the moral communities hypothesis. Tittle and Welch, in what came to be known as secular social disorganization theory, argued that there are many forces that constrain individuals' from committing deviant acts, and that religiosity only constrains individuals' from committing deviant acts when the forces that typically constrain deviant behavior, such as aggregate religiosity, are absent or weak.

Tittle and Welch (1983) used interview data from a random, multi-stage sample of 1,993 adults in their analysis of secular social disorganization theory. Tittle and Welch's study is unique in that they did not draw their sample from different ecological units and then measure variables such as the group's level of aggregate religiosity directly; instead, they relied upon "constructed reference groups" (1983, p. 664).

Tittle and Welch defined a constructed reference group as a, "social context which possesses a substantial degree of social psychological reality" (1983, p. 665). Tittle and Welch cited Bott (1954) in making their argument that although these groups, such as groups based upon race, age, and gender, may not be "objectively real," they are "psychologically real," in the sense that they do affect individual behavior by serving as groups that an individual may use to orient his or her behavior (1983, pp. 663-664). In their analysis, Tittle and Welch determined that within the reference groups that they had constructed, an increase in social integration, aggregate religiosity, or perceived conformity was associated with a decrease in the inhibiting power of religiosity on deviance.

Although only Tittle and Welch (1983) have directly tested secular social disorganization theory, a number of studies have tested the moral communities hypothesis, and by extension, secular social disorganization theory. The empirical research in the area can best be described as inconclusive, as although only approximately half of the studies provide support for the moral communities hypothesis, the remaining studies do not conclusively support either perspective. The following section will briefly discuss the research that has examined the moral communities hypothesis, beginning with the studies that have presented supportive results.

Stark, Kent, and Doyle (1982) utilized questionnaire data from a random sample of adolescent males in 87 different schools throughout the country in their analysis of the moral communities hypothesis. Stark et al. constructed a measure of the level of aggregate religiosity in the different schools, and classified them as either "moral" or "secular" schools. Based upon their gamma analysis, Stark et al. determined that the

relationship between religiosity and deviance was much weaker in the "secular" schools than it was in the "moral" schools. In addition, Stark et al. determined that in the most highly secularized schools, the relationship between religiosity and deviance was extremely weak.

In a similar study, Stark (1996) also used questionnaire data from a national sample of high school seniors in order examine how the religiosity-delinquency relationship varied across different geographical regions in the United States. Based upon a gamma analysis, Stark determined that there was an inverse relationship between religiosity and delinquency in every geographical region except the Pacific Northwest, which is marked by a very low level of religious participation among the population.

Regnerus (2003b) provided partial support for the moral communities hypothesis in his analysis of data from the National Longitudinal Study of Adolescent Health. Regnerus used two different measures of aggregate religiosity, the percentage of students in each school that identified themselves as a born-again Christian, and the school mean of the students' attendance at religious services. Based upon his analysis using hierarchical linear modeling, Regnerus determined that aggregate religiosity did affect the individual level relationship between religiosity and delinquency when it was conceptualized as the percentage of students that identified themselves as a born-again Christian, but not when it was conceptualized as the mean frequency of attendance at religious services.

Two additional studies have presented results that are supportive of the moral community hypothesis. Baier and Wright (2001) conducted a meta-analysis on the research that had investigated the religiosity-deviance relationship, and determined that

studies that had drawn their samples from known church members had reported stronger relationships between religiosity and deviance than studies that had drawn their samples from a more diverse population. Baier and Wright argue that individuals who are members of a church are participating in a moral community, which explains why the relationship between religiosity and deviance was stronger in these studies than in the studies that drew their samples from the population at large. In a similar fashion, Richardson, Bell, and Carlson (2000) used participation in either religious services or participation in a twelve-step program as a proxy for participation in a moral community in their study of the relationship between religiosity and desistance from alcohol and crack cocaine use. They determined that a change in church attendance was inversely related to both forms of drug use, and that a change in twelve-step meeting attendance was inversely related to alcohol use.

Although a number of studies have presented results that are generally supportive of the moral community hypothesis, several additional studies have presented results that are not supportive of the moral community hypothesis. A great deal of the research that has been conducted in this area has utilized samples of high school students, most likely because they are a fairly accessible population with an inherently nested structure. These studies typically examine if differences in the mean level of religiosity of the particular school that students attend have an affect on the individual student level relationship between religiosity and some form of delinquency.

For example, Cochran and Akers (1989) determined that the average level of religiosity of the school that individual students attended did not affect the individual level relationship between religiosity and alcohol or marijuana use. In a similar study,

31

(Evans, Cullen, Burton Jr., Dunaway, Payne, & Kethineni, 1996) it was determined that

the number of religious friends that the individual student reported did not affect the

strength of the individual level religiosity-delinquency relationship. Bjarnason,

Thorlindsson, Sigfusdottir, and Welch (2005) investigated the relationship between

religiosity and the use of alcohol among high school students in Iceland. Bjarnason et al.

determined that although several of the student level variables that measured religiosity

were significantly associated with the use of alcohol, the level two variable that measured

parental religiosity was not significantly associated with the use of alcohol in their

hierarchal linear modeling analysis, which is inconsistent with what would be predicted

by the moral communities hypothesis.

　　　　Other studies have investigated the moral communities hypothesis by comparing

the strength of the religiosity-deviance relationship among groups living in different

geographical areas. For example, Junger and Polder (1993) demonstrated the presence of

an inverse relationship between religiosity and delinquency among both a group of moral

(Moroccan) adolescents, and a group of secular (Dutch) adolescents. In addition,

Chadwick and Top (1993) conducted a similar study in which they compared the strength

of the religiosity-deviance relationship among a group of Mormon adolescents living in a

largely secular community to a similar group of Mormon adolescents that lived in a

largely "moral" community. They determined that the ecological area in which the

adolescent lived did not affect the strength of the religiosity-deviance relationship.

Finally, Benda and Corwyn (2001) compared the strength of the religiosity-deviance

relationship among high school students living in different geographic areas, and

determined that the strength of the religiosity-deviance relationship did not differ between the different geographic regions.

Welch, Tittle, and Petee (1991) tested the usefulness of the moral communities hypothesis using questionnaire data from adult Catholics. The results of their hierarchical regression analysis demonstrated that there was both an individual and a parish level relationship between religiosity and most forms of deviance, however there were no significant interaction effects between the two, which is inconsistent with what the moral communities hypothesis would predict.

Stack and Kposowa (2006) examined the relationship between religiosity and tax fraud acceptability using data from the World Values Survey. They present results that either support or refute the moral communities hypothesis depending upon how the aggregate religiosity variable was measured. When aggregate religiosity was conceptualized as the mean level of religiosity of the respondents in the different countries, no support was found for the moral communities hypothesis using hierarchal linear modeling. However, when a high level of aggregate religiosity was conceptualized as being present when more than 50 percent of a nation's population reported a religious affiliation, support for the moral community hypothesis was found in that the aggregate religiosity variable significantly predicted the existence of a bivariate relationship between religiosity and tax fraud acceptability through the use of logistic regression.

Religiosity and Recidivism

The relationship between inmate religiosity and recidivism has received a fair amount of attention in the literature. In this section, six studies that have investigated the relationship between inmate religiosity and recidivism will be briefly discussed. Of the

six studies that will be discussed, one focuses on the rehabilitative strategies utilized by

prison chaplains, four focus on the relative success of various prison ministry programs,

and one focuses on the relationship between religiosity and recidivism among a more

representative sample of prison inmates.

Sundt, Dammer, and Cullen (2002) administered questionnaires to 232 prison

chaplains throughout the United States in order to collect information on the role of

chaplains in offender rehabilitation. They determined that the majority of chaplains are

highly supportive of rehabilitation, and that most chaplains utilize rehabilitative methods

that have been demonstrated to be associated with a reduction in recidivism.

The effectiveness of various prison ministry programs, such as the Prison

Fellowship Ministry, has received the most attention in the religiosity-recidivism

literature. The effectiveness of these prison ministry programs has been examined in

studies by Young, Gartner, O'Connor, Larson, and Wright (1995), O'Connor, Ryan,

Yang, Wright, and Parikh (1996), Johnson, Larson, and Pitts (1997) and Johnson (2004).

These four studies all employ a quasi-experiential methodology in which the recidivism

rate of inmates who have participated in these religious programs are compared to

inmates who have not participated in any religious programs. All four of these studies

demonstrate at least partial support for the contention that religious inmates are less likely

to experience recidivism than are non-religious inmates.

Sumter (1999) investigated the relationship between inmate religiosity and

recidivism among a group of 321 male inmates from 12 prisons throughout the United

States. Sumter utilized a multi-dimensional measure of religiosity, and a logistic

regression analysis technique, which demonstrated that there was a significant inverse relationship between inmate religiosity and recidivism.

Religiosity and Institutional Deviance

The relationship between inmate religiosity and institutional deviance has been the focus of a number of studies in recent years. One of these studies is primarily concerned with identifying the religious groups that are most likely to violate prison rules, while the other studies focus on the relationship between inmate religiosity and the frequency of committing deviant behavior during incarceration.

Pass (2002) administered questionnaires to a random sample of 490 male inmates in a maximum security facility in order to determine if certain religious groups were more likely than others to violate prison rules. Pass determined that although Muslims and Protestants were more intrinsically oriented towards religion than were Catholics, they still received more disciplinary infractions than did Catholics. Pass argues that the manner in which Muslims are perceived by the prison administration may partially explain why they are particularly prone to be punished for violating prison rules.

Johnson (1984) investigated the relationship between religiosity and institutional deviance by examining the institutional records of 782 male inmates that had been released from a prison in Florida. Johnson determined that there was not a significant relationship between an inmate's religiosity and the amount of time that they spent in disciplinary confinement for violating prison rules, or between religiosity and the amount of gain time that an inmate lost for violating prison rules.

Johnson, Larson, & Pitts (1997) examined the relationship between participation in various Prison Fellowship (PF) programs such as religious seminars and bible studies,

and institutional deviance using a quasi-experimental method in which 201 inmates that had participated in PF activities were compared to a control group of 201 inmates who had not participated in any PF activities. Johnson, Larson, and Pitts determined that there were no overall differences between the PF and the non-PF inmates on the measure of institutional deviance. However, inmates that frequently (10 or more times a year) participated in the PF bible studies were significantly less likely than their non-PF counterparts to violate prison rules. In addition, it was also determined that although the frequent PF attendees were slightly less likely than their non-PF counterparts to commit serious infractions of the prison rules, they were significantly **more** likely than the individuals who infrequently attended the PF bible studies to commit serious infractions of the prison rules[5].

Staton, Webster, Hiller, Rostosky, and Leukefeld (2003) focused on the relationship between religiosity, spirituality, and drug use among prison inmates using interview data collected from a convenience sample of 661 male inmates from four prisons in Kentucky. Staton et al. determined that there was an inverse relationship between both spirituality and religiosity and the use of most forms of drugs.

O'Connor and Perreyclear (2002) investigated the relationship between inmate religiosity and institutional deviance by examining the institutional records of 1,579 male inmates in a medium-maximum security facility. The results of the logistic regression analysis demonstrated that there was an inverse relationship between inmate religiosity and the number of infractions received for violating prison rules.

Kerley, Matthews, and Blanchard (2005) relied upon questionnaire data from a random sample of 386 inmates from a penitentiary in Mississippi in their examination of

[5] See De Nike (2005) for an interesting explanation of this phenomenon.

the relationship between religiosity and negative prison behaviors such as arguing and fighting. The results of their logistic regression analysis demonstrated that there was an inverse relationship between religiosity and frequency of arguing, and a largely indirect relationship between religiosity and frequency of fighting via the mediating variable frequency of arguing.

Nelson-Green (1994) focused on the aggregate level relationship between religiosity and inmate misconduct in her analysis of federal prisons in the United States. Interestingly enough, Nelson-Green determined that there was a positive relationship between aggregate religiosity and inmate misbehavior among the 68 institutions that she examined.

To date, the most comprehensive study of the relationship between religiosity and institutional deviance (Clear & Sumter, 2002)[6] was conducted by administering questionnaires to 769 male inmates housed in 20 prisons throughout 12 states. It was determined, based upon a multiple regression analysis, that there was an inverse relationship between an inmate's religiosity and the number of disciplinary confinements they received for violating prison rules. However, it was also determined that the significant, inverse relationship that existed in the full sample was not present in all institutions, and that the relationship between religiosity and deviance was significantly affected by institutional factors that were not measured in the study.

---

[6] See Clear, Stout, Dammer, Kelly, Hardyman, and Shapiro (1992) for an additional discussion of this data, including a discussion of the nature of religious practice within the correctional environment that is largely based upon participant-observation and interviews. Dammer (1992, 2002) also provides a discussion of the ethnographic data that is discussed in Clear et al. (1992).

Summary and Significance

The review of the literature that is presented above demonstrates a number of key points concerning why the research that will be outlined in the next chapter is of particular significance. This section will briefly discuss seven reasons why this research is of particular significance, and how it is designed to examine theoretical questions that have not been adequately dealt with in the literature.

As table number one demonstrates, the majority of the literature that has examined the moral community hypothesis has utilized adolescent subjects. Of the thirteen studies that have examined the hypothesis, only three of them were based upon an analysis of adult subjects. Thus, one contribution of the present research is that it will add to the limited number of studies that have examined the moral community hypothesis among adults, and it will be the first study to examine the moral community hypothesis in the correctional environment.

Table 1 Moral Community Hypothesis		
Study	Sample	Support
Stark, Kent, & Doyle (1982)	Juvenile	Yes
Cochran & Akers (1989)	Juvenile	No
Welch, Tittle, & Petee (1991)	Adult	No
Chadwick & Top (1993)	Juvenile	No
Junger & Polder (1993)	Juvenile	No
Evans et al (1996)	Juvenile	No
Stark (1996)	Juvenile	Yes
Richardson, Carlson, & Bell (2000)	Adult	Yes
Baier & Wright (2001)	Mixed	Yes
Benda & Corwyn (2001)	Juvenile	No
Regnerus (2003b)	Juvenile	Partial
Bjarnason et al (2005)	Juvenile	No
Stack & Kposowa (2006)	Adult	Partial

Additional examination of the moral community hypothesis is also warranted due to the fact that although the moral community hypothesis and secular social disorganization theory are logically juxtaposed, the research that has examined the issue is inconclusive. As table one illustrates, although six of the thirteen studies that were discussed above demonstrate at least partial support for the moral community hypothesis, the remaining studies do not support either perspective. Thus, additional research is warranted in order to fully elucidate the complex relationship between group religiosity, individual religiosity, and crime-deviance.

The research that has examined the antiasceticism hypothesis suffers from deficiencies that are also shared by the research that has examined the moral community hypothesis. As table two illustrates, when Baier and Wright's 2001 meta analysis is excluded, only one of the seven studies that have examined the antiasceticism hypothesis utilized an adult sample. In addition, the antiasceticism hypothesis has not been adequately tested in the correctional environment. Fernander, Wilson, Staton, and Luekfield (2005) tested the hypothesis using a sample of prison inmates; however, as discussed above, their study is critically flawed. In addition, although Kerley, Matthews, and Blanchard (2005) investigated the relationship between religiosity and two forms of misconduct (arguing and fighting) among prison inmates, the relative strength of the relationships is not the primary focus of their article.

Table 2	
Antiasceticism Hypothesis	
Study	Sample
Middletown & Putney (1962)	College Students
Albrecht, Chadwick, & Alcorn (1977)	Adolescents
Cochran (1988)	Adolescents
Cochran (1989)	Adolescents
Free (1992)	College Students
Fernquest (1995)	College Students
Baier & Wright (2001)	Meta Analysis
Fernander et al (2005)	Adults

Another problem with the existing literature that is specific to the three studies (Clear & Sumter, 2002; Johnson, Larson, & Pitts, 1997; Staton, Webster, Hiller, Rostosky, & Leukefeld, 2003) that have investigated the relationship between religiosity and institutional misconduct in more than one prison setting is that all three studies use analysis techniques that are inappropriate for nested data. As discussed in the methods chapter, the analysis of nested data with inappropriate analysis techniques often leads to serious problems with the interpretation of the data.

In addition, Clear and Sumter's 2002 study determined that the relationship between religiosity and misconduct is not constant, but that it varied based upon the particular institution that the inmate was incarcerated in. They determined that in some prisons, religiosity was a significant predictor of misconduct, but that in other prisons, the two variables were unrelated. Furthermore, Clear and Sumter argue that the religiosity-deviance relationship is affected by institutional factors that were not measured in their study (2002, p. 150, 152). Although Clear and Sumter do not discuss the possibility, is it not possible, in light of the existing research that has examined the moral community hypothesis, that one of those institutional characteristics is the aggregate religiosity of the institution? In other words, is it not possible that in institutions marked by a high level of

aggregate religiosity, inmates are bound together into a "moral community," and thus less

likely to engage in deviant behavior, while in institutions that are marked by low levels of

aggregate religiosity, there is no "moral community" that binds inmates together, and

thus no relationship between individual religiosity and the commission of deviant

behavior?

Table 3				
Religiosity & Deviance Literature				
Individual Level Studies, Non Prisoners				
Study	**Sample Type**	**Sample Size**	**D.V.**[1]	**Inverse Relationship**
Adeseum (1993)	Prob	1,437	CB	Y
Albrecht, Chadwick, & Alcorn (1977)	Non-prob	244	CB	Y
Amey, Albrecht, & Miller (1996)	Non-prob	11,728	NV	Y
Amoateng & Bahr (1986)	Non-prob	17,000	NV	Y
Benda (1995)	Non-prob	1,093	NV, GI	Y
Benda (1997)	Non-prob	1,093	NV, GI	Y
Benda & Corwyn (1997a)	Prob	1,093	NV, GI	Y, GI
Benda & Corwyn (1997b)	Non-prob	724	NV, GI	Y, GI
Benda & Corwyn (2001)	Prob	837	GI	Y
Bock, Cochran, & Beeghley (1987)	Prob	4,350	NV	Y
Brownfield & Sorenson (1991)	Non-prob	1,206	NV	Y
Bjarnason, Thorlindsson, Sigfusdottir, & Welch (2005)	Prob	3,524	NV	Y
Burkett (1977)	Non-prob	837	NV	Y
Burkett (1980)	Non-prob	323	NV	Y
Burkett (1993)	Non-prob	264	NV	Y
Burkett & Ward (1993)	Non-prob	612	NV	Y
Burkett & Warren (1987)	Non-prob	264	NV	Y
Burkett & White (1974)	Non-prob	855	NV, GI	Y
Caputo (2004)	Prob	1,911	NV, GI	Y, NV
Chadwick & Top (1993)	Non-prob	1,398	NV, GI	Y
Chu (2003)	Prob	1,383	NV, GI	Y
Clarke, Beeghley, & Cochran (1990)	Prob	7,326	NV	Y
Cochran (1988)	Non-prob	3,065	NV, GI	Y
Cochran (1989)	Non-prob	3,065	NV, GI	Y
Cochran & Akers (1989)	Non-prob	3,065	NV	Y
Cochran, Chamlin, Beeghley, & Fenwick (2004)	Prob	12,400	NV	**N**
Cochran, Wood, & Arneklev (1994)	Non-prob	1,591	NV, GI	Y
Cretacci (2003)	Prob	6,500	GI	**N**
Elifson, Peterson, & Hadaway (1983)	Non-prob	600	NV, GI	Y
Ellis & Thompson (1989)	Non-prob	354	NV, GI	Y
Evans et al (1995)	Prob	555	CB	Y
Evans et al (1996)	Non-prob	263	NV, GI	Y
Fernquist (1995)	Non-prob	178	NV, GI	Y
Free (1992)	Non-prob	916	NV, GI	Y
Gorsuch & McFarland (1972)	Non-prob	84	GI	Y

Grasmick, Bursik, & Cochran (1991)	Prob	330	GI	Y
Hadaway, Elifson, & Peterson (1984)	Prob	600	NV	Y
Harris (2003)	Non-prob	1,393	CB	Y
Harrison (2005)	Non-prob	305	CB	Y
Higgins & Albrecht (1977)	Non-prob	1,383	CB	Y
Hirschi & Stark (1969)	Non-prob	4,077	GI	**N**
Jang & Johnson (2003)	Prob	2,107	GI	Y
Jang & Johnson (2005)	Prob	659	GI	Y
Jensen & Erikson (1979)	Non-prob	3,268	NV, GI	Y
Johnson, Jang, Larson, & De Li (2001)	Non-prob	768	NV	Y
Johnson, Marcos, & Bahr (1987)	Non-prob	768	NV	Y
Junger & Polder (1993)	Non-prob	584	GI	Y
Krohn, Akers, Radosevich, & Lanza-Kaduce (1982)	Non-prob	3,065	NV	Y
Litchfield, Thomas, & Li (1997)	Non-prob	1,358	NV	Y
Longshore, Chang, Hsieh, & Messina (2004)	Non-prob	1,036	NV	Y
McIntosh et al. (1981)	Non-prob	2,626	NV	Y
Marcos, Bahr, & Johnson (1986)	Non-prob	2,626	NV	Y
McLuckie, Zahn, & Wilson (1975)	Non-prob	554	NV, GI	Y, NV
Middletown & Putney (1962)	Non-prob	4,491	NV	Y
Nelson & Rooney (1982)	Non-prob	4,491	NV, GI	Y, NV
Pearce & Haynie (2004)	Non-prob	10,444	GI	Y
Perkins (1985)	Non-prob	1,514	NV	Y
Powell (1997)	Non-prob	521	GI	Y
Regnerus (2003a)	Non-prob	516	NV	Y
Regnerus (2003b)	Prob	11,046	GI	Y
Preston (1969)	Non-prob	475	NV, GI	Y
Richardson, Bell, & Carlson (2000)	Prob	193	NV	Y
Rohrbaugh & Jessor (1975)	Non-prob	475	NV	Y
Ross (1991)	Non-prob	271	GI	**N**
Simons, Simons, & Conger (2004)	Non-prob	1,308	GI	Y
Sloane & Potvin (1986)	Prob	1,121	GI, NV	Y
Stack & Kposowa (2006)	Prob	45,728	NV	Y
Stark (1996)	Non-prob	11,995	CB	Y
Stark, Kent, & Doyle (1982)	Non-prob	1,799	GI	Y
Tittle & Welch (1983)	Prob	1,993	CB	Y
Turner & Willis (1979)	Non-prob	379	NV	Y
Wechsler & McFadden (1979)	Non-prob	7,083	NV	Y
Welch, Tittle, & Grasmick (2006)	Prob	343	GI	Y
Welch, Tittle, & Petee (1991)	Non-prob	2,487	CB	Y
[1] NV = non violent deviance, GI = general index crimes, CB = combined index				

Chapter Three: Methodology

Data Collection Procedure

This project uses data from the 1997 Survey of Inmates in State and Federal Correctional Facilities (SISFCF). The SISFCF was conducted by the Bureau of the Census, and it provides cross-sectional, nationally representative data on state and federal prison inmates in the United States. The SISFCF utilized computer-assisted personal interviewing, and the structured interviews with inmates were approximately one hour in length. The interviews were conducted between June and October of 1997 (U.S. Dept. of Justice, 2000, p. 1, 5).

Measurement: Dependent Variables

The dependent variable in this analysis is the amount of institutional misconduct that each individual inmate has been either found guilty of, or been "written up or formally charged with" since his or her admission to his or her current correctional facility (U.S. Dept. of Justice, 2000, p. 362). The SISFCF asked inmates if they had been found guilty of a number of different violations including:

- A drug violation, such as possession, use, or dealing in drugs.
- An alcohol violation, including unauthorized possession, use, or sale.
- Possession of a weapon.
- Possession of stolen property.
- Possession of any other unauthorized substance or item.
- Verbal assault on a correctional officer or other staff member.
- Physical assault on a correctional officer or other staff member.

Similarly, inmates were asked if they had been written up or formally charged with a variety of different forms of misconduct including:

- Verbal assault on another inmate.
- Physical assault on another inmate.

- Escape or attempted escape.
- Any other major violation, including work slowdown, food strikes, setting fires, rioting, etc.
- Any minor violations relating to facility orderliness and operation, such as use of abusive language, horseplay, failing to follow sanitary regulations, etc.
- Any other violation, specify.

Inmates that indicated that had either been found guilty of, or been written up or formally charged with a particular violation were then asked how many times they had been found guilty of or been written up for that particular type of violation (U.S. Dept. of Justice, 2000, pp. 362-366).

For hypotheses one and two, the dependent variable is the total number of violations that the inmate has committed since admission to their current correctional facility. For hypothesis three, minor forms of misconduct were differentiated from serious forms of misconduct using an exploratory factor analysis. The results of the factor analysis are presented in chapter four.

Measurement: Independent Variables

The independent variables in this study can be broadly classified by two primary characteristics. The independent variables are either primary variables, which are the variables that measure religiosity, or secondary variables, which are the variables that previous research has identified as being covariates of the dependent variable, institutional misconduct. In addition, since this project will use hierarchical linear modeling as its primary analysis technique, the independent variables must be distinguished as either level one (individual level) or level two (group level) variables.

The primary independent variable for hypotheses one and three is the subject's level of religiosity. This was assessed by asking subjects, "In the past week, have you engaged in any religious activities, such as religious services, private prayer or

meditation, or Bible reading or studying" (U.S. Dept. of Justice, 2000, p. 354). Subjects who responded in the affirmative were then asked how much time, in hours and minutes, they had spent in the previous week engaging in these activities, (U.S. Dept. of Justice, 2000, p. 354.

Aggregate religiosity, which is a level two variable, is an important independent variable in hypothesis number two. This variable was calculated by determining the mean amount of time inmates' spend practicing religion in each correctional facility in the sample.

Measuring religiosity in the fashion indicated above could be criticized because of its lack of content validity. Critics of this strategy would argue that religiosity is a complex, multi-dimensional concept, and that measuring religiosity in the fashion indicated above does not tap all of the dimensions of religiosity. Specifically, critics would argue that measuring religiosity in the above indicated fashion misses important dimensions such as salience, belief, and knowledge (Clear et al, 1992; Cornwall, Albrecht, Cunningham, & Pitcher, 1986; Gronblom 1984; King & Hunt 1990).

Although the argument that measuring religiosity in the manner indicated above does not capture all of the dimensions of religiosity is valid; the research that has examined this issue indicates that this is not entirely problematic. The reason that this strategy is not overly problematic is that when religiosity is measured in a multidimensional manner, its construct validity is relatively low. In other words, the predictive validity of the behavioral dimension of religiosity is more consistent than the predictive validity of the attitudinal dimension of religiosity, at least when the dependent

46

variable that is being analyzed is crime or deviance. Although only two studies have directly examined this topic, they both support this contention.

Ellis (1985) conducted a systematic literature review of the religiosity-deviance literature, and determined that the behavioral dimension of religiosity (church attendance) is a more consistent predictor of deviance than are measures that focus on the attitudinal dimension of religiosity. Based upon his review of the literature, Ellis determined that twenty-six out of the thirty-one studies that used church attendance as their measure of religiosity reported a significant inverse relationship between religiosity and deviance. However, when religiosity was operationalized as belief in God, belief in prayer, or as religious salience, the results were much less consistent (Ellis, 1985, pp. 506-508).[7] In a related study, (Evans, Cullen, Dunaway, Gregory, & Burton, 1995) it was also determined that the behavioral dimension of religiosity is a more consistent predictor of deviance than is the attitudinal dimension of religiosity. Evans et al measured religiosity four different ways in their study. They measured religious participation, religious salience, belief in hellfire, and general religiosity. General religiosity was operationalized as a combination of the other three measures of religiosity. The results of their regression analysis demonstrated that the only measure of religiosity that was significantly associated with criminal behavior was participation in religious activities. They argue that their research, "confirms the efficacy of behavioral indicators of

---

[7] It should be noted that when religiosity was operationalized as belief in an afterlife, four out of five studies that were examined demonstrated the presence of an inverse relationship between religiosity and deviance.

religiosity (usually attendance) so prevalent in prior research" (Evans et al., 1995, p. 210).[8]

The secondary independent variables for this project were selected based upon previous research (Adams, 1992; Cannon, 2000; Clear & Sumter, 2002; Flanagan, 1983; Kerley, Matthews, & Blanchard, 2005; O'Connor & Perreyclear, 2002; Pass, 2002; Sorensen, Wrinkle, & Gutierrez, 1998) that identified a number of variables that are associated with institutional misconduct.

The following independent variables will be included in this analysis:

Level One:

- **Gender**

- **Age:** Age was measured in years, by asking the subject for their date of birth.

- **Race:** Race was classified into the following categories:

  o White
  o Black or African-American
  o Spanish, Latino, or Hispanic
  o Other

- **Marital Status:** Inmates were classified as being either married, or not married.

- **Time Served:** The length of time the inmate has served on their current sentence was measured in days and months.

- **Criminal History:** The criminal history of the subject consists of the following categories:

  o First time offender
  o Recidivist, violent offense
  o Recidivist, non-violent offense

- **Level of Education:** Subjects were asked to indicate the last year of school that they had attended.

---

[8] Similarly, Tittle and Welch (1983, p. 662) argue that, "the theoretical significance, empirical substitutability, and comparability provided by attendance make it a reasonable and convenient general indicator of religiosity."

- **Monthly Income Prior to Arrest:** This is an ordinal variable that consists of categories ranging from no income to more than $7,500 of income per month.

- **Crowding:** Subjects were asked to indicate the number of inmates with which they share sleeping quarters.

Level Two

- **Security Level of Facility:** This is an ordinal variable that consists of the following categories:

  - Minimum
  - Low
  - Medium
  - High
  - Maximum
  - Administrative

- **Geographic Region of Facility:** This variable consists of the following categories:

  - Northeast
  - Midwest
  - South
  - West

- **Mean Crowding:** This variable represents the mean number of individuals that sleep in common living areas in each correctional facility in the sample.

Sampling

The SISFCF used a complex, two-stage cluster sampling design in order to select prison inmates from both state and federal correctional facilities. The first stage of sampling involved selecting correctional facilities for study. In the second stage of sampling, individual inmates from the correctional facilities selected in the first stage were selected for study. Since the sampling procedure was slightly different for state prisons as compared to federal prisons, the sampling procedures for the state and federal

systems will be described separately, beginning with the procedures used to select the sample of state prison inmates.

In the first stage of sampling for the state prison sample, individual correctional facilities were selected for study from a list of 1,409 correctional facilities that were enumerated in the Bureau of Justice Statistics 1995 Census of State and Federal Correctional Facilities. Correctional facilities that had opened between the completion of the census and June 30, 1996 were also included in the list from which state correctional facilities were selected. From this list, two sampling frames were constructed, one for males, and one for females. If a facility housed both sexes, the facility was included in both sampling frames. From these sampling frames, the 13 largest male prisons and 17 largest female prisons were selected with certainty. The remainder of the prisons were grouped into strata based upon census region, facility type (confinement or community based), security level, and the size of the prison population. Systematic samples using a random start were selected within each of the above strata using the probability proportional to size technique, in which prisons with more inmates were given a higher probability of being selected. This resulted in a sample of 280 prisons, 220 male prisons, and 60 female prisons. All of the male prisons participated in the study, however five of the female prisons either closed before the study started, or refused to participate in the study, thus reducing the final sample size to 275 prisons (U.S. Dept. of Justice, 2000, pp. 1-5).

The second stage of sampling consisted of selecting individual inmates for study from the correctional facilities that were selected in the first stage of sampling. The sampling frame for the second stage of sampling consisted of a list of all inmates that had

used a bed in the facility on the night immediately preceding data collection. This list of inmates was provided by each facility that was studied. From this list of inmates, a systematic sample was drawn using a random start and a sampling interval that varied in size based upon the size of the facility. The final sample consisted of 11,344 male inmates and 2,941 female inmates. The overall response rate was 92.2% (U.S. Dept. of Justice, 2000, pp. 5, 15-16).

Correctional facilities for the federal sample were selected in a manner similar to the manner in which the state facilities were selected. Individual correctional facilities were selected from a list of 127 correctional facilities that was supplied by the Federal Bureau of Prisons. Two sampling frames were initially constructed, one for male facilities, and one for female facilities. If the facility housed inmates of both sexes, the facility was listed on both the male and the female sampling frame. One male facility and two female facilities were automatically selected for the sample because of their size. The remainder of the facilities were grouped into strata based upon the security level of the facility. Within each stratum, correctional facilities were selected using a systematic sampling procedure with a random start and a sampling interval that varied in size based upon the number of facilities in each stratum. The final sample consisted of 32 male facilities and 8 female facilities. All of the facilities that were selected for data collection participated in the study (U.S. Dept. of Justice, 2000, pp. 1-4).

The second stage of sampling for federal facilities proceeded in a manner similar to the way in which inmates were selected from the state facilities. The Federal Bureau of Prisons provided the sampling frame from their central database. The sampling frame consisted of a list of inmates that were housed in the selected facilities. From this list, the

sample was drawn in two steps in order to ensure that non-drug offenders were

adequately represented. In the first step, inmates were selected from the sampling frame

using a systematic sampling technique with a random start and a sampling interval that

varied in size depending on the size of the correctional facility. In the second step, one

out of every three drug offenders that were selected in the first step were selected for

inclusion in the final sample, along with all of the non-drug offenders that were selected

in the first step. The final sample consisted of 3,173 male inmates and 868 female

inmates. The overall response rate was 90.2% (U.S. Dept. of Justice, 2000, pp. 5, 16).

Weighting

Sampling weights are provided for the raw SISFCF data that are designed to

produce parameter estimates with known degrees of sampling error. The following

weights were applied to the raw SISFCF data:

1. **Basic Weight:** The basic weight is simply the inverse of the probability of
    selection for each sampled inmate. For example, since approximately one out of
    every seventy-five male inmates was selected for inclusion in the state sample, the
    basic weight for male inmates in the state sample is approximately 74.69.

2. **Drug Subsampling Factor:** This weight was only applied to inmates in the
    federal sample. Since only one third of the inmates who were drug offenders
    were selected for the final sample, drug offenders in the federal sample were
    weighted by a factor of three.

3. **Weighting Control Factor:** This weight was applied if the sampling rate in a
    facility had to be adjusted because the number of inmates in the facility was

52

substantially different from the number that was expected based upon the 1995 census or the 1996 list provided by the Bureau of Prisons.

4. **Duplication Control Factor:** This weight was used when the total inmate population in a facility was smaller than the number that was to be sampled from every facility in a particular stratum.

5. **Noninterview Factor:** This weight was applied to adjust the sample to account for inmates that refused to participate in the study.

6. **Offense Category Ratio Adjustment Factor:** This weight was used to adjust the weighted sample to reflect varying interview rates among inmates in differing offense categories.

7. **Control Count Ratio Adjustment Factor:** This weight was used to adjust the weighted sample by stratum level counts that were current as of 6-30-97.

The final weight for the data, which is the weight that was used in this analysis, is a product of the basic weight and all of the adjustment factors that are discussed above. The only difference between the weighting of the federal data as compared to the state data is that the weighting of the federal data includes the Drug Subsampling Factor, which was not applicable to the state data (U.S. Dept. of Justice, 2000, pp. 6-15).[9]

<div align="center">

Analysis

</div>

The primary analysis technique that was used in this project was hierarchical linear modeling (HLM), which is also known as multilevel regression or random coefficient modeling. Hierarchical linear modeling is a technique that is similar to

---

[9] Additional details concerning the weighting of the data are available in the codebook that accompanies the data file (U.S. Dept. of Justice, 2000, pp. 8-14).

standard regression techniques, although it can effectively deal with hierarchically ordered data sets.

Standard regression techniques, such as ordinary least squares regression, are not appropriate for the purposes of this analysis for two primary reasons. Standard analysis techniques cannot effectively deal with the hierarchal structure of this data, and standard analysis techniques are predicated upon the assumption of independence of observations, which is violated in this data set.

In this data, prisoners are nested within prisons. Thus, the prisoners that are housed in a particular institution share many common characteristics, such as the influence of local prison administrators, the influence of common correctional officers, the informal culture of the particular prison, etc. This means that the prisoners within a particular institution tend to be more homogeneous than would be a sample of prisoners that was randomly drawn from the population of all prisoners at large. In statistical terms, the prisoners that are housed in a common prison share correlated random effects, something that standard regression techniques cannot effectively deal with (Hox, 2002; Osborne, 2000; Raudenbush & Bryk, 2002).

In addition, standard regression techniques assume independence of observations, or in other words, simple random sampling. Since this data was selected using cluster sampling, this assumption is obviously violated. If this were not accounted for in the analysis, serious issues with statistical power could result. This problem results from the fact that when cluster sampling is used, the effective size of the sample is reduced. Thus, the standard errors of the regression coefficients would be too small, which leads to

obvious difficulties with the interpretation of the statistical significance of the data (Hox, 2002; Osborne, 2000; Raudenbush & Bryk, 2002).

One important consideration as far as analysis is concerned is that the data on the state prisoners had to be analyzed separately from the data on the federal prisoners. Because the samples were drawn from two different populations, they could not be analyzed together, as they constitute two distinct hierarchically ordered samples (Hox, 2002; Raudenbush & Bryk, 2002).

Chapter Four: Results

This chapter will examine the results of the multilevel regression analysis that was conducted in order to test the hypotheses that were presented in chapter one. This chapter will proceed by first briefly discussing the descriptive statistics that are associated with the variables that were included in the analysis. The regression models that examined hypotheses one and two will then be examined. The results of the exploratory factor analysis that was conducted in order to differentiate minor forms of misconduct from serious forms of misconduct for the purpose of examining hypothesis number three will then be discussed. Finally, the regression models that examined hypothesis number three will be examined. Although data from the state sample had to be analyzed separately from the data from the federal sample, the results will not be discussed separately, as the same pattern is present in both sets of data.

Descriptive Statistics

The descriptive statistics (tables four and five) that are associated with the variables in the study demonstrate that the sample seems to be representative of the population from which it was drawn. The subjects are fairly young, disproportionately non-white, male, unmarried, and on average, have less than a high school education. The mean of 6.5 on the income variable indicates that federal prisoners earned approximately $1,300 in the month before their incarceration, and state prisoners, with a mean of 5.41, earned slightly less.

Table 4					
Descriptive Statistics: State Sample					
Variable	**Mean**	**S.D.**	**Min**	**Max**	**r**
Religiosity Centered	7.55	407.02	-227.56	2232.44	**-0.022**
Mean Religiosity	216.67	80.15	21.51	505.33	**0.015**
Time Served	46.18	50.77	0.03	1179.8	0.209
Age	33.58	9.41	15	89	**-0.077**
Education	10.79	2.34	0	18	**-0.039**
Income	5.41	3.28	0	12	**0.03**
Security Level	3.43	1.34	1	6	**0.11**
Crowding	20.92	42.69	0	700	**-0.05**
Mean Crowding	20.94	27.43	0	176.89	**-0.056**
White	0.34		0	1	0.015
Black	0.47		0	1	**0.013**
Hispanic	0.16		0	1	**-0.039**
Other	0.03		0	1	0.009
Married	0.17		0	1	**-0.061**
Male	0.8		0	1	**0.049**
1st Time Offender	0.25		0	1	**-0.05**
Violent Recidivist	0.43		0	1	**0.098**
Non Violent Recidivist	0.32		0	1	**-0.054**
Northeast	0.14		0	1	-0.004
Midwest	0.19		0	1	**0.085**
South	0.47		0	1	-0.003
West	0.2		0	1	**-0.071**
Total Violations	3.06	10.49	0	351	**1**
Assault Factor	0.55	1.43	0	12	**0.591**
Substance Abuse Factor	0.12	0.49	0	6	**0.267**
Bold = Significant Correlation with total violations, 2 tailed significance test					
N = 11,789					

Table 5					
Descriptive Statistics: Federal Sample					
Variable	**Mean**	**S.D.**	**Min**	**Max**	**r**
Religiosity Centered	-3.6	357.11	-196.55	2262.45	0.006
Mean Religiosity	187.14	62.63	85.87	335.83	**0.039**
Time Served	48.21	41.8	0.17	469	**0.261**
Age	37.44	10.55	18	85	**-0.065**
Education	11.44	3.09	0	18	-0.018
Income	6.5	3.54	0	12	**0.068**
Security Level	2.59	1.29	1	6	**0.153**
Crowding	7.5	26.16	0	350	-0.027
Mean Crowding	7.64	17.35	0.69	109.33	**-0.04**
White	0.3		0	1	-0.002
Black	0.37		0	1	0.029
Hispanic	0.28		0	1	**-0.048**
Other	0.05		0	1	**0.031**
Married	0.32		0	1	**-0.084**
Male	0.93		0	1	**0.087**
1st Time Offender	0.39		0	1	**-0.113**
Violent Recidivist	0.23		0	1	**0.174**
Non Violent Recidivist	0.38		0	1	**-0.045**
Northeast	0.12		0	1	0.014
Midwest	0.13		0	1	**0.087**
South	0.56		0	1	**-0.049**
West	0.2		0	1	-0.021
Total Violations	0.98	3.391	0	81	**1**
Assault Factor	0.19	0.763	0	11	**0.647**
Substance Abuse Factor	0.14	0.6	0	6	**0.541**
Bold = Significant Correlation with total violations, 2 tailed significance test					
N = 3,220					

The descriptive statistics also demonstrate that there is a great deal of variability in the dependent variables, and in the primary independent variable. As tables four and five demonstrate, the standard deviation is approximately four times the size of the mean for the dependent variables in the study. In addition, there is a good deal of variability in the individual religiosity variable. The non-centered individual religiosity variable for state prisoners has a mean of 228 and a standard deviation of 402. Likewise, the non-centered religiosity variable for federal prisoners has a mean of 190 and a standard deviation of 360. Taken together, this indicates that there are a large number of prisoners that have extreme values on these variables. It indicates that although many prisoners have committed no violations, some prisoners have committed many violations. Similarly, although many prisoners abstain from engaging in any religious activities, some prisoners spend the majority of their time engaging in religious activities.

Hypotheses One and Two

The primary analysis technique that was used to examine the hypotheses in this study was hierarchical linear modeling, which was conducted using SPSS version 12. The individual religiosity variable was grand mean centered in order to ease its interpretation (Hox, 2002; Raudenbush & Bryk, 2002). In addition, the decision to treat the religiosity variable as a fixed or random effect variable was primarily based upon an examination of the goodness of fit statistics (the -2 log likelihood) that were associated with the regression models that treated the religiosity variable as either a fixed or a random effect variable. The -2 log likelihood of the random and fixed effect models was compared, and the model that best fit the data was selected. This decision was also based upon an examination of the significance of the Wald test that examined the variance of

the slope, the intercept, and slope-intercept covariance for the random effect religiosity variable.

Hypothesis number one argues that there is an inverse relationship between individual religiosity and institutional misconduct. This hypothesis was examined using the models that are presented in the left hand columns of tables six and seven. As the tables demonstrate, the hypothesis was not supported in either the state or federal data set. Although the relationship is in the predicted direction, it is not a statistically significant relationship.

Hypothesis number two argues that the inverse relationship between religiosity and misconduct is stronger in institutions that are marked by higher levels of aggregate religiosity. This hypothesis was examined using the models that are presented in the right hand columns of tables six and seven. As the tables demonstrate, the hypothesis is not supported. Again, although the relationship is in the predicted direction, it is not statistically significant.

	Table 6			
	Multilevel Regression Analysis			
	State Data			
	Hypothesis 1		**Hypothesis 2**	
Variable	**Coefficient**	**S.E.**	**Coefficient**	**S.E.**
Intercept	4.3362513	.553***	3.422585	.668***
Male	0.2807549	0.292	0.4889211	0.302
Age	-0.1724473	.001***	-0.1724719	.001***
Black	-1.0848113	.027***	-1.0851238	.027***
Hispanic	-1.1661563	.037***	-1.663406	.037***
Other	-0.1267291	0.069	-0.1270901	0.069
Married	-0.4454253	.030***	-0.4456205	.030***
Time Served	0.0485556	.000***	0.0485575	.000***
Violent Recidivist	0.8424417	0.029***	0.8425757	.029***
Non Violent Recidivist	0.8762773	.032***	0.8765294	.032***
Education	-0.0866952	.005***	-0.0867092	.005***
Income	0.1572436	.004***	0.1572609	.004***
Security Level	0.4319501	.107***	0.3949046	.107***
Northeast	0.6580266	0.488	0.6425833	0.483
Midwest	2.395852	.458***	2.3935702	.454***
South	1.0132865	.383**	0.7907789	.389*
Crowding	-0.0035852	.000***	-0.0035844	.000***
Mean Crowding	-0.008539	0.006	-0.0095005	0.006
Religiosity Centered	**-0.0002021**	0.000	**0.0001006**	0.001
Mean Religiosity			0.0044209	.002*
Religiosity * Mean Religiosity			-0.0000013	0.000
* = p<.05, ** = p<.01, *** = p<.001				
N = 275 , n = 11,789				
Bold = random effect				

61

	Table 7			
	Multilevel Regression Analysis			
	Federal Data			
	Hypothesis 1		**Hypothesis 2**	
Variable	**Coefficient**	**S.E.**	**Coefficient**	**S.E.**
Intercept	1.1039095	.236***	0.5816222	0.349
Male	-0.1159581	0.132	-0.0148488	0.143
Age	-0.0411694	.001***	-0.0411879	.001***
Black	-0.27777636	.032***	-0.2788557	.032***
Hispanic	-0.2583744	.036***	-0.2586474	.036***
Other	0.530984	.059***	0.5341962	.059***
Married	-0.18947	.027***	-0.1895891	.027***
Time Served	0.0198728	.000***	0.0198666	.000***
Violent Recidivist	0.5943432	.036***	0.5941362	.036***
Non Violent Recidivist	-0.0005039	0.029	-0.000436	0.029
Education	-0.0250606	.004***	-0.0250251	.004***
Income	0.0717324	.003***	0.0717415	.004***
Security Level	0.1428506	.049***	0.1297714	.048**
Northeast	0.132559	0.220	0.1537375	0.213
Midwest	0.6119121	.227**	0.6164528	.213**
South	0.0206282	0.162	-0.0307327	0.162
Crowding	0.0004213	0.000	0.0004138	0.000
Mean Crowding	-0.0027405	0.004	-0.0017643	0.004
Religiosity Centered	**-0.0000024**	0.000	**0.0003667**	0.000
Mean Religiosity			0.0025061	0.001
Religiosity * Mean Religiosity			-0.0000019	0.000
** = p<.01, *** = p<.001				
N= 40, n = 3,220				
Bold = random effect				

Hypothesis Three

Hypothesis three argues that the relationship between religiosity and misconduct is stronger in magnitude for minor forms of misconduct as compared to serious forms of misconduct. In order to differentiate minor forms of misconduct from serious forms of misconduct, an exploratory factor analysis was conducted on the 13 misconduct variables that were discussed in the measurement section of the methodology chapter.

The raw data on these various forms of misconduct had to be modified in order to produce a square symmetric matrix that could be analyzed using factor analysis. The raw data consisted of count data that indicated the number of times that an inmate had been charged with or convicted of a particular offense. These count data were modified so that a score of three or more offenses for each particular violation was collapsed into a common category, producing an ordinal measure.

A principal axis factor analysis with orthogonal (varimax) rotation was conducted on the modified data. Three factors with an eigenvalue greater than one were initially extracted. However, a two-factor solution was chosen based upon an examination of the scree plot, and because the third factor was not theoretically interpretable. The results of the factor analysis are presented in table number eight, and the descriptive statistics that are associated with the factors are included in tables four and five.

The first factor, "assault" emphasizes serious forms of institutional misconduct. The four variables with high loadings on this factor include physical assault of another inmate, verbal assault of another inmate, physical assault of a staff member, and verbal assault of a staff member.

The second factor, "substance abuse" emphasizes minor forms of institutional misconduct. The two variables with high loadings on this factor include drug violations and alcohol violations.

Table 8: Factor Loadings		
	Factor 1:	Factor 2:
	Assault	Substance Abuse
Drugs	0.095	**0.408**
Alcohol	0.040	**0.405**
Weapons	0.361	0.390
Other Substance-Item	0.228	0.286
Verbal Assault-Staff	**0.564**	0.190
Physical Assault-Staff	**0.435**	0.221
Verbal Assault-Inmate	**0.511**	0.034
Physical Assault-Inmate	**0.627**	0.208
Escape	0.094	0.204
Other Major	0.255	0.168
Minor Violations	0.299	0.152
Other	0.034	0.046
Theft	0.107	0.112
Eigenvalue	2.715	1.147
Variance	20.9%	8.9%
Alpha	0.643	0.344[10]
Total Variance Explained	29.8%	

The models that were used to test hypothesis number three are presented in tables nine and ten. The substance abuse factor was used as the dependent variable in the model that examined minor misconduct, and the assault factor was used as the dependent variable in the model that examined serious misconduct. As the tables demonstrate, the hypothesis is not supported.

---

[10] The low value of the alpha coefficient is partially explained by the small number of items that make up the index.

Individual religiosity was not a significant predictor of either minor or serious forms of misconduct in the federal data. In addition, religiosity was a significant predictor of serious misconduct, but not of minor misconduct in the state data. Interestingly enough, this is exactly opposite of what would be predicted by the hypothesis.

The models presented in tables nine and ten also do not support hypothesis number two. As the tables demonstrate, the interaction effect between individual religiosity and mean religiosity was not a significant predictor of either minor or serious forms of misconduct, which is contrary to what the hypothesis would predict.

Conclusion

This analysis demonstrates that, contrary to the majority of the existing literature, religiosity is unrelated to institutional misconduct among prison inmates. The only time that religiosity was a significant predictor of misconduct in this analysis was in the model that examined serious forms of misconduct among state inmates. Additionally, even this finding is contrary to what would be predicted by the existing literature. Clearly, additional research in this area is warranted in order to determine why religiosity is an inhibitor of deviance among the general population, but not among prison inmates.

Table 9							
Multilevel Regression Analysis							
State Sample							
	Minor Misconduct				**Serious Misconduct**			
Variable	**Coefficient**	**S.E.**	**Coefficient**	**S.E.**	**Coefficient**	**S.E.**	**Coefficient**	**S.E.**
Intercept	0.1554542	0.027***	0.1858856	0.033***	0.6535440	0.081***	0.6187975	0.097***
Male	-0.0132379	0.014	-0.0200496	0.015	0.1034169	0.041	0.1102621	0.042*
Age	-0.0045582	.000***	-0.0045574	0.000***	-0.0285145	0.000***	-0.0285139	0.000***
Black	-0.0651801	0.001***	-0.0651696	0.001***	0.0754018	0.003***	0.0754076	0.003***
Hispanic	-0.0111213	0.002***	-0.0111156	.002***	-0.0445654	0.005***	-0.0445675	0.005***
Other	0.0438662	0.003***	0.0438798	0.003***	0.0642785	0.009***	0.0642978	0.009***
Married	0.0008346	0.001	0.0008404	0.001	-0.0982749	0.004***	-0.0982371	0.004***
Time Served	0.0026004	0.000***	0.0026003	0.000***	0.0076879	0.000***	0.0076879	0.000***
Violent Recidivist	0.0830893	0.001***	0.0830858	0.001***	0.1964794	0.004***	0.1964926	0.004***
Non Violent Recidivist	0.0762109	.002***	0.0762023	0.002***	0.1188909	0.004***	0.1188941	0.004***
Education	-0.0063066	0.000***	-0.0063062	0.000***	-0.0193019	0.001***	-0.0193001	0.001***
Income	0.0043857	0.000***	0.0043851	0.000***	0.0248099	0.000***	0.0248107	0.000***
Security Level	0.0109436	.005*	0.0121934	0.005*	0.0955358	0.016***	0.0942947	0.016***
Northeast	-0.0269084	0.024	-0.0264293	0.024	0.0675094	0.072	0.0661776	0.072
Midwest	0.0329580	0.023	0.0330326	0.023	0.0697024	0.068	0.0688909	0.068
South	-0.0374572	0.019*	-0.0300086	0.019	0.0944354	0.057	0.0862044	0.058
Crowding	-0.0000475	0.000**	-0.0000475	0.000	-0.0007519	0.000	-0.0007519	0.000
Mean Crowding	0.0000600	0.000	0.0000914	0.000	-0.0015317	0.001	-0.0015556	0.001
Religiosity Centered	**-0.0000270**	0.000	**-0.0000427**	0.000	**-0.0001321**	0.000***	**-0.0002892**	0.000***
Mean Religiosity			-0.0001479	0.000			0.0001672	0.000
Religiosity * Mean Religiosity			0.0000001	0.000			0.0000007	0.000
* = p<.05, ** = p<.01, *** = p<.001								
N = 275, n = 11,789								
Bold = random effect								

Table 10							
Multilevel Regression Analysis							
Federal Sample							
	Minor Misconduct				Serious Misconduct			
Variable	Coefficient	S.E.	Coefficient	S.E.	Coefficient	S.E.	Coefficient	S.E.
Intercept	0.1635427	.069*	0.1670867	0.096	0.2572211	.066***	0.180272	.087*
Male	-0.1094661	.032**	-0.1116526	.033**	-0.1097379	.035**	-0.088801	.037*
Age	-0.0041695	.000***	-0.0041694	.000***	-0.0091527	.000***	-0.00915	.000***
Black	-0.1177092	.006***	-0.1177314	.006***	0.0148286	.007*	0.0150326	.007*
Hispanic	-0.0555664	.006***	-0.0555804	.006***	-0.0284639	.008**	-0.0283915	.008**
Other	0.000828	0.010	0.0007034	0.010	0.0628677	.013***	0.0641411	.013***
Married	0.022411	.005***	0.0223857	.005***	-0.0298415	.006***	-0.0294671	.006***
Time Served	0.0023403	.000***	0.0023404	.000***	0.0034025	.000***	0.0034017	.000***
Violent Recidivist	0.1978979	.006***	0.197873	.006***	0.1241613	.008***	0.1245779	.008***
Non Violent Recidivist	0.0296005	.005***	0.0295733	.005***	-0.0255077	.007***	-0.0251558	.007***
Education	-0.0009623	0.001	-0.0009661	0.001	-0.0060019	.000***	-0.0059549	.000***
Income	0.0039204	.001***	0.0039197	.001***	0.0082041	.001***	0.0082096	.001***
Security Level	0.0335767	.015*	0.033961	.015*	0.0552054	.014***	0.051993	.014**
Northeast	-0.0056989	0.071	-0.0057371	0.071	0.1118943	0.065	0.1118748	0.063
Midwest	0.0546664	0.074	0.0539648	0.075	0.0887692	0.069	0.0915758	0.067
South	-0.0039268	0.051	-0.0017774	0.053	0.0562694	0.048	0.0415665	0.047
Crowding	0.0008362	.000***	0.0008366	.000***	-0.0005905	.000***	-0.000594	.000***
Mean Crowding	-0.0011473	0.001	-0.0011741	0.001	0.0023404	.001*	0.002479	.001*
Religiosity Centered	**-0.0000279**	0.000	**0.0000027**	0.000	0.0000152	0.000	-0.0000136	0.000
Mean Religiosity			-0.0000179	0.000			0.000373	0.000
Religiosity * Mean Religiosity			-0.0000002	0.000			0.0000001	0.000
* = p<.05, ** = p<.01, *** = p<.001								
N= 40, n = 3,220								
Bold = random effect								

Chapter Five: Conclusion and Discussion

In this chapter, the results of the analysis presented in the preceding chapter will be briefly summarized. This will be followed by a discussion of the limitations of the current research. Finally, the theoretical implications of this study, as well as suggestions for future research will be briefly discussed.

Summary

As discussed in the previous chapter, the results of this study demonstrate that religiosity is not a significant predictor of institutional misconduct among prison inmates. The only time that religiosity was inversely related to misconduct was in the model that examined serious forms of misconduct among state inmates. Furthermore, even this finding is contrary to what would be predicted by the existing literature. The existing literature would predict that religiosity would be inversely related to minor forms of misconduct, but not necessarily to serious forms of misconduct.

One explanation for the discrepancy between the results of this study and the majority of the existing literature that has examined the relationship between religiosity and misconduct among prison inmates is methodological in nature. As discussed previously, all three of the studies (Clear & Sumter, 2002; Johnson, Larson, & Pitts, 1997; Staton, Webster, Hiller, Rostosky, & Leukefeld, 2003) that have examined the religiosity-misconduct relationship in more than one prison use analysis techniques that are inappropriate for nested data. The use of these techniques leads to problems with interpreting the significance of the results, as these techniques increase the probability of incorrectly rejecting the null hypothesis that there is no relationship between religiosity and misconduct.

Limitations

The most obvious limitation of this research is that it is based upon self-report data. It is widely recognized that the use of self-report data can be problematic in terms of validity (Akers, Massey, Clarke, & Lauer, 1983; Fan, Miller, Park, Winward, Christensen, Grotevant, & Tai, 2006; Johnson & Richter, 2004). However, despite its shortcomings, the use of self-report data is widely accepted in criminological research.

Another limitation of this research is that the primary independent variable, religiosity, is measured in an unconventional fashion. Although the argument is made in the methodology chapter that the manner in which religiosity is measured is not overly problematic, there is little basis for comparison. None of the studies examined in the literature review chapter measured religiosity in the same fashion that this study does. Thus, it is somewhat difficult to make concrete generalizations concerning the validity of measuring religiosity in this manner.

Theoretical Implications and Future Research

One reason that this study is significant is that it explicitly tests the moral community hypothesis, and by extension, Tittle and Welch's (1983) contingency theory in a total institution. As discussed in the literature review chapter, the moral community hypothesis argues that the reason that religiosity constrains deviant behavior is that individuals' align their behavior to meet the informal expectations of their peers. Thus, in a total institution, in an environment in which individuals are almost completely cut off from the outside world, the effect of peer beliefs and expectations should be extremely pronounced. Thus, the effect that aggregate religiosity has on the individual level religiosity-deviance relationship should be rather pronounced in the correctional

environment. In fact, if aggregate religiosity does not affect the individual level religiosity-deviance relationship in a total institution, then it probably does not affect it anywhere.

Thus, the findings of this study, that aggregate religiosity did not affect the individual level relationship between religiosity and any of the forms of misconduct that were examined in this study, are not theoretically insignificant. These findings cast serious doubt on the efficacy of both the moral community hypothesis, and the contingency theory. Apparently, either aggregate religiosity does not affect the individual level religiosity-deviance relationship, or there is something in the prison environment that prevents religiosity from inhibiting deviant behavior.

If there is something in the prison environment that confounds the effect of religiosity on institutional misconduct, the existing literature suggests that that confounding variable would be race.

DeNike (2005), based upon an ethnographic analysis of the practice of religion in prison, argues that the practice of religion in prison inadvertently exasperates racial tension among the inmates. DeNike argues that although the majority of male prisons are racially segregated, non-Islamic religious groups in prison are not typically racially segregated. DeNike argues that this often puts religious inmates in conflict with non-religious inmates. One of the subjects in DeNike's study summarized the situation as follows:

> "I was harassed and threatened by the Aryan Brotherhood. They'd say, 'You're embarrassing the white race'"...
> There, segregation is voluntarily practiced by inmates. But the Christian group was Mexicans, whites and blacks, with the leader being a black guy. We would sing on the yard,

not trying to stick out, just showing our devotion. Other
inmates gave us a raft of crap about it" (2005, p. 118)

Another subject in DeNike's study had this to say about the consequences of

trying to protect interracial religious friends:

"I had a white friend who these guys just walked up and
jumped on, and I was standing there with him, so I tried to
protect him. And because of that, me being black, getting
in the middle of this white fight just set the whole prison
crazy. Because I was trying to pull these guys off of him,
and if some white guys are jumping on a white guy, a black
guy trying to protect him is the last thing in the world you
want to do, because then that puts all the black people in
jeopardy, so now there's going to be a race riot" (2005, p.
119)

The fact that this conflict between religious and non-religious inmates often leads

to confrontations, and thus violations of prison rules, would explain why there is not an

inverse relationship between religiosity and misconduct among prison inmates. This

assertion is also supported by the results of the analysis performed in this study, as mean

religiosity was positively related to misconduct in the model that tested hypothesis

number two among state inmates (table six). Furthermore, in her analysis of the

aggregate level relationship between religiosity and misconduct, Nelson-Green (1994)

determined that there was a positive relationship between the two variables. Therefore,

additional research on the practice of religion in the correctional environment should

examine the hypothesis that religiosity is indirectly related to an increase in institutional

misconduct among prison inmates through its effect on increasing racial tension among

inmates.

Therefore, additional research that examines the moral community hypothesis in

other types of total institutions, such as boarding schools, substance abuse treatment

centers, psychiatric hospitals, etc is warranted in order to examine the moral community hypothesis in environments that are less racially polarized.

Further research on the moral community hypothesis could prove to be rather enlightening. It could increase our understanding of how religiosity affects social behavior among different groups of people, and it could also deepen our understanding of how religiosity affects the unique culture that develops behind the walls of the penitentiary.

References

Adams, Kenneth. (1992). Adjusting to prison life. *Crime and Justice* 16, 275-359.

Adeseun, Quadri A. (1993). The Impact of Religious Beliefs and Religious Commitments on Delinquent Behaviors. (Doctoral dissertation, University of Maryland, 1993). *Dissertation Abstracts International*, 54/10, 3883.

Agnew, Robert. (1992). Foundation for a general strain theory of crime and delinquency. *Criminology* 30(1), 47-87.

Akers, Ronald L., Massey, James, Clarke, William, & Lauer, Ronald M. (1983). Are self-reports of adolescent deviance valid? Biochemical measures, randomized response, and the bogus pipeline in smoking behavior. *Social Forces* 62(1), 234-351.

Albrecht, Stan L., Chadwick, Bruce A., & Alcorn, David S. (1977). Religiosity and deviance: Application of an attitude-behavior contingent consistency model. *Journal for the Scientific Study of Religion* 16(3), 263-274.

Amey, Cheryl H., Albrecht, Stan L., & Miller, Michael K. (1996). Racial differences in adolescent drug use: The impact of religion. *Substance Use and Misuse* 31(10), 1311-1332.

Amoateng, Acheampong Yaw, & Bahr, Stephen J. (1986). Religion, family, and adolescent drug use. *Sociological Perspectives* 29(1), 53-76.

Baier, Colin J., & Wright, Bradley R. E. (2001). "If you love me, keep my commandments": A meta-analysis of the effect of religion on crime. *Journal of Research in Crime and Delinquency* 38(1), 3-21.

Bainbridge, William S. (1989). The religious ecology of deviance. *American Sociological Review* 54(2), 288-295.

Benda, Brent B. (1995). The effects of religion on adolescent delinquency revisited. *Journal of Research in Crime and Delinquency* 32(4), 446-466.

Benda, Brent B. (1997). An examination of a reciprocal relationship between religiosity and different forms of delinquency within a theoretical model. *Journal of Research in Crime and Delinquency* 34(2), 163-186.

Benda, Brent B. (2002). Religion and violent offenders in boot camp: A structural equation model. *Journal of Research in Crime and Delinquency* 39(1), 91-121.

Benda, Brent B. & Corwyn, Robert Flynn. (1997a). Religion and delinquency: The relationship after considering family and peer influences. *Journal for the Scientific Study of Religion* 36(1), 81-92.

Benda, Brent B., & Corwyn, Robert Flynn. (1997b). A test of a model with reciprocal effects between religiosity and various forms of delinquency using 2-stage least squares regression. *Journal of Social Service Research* 22(3), 27-52.

Benda, Brent B., & Corwyn, Robert F. (2001). Are the effects of religion on crime mediated, moderated, and misrepresented by inappropriate measures? *Journal of Social Service Research* 27(3), 57-86.

Benda, Brent B. & Toombs, Nancy J. (2002). Religiosity and drug use among inmates in boot camp: Testing a theoretical model with reciprocal relationships. *Journal of Offender Rehabilitation* 35(3-4), 161-183.

Beyerlein, Kraig, & Hipp, John R. (2005). Social capital, too much of a good thing? American religious traditions and community crime. *Social Forces* 84(2), 995-1013.

Bjarnason, Thoroddur, Thorlindsson, Thorolfur, Sigfusdottir, Inga D., & Welch, Michael R. (2005). Familial and religious influences on adolescent alcohol use: A multi-level study of students and school communities. *Social Forces* 84(1), 375-390.

Bock, E. Wilbur, Cochran, John K, & Beeghley, Leonard. (1987). Moral messages: The relative influence of denomination on the religiosity-alcohol relationship. *Sociological Quarterly* 28(1), 89-103.

Bott, E. (1954). The concept of class as a reference group. *Human Relations* 7(3), 259-285.

Brownfield, David & Sorenson, Ann Marie. (1991). Religion and drug use among adolescents: A social support conceptualization and interpretation. *Deviant Behavior* 12(3), 259-276.

Burkett, Steven R. (1977). Religion, parental influence, and adolescent alcohol and marijuana use. *Journal of Drug Issues* 7(3), 263-273.

Burkett, Steven R. (1993). Perceived parents' religiosity, friends' drinking, and hellfire: A panel study of adolescent drinking. *Review of Religious Research* 35(2), 134-154.

Burkett, Steven R., & Warren, Bruce O. (1987). Religiosity, peer associations, and adolescent marijuana use: A panel study of underlying causal structures. *Criminology* 25(1), 109-131.

Burkett, Steven R. & White, Mervin. (1974). Hellfire and delinquency: Another look. *Journal for the Scientific Study of Religion* 13(4), 455-462.

Cannon, Kevin D. (2000). The Effect of Gang Membership on Prison Rule Violations (Doctoral Dissertation, University of Nebraska, 2000). Dissertation Abstracts International, 66/2, 783-A.

Caputo, Richard K. (2004). Parent religiosity, family processes, and adolescent outcomes. *Families in Society: The Journal of Contemporary Social Services* 85(4), 495-510.

Chadwick, Bruce A. & Top, Brent L. (1993). Religiosity and delinquency among LDS adolescents. *Journal for the Scientific Study of Religion* 32(1), 51-67.

Chu, Doris C. F. (2003). *Religiosity as social capital- In the explanation of desistance from crime.* (Doctoral dissertation, State University of New York at Albany, 2003) *Dissertation Abstracts International,* 64/06, 2264.

Clarke, Leslie, Beeghley, Leonard, & Cochran, John K. (1990). Religiosity, social class, and alcohol use: An application of reference group theory. *Sociological Perspectives* 33(2), 201-218.

Clear, Todd R., Stout, Bruce D., Dammer, Harry, Kelly, Linda, Hardyman, Patricia, & Shapiro, Carol. (1992). *Prisoners, Prisons and Religion*. Newark, NJ: Rutgers University, School of Criminal Justice.

Clear, Todd A. & Sumter, Melvina T. (2002). Prisoners, prison, and religion: Religion and adjustment to prison. *Journal of Offender Rehabilitation* 35(3-4), 127-159.

Cochran, John K. (1988). The effect of religiosity on secular and ascetic deviance. *Sociological Focus* 21(4), 293-306.

Cochran, John K. (1989). Another look at delinquency and religiosity. *Sociological Spectrum* 9(2), 147-162.

Cochran, John K., & Akers, Ronald L. (1989). Beyond hellfire: An exploration of the variable effects of religiosity on adolescent marijuana and alcohol use. *Journal of Research in Crime and Delinquency* 26(3), 198-225.

Cochran, John K., Chamlin, Mitchell B., Beeghley, Leonard, & Fenwick, Melissa. (2004). Religion, religiosity, and nonmarital sexual conduct: An application of reference group theory. *Sociological Inquiry* 74(1), 102-127.

Cochran, John K., Wood, Peter B., & Arneklev, Bruce J. (1994). Is the religiosity-delinquency relationship spurious? A test of arousal and social control theories. *Journal of Research in Crime and Delinquency* 31(1), 92-123.

Cornwall, Marie, Albrecht, Stan L., Cunningham, Perry H., & Pitcher, Brian L. (1986). The dimensions of religiosity: A conceptual model with an empirical test. *Review of Religious Research* 27(3), 226-244.

Cretacci, Michael A. (2003). Religion and social control: An application of a modified social bond on violence. *Criminal Justice Review* 28(2), 254-277.

Dammer, Harry R. (1992). Piety in prison: An ethnography of religion in the correctional environment. Doctoral dissertation, Rutgers University, 1992). *Dissertation Abstracts International,* 53/05, 1676.

Dammer, Harry R. (2002). The reasons for religious involvement in the correctional environment. *Journal of Offender Rehabilitation* 35(3-4), 35-58.

De Nike, Moira. (2005). *The penitent: The myths and realities of religious rehabilitation among California prisoners.* (Doctoral dissertation, University of Hawaii, 2005). *Dissertation Abstracts International,* 66/04, 1506.

Elifson, Kirk W., Petersen, David M., & Hadaway, C. Kirk. (1983). Religiosity and delinquency: A contextual analysis. *Criminology* 21(4), 505-527.

Ellis, Lee. (1985). Religiosity and criminality: Evidence and explanations of complex relationships. *Sociological Perspectives* 28(4), 501-520.

Ellis, Lee. (1987). Religiosity and criminality from the perspective of arousal theory. *Journal of Research in Crime and Delinquency* 24(3), 215-232.

Ellis, Lee & Peterson, James. (1996). Crime and religion: An international comparison among thirteen industrial nations. *Personality and Individual Differences* 20(6), 761-768.

Ellis, Lee & Thompson, Robert. (1989). Relating religion, crime, arousal and boredom. *Sociology and Social Research* 73(3), 132-139.

Evans, T. D., Cullen, Francis T., Burton Jr., Velmer S., Dunaway, R.G., Payne, Gary L., & Kethineni, Sesha R. (1996). Religion, social bonds, and delinquency. *Deviant Behavior* 17, 43-70.

Evans, T. David, Cullen, Francis T, Dunaway, R. Gregory, & Burton JR., Velmer S. (1995). Religion and crime reexamined: The impact of religion, secular controls, and social ecology on adult criminality. *Criminology* 33(2), 195-224.

Fan, Xitao, Miller, Brent C., Park, Kyung-Eun, Winward, Bryan W., Christensen, Matthew, Grotevant, Harold D., & Tai, Robert H. (2006). An exploratory study

about inaccuracy and invalidity in adolescent self-report surveys. *Field Research* 18(3), 223-244.

Fernander, Anita, Wilson, John F., Staton, Michele, & Leukefeld, Carl. (2005). Exploring the type-of-crime hypothesis, religiosity, and spirituality in an adult male prison population. *International Journal of Offender Therapy and Comparative Criminology* 49(6), 682-695.

Fernquist, Robert M. (1995). A research note on the association between religion and delinquency. *Deviant Behavior* 16(2), 169-175.

Flanagan, T.J. (1983). Correlates of institutional misconduct among state prisoners: A research note. *Criminology* 21(1), 29-39.

Ford, Julie, & Kadushin, Charles. (2002). Between sacral belief and moral community: A multidimensional approach to the relationship between religion and alcohol among whites and blacks. *Sociological Forum* 17(2), 255-279.

Free, Jr., Marvin D. (1992). Religious affiliation, religiosity, and impulsive and intentional deviance. *Sociological Focus* 25(1), 77-91.

Free Jr., Marvin D. (1994). Religiosity, religious conservatism, bonds to school, and juvenile delinquency among three categories of drug use. *Deviant Behavior* 15(2), 151-170.

Friedman, Lawrence M. (1993). *Crime and punishment in American history.* New York: Basic Books.

Gronblom, Gunnar. (1984). *Dimensions of religiosity: The operationalization and measurement of religiosity with special regard to the problem of dimensionality.* Abo, Finland: Abo Akademi.

Gottfredson, Michael R., & Hirschi, Travis. (1990). *A general theory of crime.* Stanford: Stanford University Press.

Grasmick, Harold G., Bursik Jr., Robert J., & Cochran, John K. (1991). "Render unto Caesar what is Caesar's": Religiosity and taxpayers inclinations to cheat. *Sociological Quarterly* 32(2), 251-266.

Grasmick, Harold G., Kinsey, Karyl, & Cochran, John K. (1991). Denomination, religiosity and compliance with the law: A study of adults. *Journal for the Scientific Study of Religion* 30(1), 99-107.

Hadaway, C. Kirk, Elifson, Kirk W., & Peterson David M. (1984). Religious involvement and drug use among urban adolescents. *Journal for the Scientific Study of Religion* 23(2), 109-128.

Harris, Mark A. (2003). Religiosity and perceived future ascetic deviance and
    delinquency among Mormon adolescents: Testing the 'this-worldly' supernatural
    sanction thesis. *Sociological Inquiry* 73(1), 28-51.

Harrison, Jill H. (2005). *Does religion matter? A test of classical theories of deviance
    on two different religious types.* (Doctoral dissertation, University of New
    Hampshire, 2005). *Dissertation Abstracts International,* 66/07, 2745.

Hickey, Anthony A. (1986). An introduction to statistical techniques for social research.
    New York: McGraw Hill.

Higgins, Paul C. & Albrecht, Gary L. (1977). Hellfire and delinquency revisited. *Social
    Forces* 55(4), 952-958.

Hirschi, Travis. (1969). *Causes of delinquency.* Berkeley: University of California
    Press.

Hirschi, Travis, & Stark, Rodney. (1969). Hellfire and delinquency. *Social Problems*
    17(2), 202-213.

Hox, Joop J. (2002). *Multilevel analysis: Techniques and applications.* Mahwah, NJ:
    Lawrence Erlbaum Associates, Incorporated.

Jang, Sung Joon, & Johnson, Byron R. (2003). Strain, negative emotions, and deviant
    coping among African Americans: A test of general strain theory. *Journal of
    Quantitative Criminology* 19(1), 79-105.

Jang, Sung J., & Johnson, Byron R. (2005). Gender, religiosity, and reactions to strain
    among African Americans. *Sociological Quarterly* 46(2), 323-357.

Jenson, Gary F. & Erickson, Maynard L. (1979). The religious factor and delinquency:
    Another look at the hellfire hypotheses. In R. Wuthnow (Ed.), *The religious
    dimension: New directions in quantitative research* (pp. 157-177). New York:
    Academic Press.

Johnson, Byron R. (1984). Hellfire and corrections: A quantitative study of Florida
    prison inmates. (Doctoral dissertation, Florida State University, 1984).
    Dissertation Abstracts International, 46/01, 269.

Johnson, Byron R. (2004). Religious programs and recidivism among former inmates in
    prison fellowship programs: A long-term follow-up study. *Justice Quarterly*
    21(2), 329-354.

Johnson, Byron R., Jang, Sung J., Larson, David B., & De Li, Spencer. (2001). Does
    adolescent religious commitment matter? A reexamination of the effects of

religiosity on delinquency. *Journal of Research in Crime and Delinquency* 38(1), 22-44.

Johnson, Byron R., Larson, David B., & Pitts, Timothy C. (1997). Religious programs, institutional adjustment, and recidivism among former inmates in Prison Fellowship programs. *Justice Quarterly* 14(1), 145-166.

Johnson, Patrick B., & Richter, Linda. (2004). Research note: What if we're wrong? Some possible implications of systematic distortions in adolescents' self-reports of sensitive behaviors. *Journal of Drug Issues* 34(4), 951-970.

Junger, Marianne, & Polder, Wim. (1993). Religiosity, religious climate, and delinquency among ethnic groups in the Netherlands. *British Journal of Criminology* 33(3), 416-435.

Kerley, Kent R., Matthews, Todd L., & Blanchard, Troy C. (2005). Religiosity, religious participation, and negative prison behaviors. *Journal for the Scientific Study of Religion* 44(4), 443-457.

King, Gary, & Zeng, Lanche. (2000). *Logistic regression in rare events data.* (Research Paper No. 2). Cambridge, MA: Harvard University, Harvard Burden of Disease Unit.

King, Morton B., & Hunt, Richard A. (1990). Measuring the religious variable: Final comment. *Journal for the Scientific Study of Religion* 29(4), 531-535.

Krohn, Marvin D., Akers, Ronald L., Radosevich, Marcia J., & Lanza-Kaduce, Lonn. (1982). Norm qualities and adolescent drinking and drug behavior: The effects of norm quality and reference group on using and abusing alcohol and marijuana. *Journal of Drug Issues* 12(4), 343-360.

Lee, Matthew R. (2006). The religious institutional base and violent crime in rural areas. *Journal for the Scientific Study of Religion* 45(3), 309-324.

Lee, Matthew R., & Bartkowski, John P. (2004). Love thy neighbor? Moral communities, civic engagement, and juvenile homicide in rural areas. *Social Forces* 82(3), 1001-1035.

Litchfield, Allen W., Thomas, Darwin L., & Li, Bing D. (1997). Dimensions of religiosity as mediators of the relations between parenting and adolescent deviant behavior. *Journal of Adolescent Research* 12(2), 199-226.

Longshore, Douglas, Chang, Eunice, Hsieh, Shih-chao, & Messina, Nena. (2004). Self-control and social bonds: A combined control perspective on deviance. *Crime and Delinquency* 50(4), 542-564.

Marcos, Anastasios C., Bahr, Stephen J., & Johnson, Richard E. (1986). Test of a bonding/association theory of adolescent drug use. *Social Forces* 65(1), 135-161.

McIntosh, W. M. Alex, Fitch, Starla, D., Wilson, J. Branton, & Nyberg, Kenneth L. (1981). The effect of mainstream religious social controls on adolescent drug use in rural areas. *Review of Religious Research* 23(1), 54-75.

McLuckie, Benjamin F., Zahn, Margaret, & Wilson, Robert A. (1975). Religious correlates of teenage drug use. *Journal of Drug Issues* 5(2), 129-139.

Middletown, Russell & Putney, Snell. (1962). Religion, normative standards, and behavior. *Sociometry* 25(2), 141-152.

Morris, Norval & Rothman, David J. (Eds.) (1995). *The Oxford history of the prison: The practice of punishment in western society.* New York: Oxford University Press.

Nelson, Hart M. & Rooney, James F. (1982). Fire and brimstone, lager and pot: Religious involvement and substance use. *Sociological Analysis* 43(3), 247-256.

Nelson-Green, Laura L. (1994). *Environmental Relationship Between Religiosity and Deviant Behavior in Federal Prisons.* (Doctoral dissertation, Rutgers University, 1994). *Dissertation Abstracts International,* 55/04, 1110.

O'Connor, Thomas P. & Perreyclear, Michael. (2002). Prison religion in action and its influence on offender rehabilitation. *Journal of Offender Rehabilitation* 35(3-4), 11-33.

O'Connor, T. P., Ryan, P., Yang, F., Wright, K., & Parikh, C. (1996, August). *Religion and prisons: Do volunteer religious programs reduce recidivism?* Paper presented at the meeting of the American Sociological Association, New York, NY.

Olson, John K. (1990). Crime and religion: A denominational and community analysis. *Journal for the Scientific Study of Religion* 29(3), 395-403.

Osborne, Jason W. (2000). Advantages of hierarchical linear modeling. *Practical Assessment, Research and Evaluation* 7(1). Retrieved June 26, 2007 from http://PAREonline.net/getvn.asp?v=7&n=1.

Pass, Michael G. (2002). Religious orientation and self-reported rule violations in a maximum security prison. *Journal of Offender Rehabilitation* 35(3-4), 119-134.

Pearce, Lisa D., & Haynie, Dana L. (2004). Intergenerational religious dynamics and adolescent delinquency. *Social Forces* 82(4), 1553-1572.

Perkins, H. Wesley. (1985). Religious traditions, parents, and peers as determinants of alcohol and drug use among college students. *Review of Religious Research* 27(1), 15-31.

Pettersson, Thorleif. (1991). Religion and criminality: Structural relationships between church involvement and crime rates in contemporary Sweden. *Journal for the Scientific Study of Religion* 30(3), 279-291.

Preston, James D. (1969). Religiosity and adolescent drinking behavior. *Sociological Quarterly* 10(3), 372-383.

Raudenbush, Steven W. & Bryk, Anthony S. (2002). *Hierarchical linear models: Applications and data analysis methods.* Thousand Oaks, CA: Sage.

Regnerus, Mark D. (2003a). Linked lives, faith, and behavior: Intergenerational religious influence on adolescent delinquency. *Journal for the Scientific Study of Religion* 42(2), 189-203.

Regnerus, Mark D. (2003b). Moral communities and adolescent delinquency: Religious contexts and community social support. *Sociological Quarterly* 44(4), 523-554.

Richard, Alan J., Bell, David C., & Carlson, Jerry W. (2000). Individual religiosity, moral community, and drug user treatment. *Journal for the Scientific Study of Religion* 39(2), 240-246.

Ross, Lee E. (1991). *Christian religiosity and deviance reexamined: An application and extension of social control theory.* (Doctoral dissertation, Rutgers University, 1991). *Dissertation Abstracts International,* 52/07, 2710.

Ross, Lee E. (1994). Religion and deviance: Exploring the impact of social control elements. *Sociological Spectrum* 14(1), 65-86.

Sampson, Robert J. & Laub, John H. (1993). *Crime in the making: Pathways and turning points through life.* Cambridge: Harvard University Press.

Simons, Leslie G., Simons, Ronald L., & Conger, Rand D. (2004). Identifying the mechanisms whereby family religiosity influences the probability of adolescent antisocial behaviors. *Journal of Comparative Family Studies* 35(4), 547-563.

Sorensen, J., Wrinkle, R., & Gutierrez, A. (1998). Patterns of rule-violating behaviors and adjustment to incarceration among murderers. *Prison Journal* 78(3), 222-231.

Stack, Steven, & Kposowa, Augustine. (2006). The effect of religiosity on tax fraud acceptability: A cross-national analysis. *Journal for the Scientific Study of Religion* 45(3), 325-351.

Stark, Rodney. (1996). Religion as context: Hellfire and delinquency one more time.
    Sociology of Religion 57(2), 163-173.

Strark, Rodney, Kent, Lori, & Doyle, Daniel P. (1982). Religion and delinquency: The
    ecology of a "lost" relationship. *Journal of Research in Crime and Delinquency*
    19, 4-24.

Staton, Michele, Webster, J. M., Hiller, Matthew, Rostosky, Sharon, & Leukefeld, Carl.
    (2003). An exploratory examination of spiritual well-being, religiosity, and drug
    use among incarcerated men. *Journal of Social Work Practices in the Addictions*
    3(3), 87-103.

Sumter, Melvina T. (1999). *Religiousness and Post-Release Community Adjustment*.
    (Doctoral dissertation, Florida State University, 1999). *Dissertation Abstracts
    International,* 60/12, 4616.

Sutherland, Edwin H. (1947). *Principles of Criminology* (4th ed.). Chicago: J.B.
    Lippincott Company.

Sundt, Jody L., Dammer, Harry R., & Cullen, Francis T. (2002). The role of the prison
    chaplain in rehabilitation. *Journal of Offender Rehabilitation* 35(3-4), 59-86.

Tittle, Charles R. & Welch, Michael R. (1983). Religiosity and deviance: Toward a
    contingency theory of constraining effects. *Social Forces* 61(3), 653-682.

Toombs, Nancy J., Benda, Brent B., & Tilmon, Randy D. (1999). A developmentally
    anchored conceptual model of drug use tested among adult boot camp inmates.
    Journal of Offender Rehabilitation 29(1/2), 49-64.

Turner, Carol J. & Willis, Robert J. (1979). The relationship between self-reported
    religiosity and drug use by college students. *Journal of Drug Education* 9(1), 67-
    78.

U.S. Dept. of Justice, Bureau of Justice Statistics, and U.S. Dept. of Justice, Federal
    Bureau of Prisons. SURVEY OF INMATES IN STATE AND FEDERAL
    CORRECTIONAL FACILITIES, 1997 [Computer file and codebook]. Compiled
    by U.S. Dept. of Commerce, Bureau of the Census. ICPSR ed. Ann Arbor, MI:
    Inter-university Consortium for Political and Social Research [producer and
    distributor], 2000.

Welch, Michael R., Tittle, Charles R., & Grasmick, Harold G. (2006). Christian
    religiosity, self-control and social conformity. *Social Forces* 84(3), 1605-1623.

Welch, Michael R., Tittle, Charles R., & Petee, Thomas. (1991). Religion and deviance among adult Catholics: A test of the "moral communities" hypothesis. *Journal for the Scientific Study of Religion* 30(2), 159-172.

Welch, Michael R., Xu, Wili, Bjarnason, Thoroddur, Petee, Tom, O'Donnell, Patricia, & Magro, Paul. (2005). "But everybody does it . . .": The effects of perceptions, moral pressures, and informal sanctions on tax cheating. *Sociological Spectrum* 25(1), 21-52.

Young, Mark C., Gartner, John, O'Connor, Thomas, Larson, David, & Wright, Kevin. (1995). Long-term recidivism among federal inmates trained as volunteer prison ministers. *Journal of Offender Rehabilitation* 22(1-2), 97-118.

VITA

Paul Sturgis is a native of the Jefferson City, Missouri area. He attended elementary school and high school in Jefferson City, and graduated from Jefferson City High School in 1993. He also holds a Bachelors degree in Sociology (1997) and a Masters degree in Sociology and Criminal Justice (2000) from Lincoln University, which is also located in Jefferson City. For his doctoral program, he decided to journey all the way to Columbia, Missouri, where he was awarded a Ph.D. in Sociology in 2008. Paul has been married since 1997, and his wife, Kelley, also considers Jefferson City to be "home."