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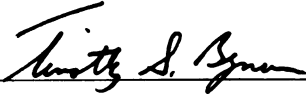
**Perceptual Stability among Youthful Offenders:
Deterrence Theory Revisited**

presented by

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of the requirements for

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**PERCEPTUAL STABILITY AMONG YOUTHFUL OFFENDERS:
DETERRENCE THEORY REVISITED**

By

Justin W. Patchin

A THESIS

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ABSTRACT

PERCEPTUAL STABILITY AMONG YOUTHFUL OFFENDERS: DETERRENCE THEORY REVISITED

By

Justin W. Patchin

Deterrence theory has been tested in a myriad of different ways. Early, methodologically weak investigations offered evidence of a marginal deterrent effect, particularly with regard to certainty of punishment. Subsequent empirical inquiry challenged these premature assumptions, suggesting deterrence plays virtually no role in determining onset or desistance of deviant activity. An important issue when attempting to uncover a deterrent effect is the extent to which perceptions of certainty or severity of punishment remain stable over time. The present study revisits this question within the context of the contemporary juvenile justice system in an effort to assess potential differences that may more readily foster a deterrent effect. Specifically, it is hypothesized that deterrence theory may have more merit today than when it was originally studied 30 years ago. Panel data are used to determine perceptual stability among early, youthful offenders.

To Him.

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INTRODUCTION

Deterrence theory has been tested and retested a number of different ways in the past thirty years. In a comprehensive review of many early studies, Paternoster (1987:213) concluded, “...deterrence research has advanced about as far as is possible...” Despite this assertion, however, few definitive answers have been reached. Accordingly, researchers continue to examine the relationship between formal criminal justice sanctions, a person's belief regarding the likelihood of apprehension and punishment for commission of a crime, and their subsequent behavior.

Many scholars have attempted to develop a theory that best explains why one person commits crime and another does not. At its simplest form, deterrence theory suggests that a person will avoid criminal behavior if the threat of apprehension and punishment is great enough. The theory is grounded in the pleasure/pain principle, which holds that individuals aim to maximize pleasure and minimize pain. Is this theory of deterrence, however, a viable explanation for criminal behavior and avoidance?

Arguably, an individual with a great deal to lose will be more susceptible to deterrence. It is this group who may already have some prosocial ties to the community and therefore may not want to jeopardize these relationships by breaking the law. A youth with a steady allowance, new toys, and a favorable reputation in the community may fear the damage that could be done if caught breaking the law. A good test of the deterrence theory, then, is among a study

population with very little to lose: adjudicated delinquents. They may already view their life as a dead end street, with little else to lose is caught for committing a crime. If deterrence theory can be supported for these at-risk youth, it would surely hold merit for those without the added weight of a juvenile arrest record.

Historically, deterrence principles were explored with juvenile samples (Williams & Hawkins, 1986). For this particular group, however, deterrence may be the least applicable. The nature of the juvenile court has traditionally been that of rehabilitation, not punishment. The focus of the juvenile justice system has been to help the youth address the negative behavior, then return him or her to society as quickly as possible. Changes in the juvenile justice system have led to a focus on punishment rather than rehabilitation; therefore contemporary times may allow for a better test of the deterrence doctrine.

In this study, deterrence theory will be tested to determine if it is a viable explanation for the offending patterns of adjudicated juveniles. While a complete examination of this theory is beyond the scope of this analysis, specific aspects of perceptual deterrence will be revisited in an exploration of the efficacy of this explanation. First, an in-depth summary of deterrence theory will be presented beginning with when it was first articulated among classical criminologists, to contemporary reclassifications and alternative reconceptualizations. Second, changes within the juvenile court that set the stage for a renewed interest in deterrence theory will be briefly reviewed. Third, the basic premises of perceptual deterrence theory will be put before an empirical test, focusing primarily on perceptions of certainty of punishment and perceptual stability

among youth. If perceptions remain relatively stable, then early cross-sectional designs showing a marginal deterrent effect can accurately estimate deterrence relationships across time. Finally, findings will be discussed and limitations acknowledged to this basic examination of perceptual deterrence theory.

CHAPTER I

DETERRENCE THEORY

Historical Perspective

Utilitarian philosopher Jeremy Bentham and classical criminologist Cesare Beccaria first postulated deterrence theory in the early 1800s (Nagin, 1998; Neubauer, 1996). The theory is based on the premise that most individuals are rational decision makers who will weigh the potential costs against the probable benefits of any desired activity. If the risks or costs of punishment are high enough, the argument goes, citizens will be dissuaded or “deterred” from criminal activity. Severe punishments such as the death penalty are anecdotally supported on the basis that they discourage would-be wrongdoers from engaging in criminality. Keeping in mind potentially uncomfortable or severe punishments, people should avoid crime and, in turn, avoid punishment because they have an innate drive to maximize pleasure and minimize pain.

Two interrelated subdisciplines have emerged under the theory of deterrence. General deterrence is the notion that the larger population is inhibited from criminal activity because of potential punishments that may be exacted on the guilty offender. Usually, general deterrence refers to individuals who have not engaged in criminal activity (or who have not been apprehended) and are basing their ideals about crime and punishment on the experiences of others (Paternoster & Piquero, 1995).

In contrast, specific deterrence pertains to individuals who have received some form of official punishment. In such a case, criminologists are concerned with the deterrent effect of the prescribed sanction on the individual being punished. Specific deterrence is successful when punished individuals cease offending, reduce the number of offenses committed, or engage in less serious offenses based on the fear of some future punishment (Paternoster & Piquero, 1995).

Some authors have criticized these definitions and acknowledged that any definition of deterrence is incomplete because deterrence principles are not readily observable (Gibbs, 1975). That is, it is difficult to determine, let alone measure, what keeps an individual from acting in a certain manner. Deterrence principles are not objective criteria that can simply be counted or even easily estimated. Indeed, there are likely numerous psychological/internal variables contributing to the final decision: What do I have to lose? What do I have to gain? Who will know what I have done? Who will care? Will I get caught? What will happen if I get caught? Will I go to jail? Answering these questions is difficult enough; estimating a causal relationship between the answers and the specific behavior is even more complicated. For these reasons, survey research is employed, using specific questions that attempt to determine what the offender was thinking at the time of the incident.

Another dichotomy that has been accepted concerns the effectiveness of sanctions to completely deter an individual. Clearly, if an offender ceases all law-breaking behaviors due to some threat or perceived threat of punishment by

official criminal justice agencies, deterrence theory is supported. This type of deterrence has been labeled *absolute deterrence* (Zimring & Hawkins, 1973). On the other hand, if a habitual bank robber reduces the frequency of offending, or retires to a less serious form of criminality such as shoplifting or petty theft, *marginal deterrence* is in effect (Zimring & Hawkins, 1973). Both outcomes are consistent with the basic elements of deterrence.

It has been argued that deterrence is not an exclusive criminological theory in itself, but rather a subsidiary of social learning theory (Akers, 1990; Akers, Krohn, Lanza-Kaduce, & Radosevich, 1979). The fear of legal punishment that deters individuals from engaging in illegal behavior, it is argued, is related more to the differential reinforcement concepts of social learning theory than being an exhaustive entity in itself (Akers, 1990). Historically, deterrence theorists have ignored this contention. Recently, however, researchers examining the deterrence doctrine have explicitly acknowledged the fundamental relationship with social learning theories (Paternoster & Piquero, 1995; Stafford & Warr, 1993). More accurately, though, deterrence and social learning models likely fall under the more general classification of rational choice theories (Paternoster, 1989).

Rational choice theories, too, stem from the classical school of criminology and suggest that the decision to engage in criminal behavior is calculated and "rational" (Shoemaker, 1996). Moreover, self-interest is always the primary motivation for determining whether or not to engage in any activity (Shoemaker, 1996). Deterrence theory argues that an individual will evaluate the likelihood

that he or she will be apprehended for an activity, and weigh the potential costs if caught. Social learning involves learning behavior through intimate relationships, witnessing others in a social group committing crimes, and successfully avoiding apprehension. Based on these definitions, it would seem that both deterrence and social learning models fall within the realm of rational choice theories.

Contemporary Empirical Investigation

The rise of social scientific interest in deterrence has been credited to the writings of Gibbs in 1968 (Brown & Esbensen, 1988). Previous investigation into the idea of deterrence was generally haphazard and focused primarily on capital punishment (Gibbs, 1968). Gibbs discovered a negative correlation between homicide prison admissions, median number of months served for these admissions, and overall rates of homicide in the community. However, he purposefully stopped short of explicating a detailed deterrence theory at that time. Gibbs authored a book several years later that was devoted to this task (see Gibbs, 1975). This was the start of numerous studies that analyzed aggregate level data to determine a deterrent effect. Until then, the deterrence doctrine was believed to be valid by most criminal justice practitioners, however commonly untested by criminologists (Brown & Esbensen, 1988).

Research on the purported deterrent effect of criminal justice sanctions has changed markedly over the past three decades. Two major tenets of historical deterrence – certainty and severity of punishment – have been tested in a myriad of ways. Initially, researchers calculated certainty of punishment by

analyzing aggregate data to determine the individual arrest risk for specific crimes (Paternoster, 1987). These type of examinations also compared crime rates to clearance rates to determine likelihood of apprehension. Severity was gauged based on the average amount of time served for the offense or calculated by determining the most common punishment for any given crime type (Paternoster, 1987).

Methodological problems arose with the study of deterrence at the aggregate level. For example, correlation bias resulted from comparing crime rates and clearance rates which contained a common element; namely the number of crimes. Researchers therefore searched for more accurate estimations of a deterrent effect (Brown & Esbensen, 1988). They abandoned aggregate-level investigations and turned to survey-based, cross-sectional study designs. In contrast to overall trends and aggregations, these types of investigations looked at an individual's actual perceived likelihood of arrest or punishment, and compared it to his or her personal offending patterns. Researchers queried respondents about their perceptions of the likelihood that a person engaging in specified illegal activities would be convicted. Answers provided, though, may be more a function of previous criminal involvement than of current ideals. This "experiential" effect will be discussed more fully later in this paper.

A distinction has been made between "deterrence" and "perceptual deterrence". The former relates to the *actual, objective* likelihood of being caught and sanctioned by the criminal justice system (Williams & Hawkins, 1986). The

latter, on the other hand, deals more with one's *perceived* likelihood of arrest and punishment (Williams & Hawkins, 1986). Perceptual deterrence studies emerged in the early 1970's, with the first study published by Waldo and Chiricos in 1972 (Paternoster, 1987). It should be noted that these early perceptual investigations failed to incorporate differences between formal and informal sanctions (Nagin, 1998). For example, Waldo and Chiricos (1972) studied undergraduate students and estimated punishment severity by asking respondents what they believed to be the maximum prison penalty for either theft or marijuana use. Informal punishments, such as social disapproval or stigma were not incorporated. Indirect consequences, such as societal condemnation for child abusers, can have a powerful deterrent effect and should be considered when attempting to isolate the overall "punishment" of any proscribed activity.

In an effort to alleviate prevailing criticisms of cross-sectional designs, the next wave of deterrence research turned to longitudinal studies that employed panel designs. These studies questioned respondents at multiple points in time to determine individual perceptions before engaging in illegal activity. While one would assume that this type of design would provide the best test of the deterrence doctrine, results were again mixed, with the majority returning unfavorable findings (Nagin & Paternoster, 1991). Moreover, panel designs have uncovered informal processes such as socialization and morality that play an important role in increasing or decreasing criminality (Klepper & Nagin, 1989).

These longitudinal studies that followed concluded that individual perceptions are relatively unstable over time (Paternoster et al. 1983a). In fact,

some authors noted significant increases in perceived likelihood of punishment when adults entered the criminal justice system (Apospori & Alpert, 1993). For this reason, cross-sectional designs that question respondents about their perceptions of sanction certainty or severity cannot assure proper measurement, and therefore cannot be assumed as a proxy for contemporaneous ideals. This determination is important; a wealth of knowledge on deterrence has been discredited because cross-sectional designs fail to accurately capture personal perceptions about the certainty and severity of criminal sanctioning. It has been argued that cross-sectional studies measure perceptions and delinquency at the same time, and therefore perceptions may not influence delinquency, the opposite may in fact be the case. If general perceptions vary markedly across time, it would be extremely difficult to estimate perceptions relevant to criminal behavior.

Finally, scenario-based studies have emerged with the potential to gauge concurrent feelings about punishment certainty and severity. In these studies, respondents are usually given brief, detailed vignettes regarding the illegal activities of a fictional character. Subjects are then asked to determine the likelihood that the individual in the scenario will be apprehended, and what the punishment will be. Also, subjects are asked what the result would be if it were themselves as the character in the story. Research in this area has offered some limited support for the deterrence theory (for example, see Bachman, Paternoster, & Ward, 1992).

While evidence collected for a deterrent effect based on perceptions of certainty of punishment were blurred by methodological uncertainties, punishment severity has been all but dismissed as a viable explanation of a decrease in offending behavior (Paternoster, Saltzman, Waldo, & Chiricos, 1983b). Indeed, Paternoster (1987:191) summarizes this view by concluding rather confidently that perceived severity "... plays virtually no role in explaining deviant/criminal conduct." Waldo and Chiricos (1972) did not obtain a significant relationship between perceptions of the severity of punishment and admitted criminality. Grasmick and Bryjak (1980), however, provide a notable exception to this assertion. With moderately high levels of certainty, they found perceived severity of punishment had a significant deterrent effect. Admittedly, Grasmick and Bryjak (1980:485) redefined perceived certainty, as "an actor's subjective judgment of how costly to himself the penalty he expects would be." This involves a great deal of variation between different types of offenses, punishments, and, indeed, offenders.

Alternative Explanations

A major criticism of many deterrence studies is that they fail to capture actual temporal order. In early, methodologically weak studies it was difficult to determine whether perceived sanctions affected behavior, or if the behavior affected perceived sanctions (Saltzman, Paternoster, Waldo, & Chiricos, 1982). While this debate subsided marginally with the dawn of longitudinally-based

panel designs, little agreement exists even today. Several competing alternative explanations have been promulgated.

Deterrence theory posits an inverse relationship between perceived sanctions and individual behavior. That is, when the perceived likelihood of apprehension for a specific proscribed activity increases, the number of times a person engages in that activity should decrease. An inverse association does not inherently equate to a deterrent effect. For example, the “naiveté” effect has been uncovered in some survey studies. This explanation suggests that those who have not engaged in criminal activity likely hold “...unrealistically high perceptions of punishment probability...” (Brown & Esbensen, 1988:226).

Conversely, those who have engaged in deviant behaviors have somewhat lowered expectations of punishment (Brown & Esbensen, 1988). For example, a youth who is arrested for the first time is uncertain what lies ahead; a seasoned delinquent, however, has been through the process and knows little will happen to him or her. Once someone has been caught and escapes severe punishment, it may be likely that person will engage in more criminal activity because they have escaped official punishment thus far.

The “overload” effect relates to the criminal justice system’s inability to address an increase in criminal activity (Brown & Esbensen, 1988). With the overload effect, the causal order is the opposite of that which is proposed by deterrence theory. When the crime rate increases, criminal justice resources are spread too thin, resulting in fewer offenders being apprehended and convicted of crimes.

The “incapacitation” effect may be another explanation that is opposite of the intended deterrent effect (Brown & Esbensen, 1988). When more offenders are caught and subsequently incapacitated, the population of individuals at-risk for criminality decreases and the crime rate will likely subside (D’Alessio & Stolzenberg, 1998). In essence, increase effort on the part of law enforcement does not reduce criminal activity. Rather, there are simply fewer criminals free in the community.

The “experiential” effect has also been suggested as a possible alternative explanation. Here, too, causal ordering is reversed. If deterrence is applicable, then an individual refrains from participating in deviant activities because of a fear of future sanctioning. With the experiential effect, individuals adjust their perceptions of punishment certainty and severity based on prior personal experiences with criminal justice agencies. In short, “true” deterrence relates to the relationship between *current* perceptions and *future* offending; the experiential effect is observed when *current* perceptions are based on *prior* involvement in criminality or delinquency (Paternoster, 1987). Again, this issue would not arise if one could show that perceptions remain relatively stable over time.

To recapitulate, the experiential effect, as it relates to the deterrence doctrine, pertains to the notion that perceptions of the certainty and severity of punishment are based largely on previous experiences with punishment and punishment avoidance. In contrast, classical deterrence theorists attempt to make a link between prevailing perceptions and future offending. Cross-

sectional designs that measure only one point in time claim to be measuring deterrence, but in fact may be uncovering experiential effects. This tangential aspect of deterrence is important, however, when attempting to dissect issues relating to delinquency and relevant punishment. If official or unofficial sanctions have any effect on offending, be it a negative or positive effect, previous or subsequent to the offense, surely policymakers would like to know about it. The experiential effect has been more readily discernable than a “true” deterrent effect. In a review of over 30 perceptual deterrence studies, Paternoster (1987) reported an average correlation coefficient for cross-sectional studies (experiential effect) at $-.30$, and at only $-.21$ for lagged measures (deterrent effect). While these statistics indicate weak relationships, they are consistent with the deterrence process.

Researchers note that cross-sectional studies measure current perceptions of punishment certainty and severity based on previous involvement (or lack of involvement), rather than future behavior. While this may differ from “true” deterrence as many have defined it (Paternoster, 1987), the experiential effect, or any relationship between offending (whether previous or subsequent) and official and unofficial sanctioning by the criminal and juvenile justice systems, is not only relevant to future policy endeavors, but also important when formulating correctional goals and missions.

Deterrence Theory Redefined

The deterrence doctrine is supported more consistently today than it was twenty years ago. Empirical evidence of a deterrent effect is much stronger now than it was in the late 1970s (Nagin, 1998). One possible reason for this is the move away from analyzing existing sources of data and employing specific survey and interview instruments in order to better estimate a person's belief about the certainty and severity of punishment under specific circumstances (Chiricos & Waldo, 1970).

In the 1980s, many researchers denounced deterrence as a reasonable explanation of criminal non-involvement because most studies returned findings contrary to the deterrence thesis (Paternoster, 1987). These early examinations into deterrence analyzed large geographic units using aggregate data, whereas more current research was done at the individual level (Waldo & Chiricos, 1972). More recently, a profusion of researchers have studied deterrence using several different methodological techniques with the hope of uncovering conclusive confirmation that either supports or contradicts the theorem (for reviews see Nagin, 1998; Paternoster, 1987; Williams & Hawkins, 1986). Unfortunately, the evidence has been rather mixed.

Williams and Hawkins (1986) reviewed research done on the perceptual properties of general deterrence. They looked at both cross-sectional and panel designs and suggest, "... attempts to isolate a deterrent effect have glossed over the perceptual process implied by a theory of general deterrence" (Williams & Hawkins, 1986:546). They offered a more complete vision of deterrence that

considers informal, indirect punishments in the relationship between perceived fear of apprehension and criminal activity. They stop short of testing this new concept of deterrence, but propose that testing is the next step in the continued exploration of deterrence.

Paternoster (1987) critically reviewed perceptual deterrence research conducted between 1972 and 1986. He pointed out that cross-sectional studies produced the most significant deterrent effects (though he argues this is actually an “experiential effect”) and that later panel studies showed little signs of deterrence. Paternoster (perhaps prematurely) concluded that deterrence theory has progressed about as far as possible, but offered some insight into how new research may be able to look at issues not yet resolved. Specifically, he notes that the vast majority of perceptual deterrence research has been conducted on samples of high school and college students. The next step involves testing deterrence principles on high criminality samples – including adults. Moreover, if cross-sectional designs are to be employed, retrospective questions about perceptions may accurately estimate a deterrent effect of current or future attitudes about offending.

Nagin (1998) reviewed the evolution of deterrence study at the end of the twentieth century and offered suggestions for a research agenda in the twenty-first century. Among these include: (1) looking at what is most effective in deterring criminal activity and understanding why reactions to criminal justice policy fluctuate across time and space, (2) determining what type of sanctions can deter individuals in the long-term, and (3) uncovering the perceived risk of

sanction in terms of *actual* policy as opposed to *intended* policy (Nagin, 1998). Nagin's (1998:3) review of the literature leads him to conclude, "... the collective actions of the criminal justice system exert a very substantial deterrent effect."

As these reviewers have indicated, the extent of research in limited areas is extensive and the findings are inconclusive. In an effort to learn more about the deterrent effect of criminal justice policy, deterrence variables have been reconsidered and re-specified. In 1993, Stafford and Warr proffered a reconceptualization of general and specific deterrence. Contrary to traditional conceptualizations, these scholars suggested that an individual can feel the effects of both general and specific deterrence simultaneously (Stafford & Warr, 1993).

As noted above, general deterrence was originally concerned solely with a non-offender who based their interpretation of the certainty and severity of punishment on the experiences of others. Moreover, specific deterrence pertained primarily to offenders who had been apprehended and punished for their deeds. Stafford and Ward (1993) contend that the same individual can make judgments on the certainty and severity of criminal justice sanction based both on personal and vicarious experiences.

Stafford and Warr acknowledge that general and specific deterrence can affect different people much differently. In the case of a naïve offender, general deterrence would likely have a greater effect (Stafford & Warr, 1993). Clearly, those who have had no experience with the criminal justice system have few personal encounters upon which to base an opinion, except behaviors that go

undetected. At the other end of the continuum is a repeat offender who has had many personal dealings with the law. A knowledgeable offender may place more weight on his or her own experiences rather than that of a stranger, thus being more affected by specific deterrence than general deterrence (Stafford & Warr, 1993). The majority of citizens lie somewhere in between; maintaining perceptions based on both personal and vicarious experiences.

Another augmentation Stafford and Warr suggest relates to those who avoid formal punishment. They suggest that punishment avoidance is equally as important as formal sanctioning when understanding deterrence processes (Stafford & Warr, 1993). Those who manage to escape official apprehension will alter their perceptions of the likelihood of being caught and punished. Specifically, it is likely that one who repeatedly avoids punishment (specific deterrence), or in the same turn those who know others who continually get away with illegal acts (general deterrence), may lower their preconceived ideas about the likelihood of apprehension.

In their re-examination of the deterrence doctrine, Stafford and Warr enumerate four pieces of information that must be gathered in survey designs in order to best test their propositions. Specifically, they note that researchers must obtain:

- (a) persons' perceptions of their own certainty and severity of legal punishment for crimes, (b) persons' perceptions of the certainty and severity of legal punishments for others (presumably those within their immediate social network), (c) self-reported criminal behavior, including

self-reports of direct experience with punishment and punishment avoidance, and (d) estimates of peers' criminal behavior, including their experiences with punishment and punishment avoidance (Stafford & Warr, 1993:133).

According to Stafford and Warr, these essential elements would allow an adequate test of their reconceptualized deterrence theory.

Empirical tests of this reconceptualization have offered supportive evidence. Paternoster and Piquero (1995) reanalyzed existing deterrence data in an effort to shed some light on Stafford and Warr's propositions. Their analysis substantiates major aspects of it. Evidence was uncovered of a concurrent effect for both general and specific deterrence (Paternoster & Piquero, 1995). These authors, however, could not test one very important aspect of Stafford and Warr's reformulation – the effects of vicarious punishment and vicarious punishment avoidance – because they did not have access to that type of data for the youth they were studying. Paternoster and Piquero (1995) also found that in some circumstances criminal justice policy might produce defiance rather than deterrence; therefore personal experiences with official agencies may lead to increased offending in other areas.

Continued examination of this new expansion of deterrence is necessary. Stafford and Warr have contributed an interesting insight into this theory and have enumerated what needs to be incorporated in order to test it. This development will provide scholars with an agenda for testing deterrence variables in the near future.

Offense-Specific Deterrence

Different types of offenses are differentially susceptible to the deterrence argument. Offenses that are characterized as *mala prohibita*, or wrong simply because the law has designated them as illegal, require more formal legal support (Paternoster, 1987). For this reason, some may view the chance of being apprehended and punished greater for crimes such as drug use, prostitution, and other so-called “victimless” crimes. Subcultural support for these types of activities is generally high, so formal policy is the only measure of regulating the behavior. Activities that are wrong because most everyone can agree that they are inappropriate (*mala in se*) such as theft or murder require little additional legal support from criminal justice agencies (Paternoster, 1987). For these types of activities, formal criminal sanctioning provides little more deterrence for potential criminals because society can control these activities without the added support of law enforcement. In addition, there are other acts that may not easily fit these categories, such as moral issues that some believe to be wrong while others do not (e.g. abortion or medical marijuana use). The effect of formal policy on these types of behaviors is unclear.

It has also been suggested, that theft and other “instrumental” offenses are more affected by threat of legal sanction than “expressive” offenses such as drug and alcohol use (Paternoster, 1987). Instrumental offenses are those in which something of value is obtained or there is some other direct benefit to the offender. Expressive acts, on the other hand, are actions that on the surface appear to have no explicit purpose or fail to provide any concrete gain from the

behavior. In sum, then, many researchers attempting to differentiate between different types of crime have uncovered inconsistent results (Williams & Hawkins, 1986).

Formal versus Informal Punishment

While many assume deterrence relates solely to officially sanctioned punishments, others argue that informal reproof, such as community disapproval, also contributes to a deterrent effect (Nagin & Paternoster, 1991). Too often, though, informal effects are overlooked in deterrence research. Fear of stigmatization and disapproval of close family and friends may have a greater deterrent effect for some potential offenders than formal sanctions such as incarceration. Threatening intimate relationships by being labeled as “delinquent” or “criminal” may be too high a risk for others. Clearly individuals with more stakes in conformity are less likely to jeopardize conventional community ties and are then more readily deterred by threats of official punishment (DeJong, 1997; Nagin, 1998).

Extralegal consequences also play a role in an individual's desistance from criminal activity. Reputational damage may result for those who have close ties to conventional community. For many, negative reactions from relatives and neighbors may be more of a deterrent than formal criminal justice sanctions.

Deterrence Theory Summarized

Deterrence theory has evolved in a number of different ways, and attempts at measuring its salience have proliferated. Early cross-sectional studies found a marginally deterrent effect for certainty of punishment, however this effect was later criticized as being based on experience rather than perceptions. Using panel designs, the next wave of deterrence research better isolated the temporal ordering of theorized deterrence, but largely failed to uncover significant findings. More contemporary scholarship has expanded the definition of deterrence, including both formal and informal punishments as well as personal and vicarious experiences upon which to base perceptions.

There are three basic elements to perceptual deterrence: (1) sanctions, (2) knowledge of those sanctions, and (3) perceptions of the likelihood of apprehension for breaking the law to which the sanctions are the punishment. As discussed above, sanctions can include both formal sanctions such as prison and probation, and informal punishments such as community service, or public condemnation. The effect of each type of sanction, whether formal or informal, depends on the individual as well as the context within which the crime was committed. In order for deterrence to work, criminals must have knowledge of any sanctions that may be exacted if apprehended for breaking the law. If a young man does not know that he can be punished for stealing, he likely will not think anything is wrong with engaging in that activity. Each offender has some idea about the likelihood that he or she will be caught for participating in certain

activities. These perceptions are learned through personal contacts with law enforcement and the knowledge of others in that situation. In short, sanctions are intended to deter potential criminals from breaking the law. These sanctions must be known in order to effectively deter an individual. Finally, the likelihood of apprehension must be high enough to make each prospective criminal perceive a possibility of being caught, and in turn subject to those sanctions. This is the deterrence process in action.

Deterrence theory is just one of many criminological theories being examined to date. A general overview of the underlying principles of deterrence theory has been presented, highlighting many of the criticisms of available research while noting areas suggested for future study of deterrence. The following chapter will turn to the premise of this particular study and present information promoting the purpose of studying deterrence within the context of the juvenile justice system.

CHAPTER II

THE CONTEMPORARY JUVENILE JUSTICE SYSTEM

This chapter will explain the context within which deterrence theory is being tested. An argument will be presented that will show that the study of deterrence within the juvenile justice system may be more fruitful today than when originally tested. Changes in the juvenile court, coupled with current negative public attitudes about youthful criminals in general, will be allow for a good test of deterrence principles.

Historical Review

Established in 1899, the juvenile justice system was proffered as an alternative to the harsh adult system (Forst, 1995). The juvenile system was conceptualized as a more humane way to address negative behaviors of youth, with the goal of rehabilitating and returning them to society (Van Vleet, 1999). Youthfulness was recognized as a mitigating factor because children were less physically and cognitively developed.

Several reasons were given for the creation of a separate juvenile court. First, some felt that punishments prescribed in the adult court were too cruel for youthful offenders (Forst, 1995). Others, aptly labeled “child savers,” aimed to save children from the degradation of adult prisons (Forst, 1995). Finally, it was argued that the formalities of the adult court were not necessary and inappropriate for juveniles (Forst, 1995).

Progressive reformers acknowledged the failings of the adult system and constructed a system that attempted to rehabilitate troubled youth and get them back on track. Thus, the court was de-formalized and sanctions were mitigated accordingly. Many aspects of the criminal court were utilized in the construction of the new juvenile system. Official labels were modified, however, to avoid formal stigmatization. While adults were put on trial, youth were adjudicated; when adults were found to be criminal, youth were delinquent; where adults received a sentence, youth were given a disposition (Forst, 1995). This was to keep young people from being labeled as “bad,” with hope that they would someday be cured of their current ailment.

Originally, rehabilitation was the mission of the juvenile justice system (Mack, 1995). Individualized justice was designed to address the needs of the specific individual, not the behavior. Dispositions were prescribed that intended to improve the child. To this end, most sentences were indeterminate in nature, which meant the duration was unspecified and dependent on successful treatment progressing for the individual.

The legal concept of *parens patriae* designated the state to act in the best interest of the child when the parents were unable to provide adequate care (Forst, 1995). Additionally, courts were instructed to act *in loco parentis*, or in place of parents, when the parents failed to provide proper authority over their children (Forst, 1995).

Changes in the Juvenile Court

The juvenile justice system has seen a prominent shift in recent years. Beginning in the civil rights era of the late 1960s, the Supreme Court began to reshape the orientation of the juvenile court with several notable cases. Landmark decisions handed down in *In re Gault* (1967), *In re Winship* (1970), *Breed v. Jones* (1975), and others have gradually transformed the juvenile court (Feld, 1997). These cases, among others, afford youth many procedural protections previously reserved only for adults. For example, *Gault* granted youth the right to counsel, notice of charges, cross-examination, and protection from self-incrimination (Siegel and Senna, 1997). *Winship* increased the burden of proof for cases that may result in commitment to "beyond a reasonable doubt" (Siegel and Senna, 1997). In addition, *Kent v. United States* (1966) and subsequent individual state legislation has allowed for the efficient transfer of incorrigible youthful offenders to the adult court for disposition. These and many other changes have erased any previously explicit differences between the juvenile and criminal justice systems (Feld, 1997).

More recent changes have also appeared to transform the juvenile court. Some political forces are attempting to transform the juvenile justice system from a rehabilitative orientation to a more retributive and punitive institution (Lipsey, 1999). This movement is a reaction to perceptions of a recent increase in violent juvenile behavior. Sensational actions of a few adolescents have made juvenile jurisdiction a topic of great political concern. School shootings across the country have resulted in a general public fear of America's youth. Responding to public

outcry and condemnation, legislatures have enacted new laws to punish juveniles, abandoning any original motives of rehabilitation.

Procedural protections were not traditionally considered for juveniles because the state was attempting to help or treat, not punish, the youths. The movement to afford youth more rights should be considered evidence of a changing court. If the purpose of the juvenile court continued to be to help the youth, the additional protections would not be necessary.

Deterrence and the Juvenile Court

Initially, deterrence research compared aggregate crime rate data to prisoner admissions during a specified period of time. Once interest turned to perceptual deterrence in the early 1980's, studies were conducted largely on juvenile samples; typically, youth in their crime-prone high school years were surveyed or interviewed. At this stage, youth were utilized so often that one reviewer of deterrence research dubbed it the "science of sophomores" (Paternoster, 1987:214). As briefly illustrated above, the juvenile justice system has changed much over the past twenty years. Youth, therefore, may not have been the best subjects in this type of research at that time.

The basic premise of deterrence theory is that laws are used to control undesirable behavior by threatening a potential punishment. Statutory law has dictated specific punishments dependent on the severity of the offense and other related factors. To illustrate, a person may be more likely to risk shoplifting

because the punishment is a monetary fine, but unwilling to steal a car for fear of incarceration.

Moreover, youth can see that many friends who shoplift do not get caught, and if they do they are often released to their parents who do little to punish them. Changing opinions about juvenile crime may result in increased surveillance and less tolerance for minor crimes such as petty theft. This may lead to more formal prosecution of such crimes and more severe punishment. With these issues in mind, deterrence theory may be more relevant to youth today than it was when originally tested in the 1980's. As such, it is anticipated that deterrence theory will be more faithfully supported in contemporary investigations.

CHAPTER III

DATA AND METHODS

The Skillman Cohort

The data utilized for this analysis were originally collected for the Skillman Foundation in an effort to evaluate a community-based initiative for low-level juvenile offenders. This group offers a different perspective of delinquency deterrence research in that it looks at early offenders who are not in maximum-security detention centers. Reviewing relevant post-adjudication information, these youths were eligible to be placed in a day treatment program that aimed to keep community and family ties intact. The program typically lasted between nine and 12 months. In-depth interviews were conducted at four points: immediately after admission into the program, and after six, 12, and 18 months. While this study was not originally designed to answer every deterrence question unconditionally, it will offer additional information with which to address the issue from yet another angle.

There were a total of 230 youth interviewed with some attrition from one time period to another. For the purposes of this longitudinal study, missing cases were excluded, therefore the minimum valid N at any level of analysis is 174. It merits notation that approximately 65% of the sample was initially interviewed while in detention or at an assessment/reception center. It is unclear how this may affect the responses given at any stage, as subsequent interviews at the respondent's home may have differing information because of the location. For

example, a youth who is in detention may be more willing to offer his or her time for an interview, whereas when at home the motivation may be to get the interview over with as quickly as possible.

Current Study

Many deterrence scholars have suggested improvements in deterrence research with the hope that some more definitive conclusions can be drawn. First, the utilization of panel designs is advised to more accurately estimate temporal order among key variables (Paternoster, 1987). As discussed at length previously, cross-sectional designs are not necessarily measuring deterrence, but experience. The current study is attempting to address this important issue by measuring perceptions of apprehension certainty at time 1 and the extent to which the respondents engaged in any proscribed activities at time 2.

Second, Stafford and Warr's (1993) reconceptualization suggested the inclusion of vicarious experiences of others in the deterrence model. The questions employed in this sample asked youth how many people (out of 100) in their neighborhood would be caught for committing each of six specific criminal acts. It is very likely that, in answering the questions, youth used information relating to their personal experiences as well as knowledge of the experiences of close friends in the neighborhood, as was suggested by Stafford and Warr. Third, Nagin (1998) advised that demographic characteristics should to be disaggregated where possible for analysis among and between differing population compositions. Due to the modest sample size, it may be difficult to

statistically assess the effects of deterrence in different demographic groups.

Ethnicity will, however, be incorporated into this study at a basic level.

In addition, this analysis will determine whether perceptions vary across time. Williams and Hawkins (1986) originally posed this question almost fifteen years ago – yet still no clear answer exists. As noted above, several authors have concluded that perceptions do in fact change from one period to the next (Paternoster et al., 1983). For this reason, cross-sectional designs have been criticized, as they do not measure perceptions and self-reported criminal behavior contemporaneously. If it can be shown that perceptions remain relatively stable, findings from previous cross-sectional studies will be reinstated as evidence of a deterrent effect.

It has been argued that young people have very unstable beliefs (Williams & Hawkins, 1986). That is, their perceptions may change from one year to another, or even from one day to another. There are many reasons why a young person's perceptions may change. Punishment avoidance may result in diminishing beliefs in the likelihood of apprehension. Friends or relatives who brag about successfully breaking the law may contribute to this relaxed belief. Conversely, increased media attention to crime control efforts by local policing agencies may increase one's perception of the likelihood of being arrested and sanctioned. Close friends who are apprehended for breaking the law for the first time may artificially inflate one's belief in the efficiency of the criminal justice system. Simply growing older may also promote changing perceptions. As they

age, developmental changes affect how youth see the world around them – they experience new activities, meet new people, and are exposed to different ideas.

Historically, deterrence theory has been more applicable to adults than youth. This is due largely to the major differences between the adult and juvenile systems. The adult system has a retributive focus functioning principally by incarcerating convicted offenders until a prescribed punishment is served. Very little attempt is made at reforming the individual or repairing the harm done to the victim. The focus is exclusively on punishment. Contemporary crime control techniques promote the deterrence ideal. Harsher sentences and increased utilization of capital punishment is thought to “deter” others from committing similar acts. As discussed above, this ideology is also shifting to the juvenile system.

Measurement Issues

A common issue in deterrence research, and indeed any inquiry in the social sciences in general, relates to the extent to which observable variables are actually representative of the behavior an examiner is attempting to measure. This problem is further confounded when the behavior is a perception or belief as these are not at all observable. The only way to determine what an individual is thinking is to ask him or her either through surveys or interviews. Even then, the responses obtained may not communicate to the actual idea researchers were attempting to capture.

For this particular study, attitudes about the certainty of punishment are estimated using specific questions asked during personal interviews. Specifically, youth were asked how many people (out of 100) would be caught for committing different crime types. If they report a high number would be apprehended, then it would follow that they “perceive” the likelihood of apprehension being high for each crime (relative to the others). If the respondent reports only a few law breakers would be caught, then their “perception” would be that the certainty of punishment for that crime is lower.

Measuring the extent to which the respondents engaged in delinquent activities is a bit more straightforward, but not without potential limitations. Self-reported delinquency was used as a measurement of actual involvement in the proscribed behavior. This method of calculation has been criticized because youth may over- or underreport certain activities in order to impress friends or hide unpopular behavior. Moreover, respondents were asked how many times in the previous six months they engaged in the acts. This type of question may result in erroneous estimations due to memory problems or other difficulties in determining an accurate figure.

On the other hand, using self-reported delinquency has become commonplace in the research of anti-social behavior. Self-reported delinquency is useful because it can uncover those activities that do not necessarily come to the attention of law enforcement (Osgood, O'Malley, Bachman, & Johnston, 1989). Also, utilizing self-reporting, as opposed to official measures taken from police departments, a wider array of behaviors can be obtained. The behaviors

are not limited to index crimes, which is the types of data official law enforcement agencies would have readily available.

Variables

Dependent variables. For this investigation, several variables will be combined to test for a deterrent effect. In general, dependent variables will include self-reported delinquency measures. Three types of delinquency will be explored: property offenses, personal offenses, and substance use. Each offense category will contain different offenses specific to their focus. Property offenses will be measured by the extent to which the respondent reported committing theft and damage to another's property. Personal offenses include assault and robbery. Substance use will be measured with the frequency of drug and alcohol use. Drugs are limited to marijuana, cocaine, and street and hard drugs.

Each self-reported delinquency measure is a continuous variable, and thus a higher score would indicate more involvement with the particular activity. The variables were combined to create a scale that varies depending on how many delinquent activities the respondent reported for the previous six months.

Independent variables. The independent variables for this study are the perceptions respondents' hold with regard to each of the aforementioned offense types. Each self-reported delinquency measure corresponds to a perceptual question. Specifically, youth were queried as to how many people in their neighborhood (out of 100) would be caught for participating in each of the following activities: public drunkenness, drug use, theft, damage to property,

robbery, and assault. Higher scores indicate an increased likelihood of apprehension.

Control variables. Several control variables will be included in the multivariate model. Following the work of previous deterrence researchers, specific variables were chosen for their theoretical influence on the overall dependent variable (self-reported delinquency). To account for rival factors, the following variables will be controlled for: peer involvement, morality, and ethnicity. These variables have emerged from previous deterrence research as important factors in explaining variation within offending patterns.

Peer involvement includes questions about the delinquent behavior of close friends to the respondent. Specifically, the youth is asked how many of his or her friends engage in a specific type of delinquency. Morality measures the extent to which the respondent feels some activity is or is not wrong. Ethnicity for this analysis is coded as a dummy variable indicating if the respondent is African American or not. Because this sample contains a high percentage of African Americans (63.5%), and because of low percentages of other minority groups, comparison across ethnic groups was impossible. Therefore, ethnicity was dichotomized to “Black” and “nonblack.”

Table 1 summarizes the variables used in each scale. Also included is an explanation of what the scale measures. The dependent variables (self-reported delinquency), independent variables (perceptions), and control variables (peer association and morality) are delineated into three crime types: property, personal, and substance use.

Table 1. Scales Used/Variable Names

Perception Scales (0-200: 0= no one caught, 200=everyone caught)

- Property Crimes
 - yNde3 – Theft \$10 to \$100
 - yNde9 – Damage to property
- Personal Crimes
 - yNde11 – Robbery
 - yNde19 – Assault
- Substance Use
 - yNde5 – Alcohol
 - yNde7 – Drugs

Delinquency Scales (0-2003: frequency of self-reported delinquency)

- Property Crimes
 - yNsd6 – Theft \$10 to \$100
 - yNsd7 – Damage to property
- Personal Crimes
 - yNsd1 – Hit someone in anger
 - yNsd3 – Robbery
- Substance Use
 - yNsd14 – Drugs
 - yNsd15 – Alcohol

Peer Association Scales (2-10: 2=no friends, 10=all friends)

- Property Crimes
 - yNep2 – Damage to property
 - yNep9 – Stolen something more than \$50
- Personal Crimes
 - yNep5 – Hit or threaten to hit someone
 - yNep11 – Beat someone up
- Substance Use
 - yNep3 – Marijuana or hashish
 - yNep6 – Alcohol

Morality Scales (2-8: 2=not at all wrong, 8=very wrong. **1-4: 1=not at all wrong, 4=very wrong)

- Property Crimes
 - yNad2 – Damage to Property
 - yNad9 – Stolen something more than \$50
 - Personal Crimes**
 - yNad5 – Hit or threaten to hit someone without reason
 - Substance Use
 - yNad3 – Marijuana or hashish
 - yNad6 – Alcohol
-

Reliability coefficients were calculated to determine if the individual variables included in the scales are measuring the same concept. Results of this test are summarized in Table 2. In general, the alpha levels indicate that the perception, peer association, and morality scales all appear to be measuring similar constructs. The delinquency scale, however, seems a little weak. There are a number of reasons for this finding. Notably, within each delinquency type, there are two relatively different offenses. For example, personal offenses are measured using the respondent's self-reported rates of assault and robbery. While youth may report a large number of assaults (which could be any physical assault, from hitting a friend to beating up a stranger), the frequency of robbery is much lower. Indeed, whereas fewer than 40% of the youth in this sample reported never having assaulted another person in the past 6 months at time 2, 77% of the same youth reported not having robbed anyone during the same period. This also indicates that the distributions of delinquency are pretty positively skewed. This may have a negative effect on the reliability of the scales utilized as well.

Table 2. Reliability Coefficients for Scales Used (Alpha)

Scale	t1	t2	t3	t4
<i>Perception</i>				
Property	.55	.62	.73	.66
Personal	.54	.48	.50	.66
Substance Use	.67	.73	.73	.80
Total	.70	.76	.75	.80
All t				.84
<i>Delinquency</i>				
Property	.20	.43	.27	.07
Personal	.00	.14	.03	.07
Substance Use	.90	.46	.11	.00
Total	.11	.34	.40	.38
All t				.18
<i>Peer Association</i>				
Property	.71	.72	.77	.79
Personal	.67	.68	.78	.75
Substance Use	.80	.84	.89	.91
Total	.80	.81	.85	.90
All t				.88
<i>Morality</i>				
Property	.53	.68	.69	.64
Substance Use	.73	.81	.82	.83
Total	.55	.63	.63	.00
All t				.61

Perceptual Stability Variables

The second aspect of deterrence being tested is the degree of perceptual stability. For this analysis, the dependent variable is perceptions of apprehension certainty as evidenced by the respondent's score on the perception scale. Again, this scale is comprised of two variables for each offense type being tested and ranges from 0 to 200; a lower score meaning low likelihood

of apprehension and a high score indicating a perception of an increased likelihood of apprehension.

The independent variable for this section of analysis is time. The contention being tested is that perceptions change over time. In effect, perceptions vary according to time (and many other variables, which will not be tested here). The purpose of this examination is not to test what causes perceptions to vary, but simply to determine whether or not they do in fact change over time.

Methods

Two major aspects of deterrence will be tested in the current investigation: the causal processes of deterrence and perceptual stability. Specifically, two questions will be explored: (1) Does the criminal behavior of youth vary depending on perceptions of the certainty of punishment, as deterrence theory suggests? and (2) Do perceptions vary across time? To address the former question, a test will determine if there is a negative correlation between the amount of times the youth has engaged in a number of delinquent acts and their perceptions of apprehension certainty.

The longitudinal nature of the data allows for several combinations of length between perceptions and activities. As noted above, some researchers have questioned cross-sectional data because it measures perceptions and self-reported delinquency at the same time. This is actually an experiential effect: current perceptions based on previous experiences. In this test, perceptions will

be measured at one point and correlated with self-reported delinquency at a later point in time. This assures an accurate test of the deterrence hypothesis.

At the bivariate level, correlation and regression will be used to test the relationship between perceptions of punishment certainty and frequency of engagement in a specific activity. Multivariate regression will then test perceptual measures controlling for the other common theoretical predictors of crime mentioned: peer involvement, morality, and ethnicity.

The second question that will be investigated is the extent of perceptual stability. To test this, a matched pair t-test will be employed to measure variation in perceptions from one time point to another. Three different time lags will be tested: 6 months, 12 months, and 18 months. It will be interesting to see if perceptions vary more in the short-term (6 months) than in longer periods (12-18 months).

CHAPTER IV

RESULTS

The first stage of the analysis will focus exclusively on testing for a deterrent effect. Univariate, bivariate, and multivariate findings will be discussed respectively. Following, will be a test of perceptual stability.

Univariate Statistics

This section will provide descriptive information on the data set utilized as well as the relevant variables being tested in this analysis. Table 3 summarizes descriptive data based on the sample as a whole. This can be used to determine external validity – whether the findings here are generalizable to other populations.

Table 3. Descriptive Information for Skillman Cohort. Total N = 230

<i>Ethnicity</i>	
African American/Black	63.5%
White	23.5%
Latino	1.7%
Native American	.4%
Other	1.7%
Missing	9.1%
Median age at first interview	16 years old
<i>Grade level</i>	
6 th	2.2%
7 th	3.5%
8 th	10.4%
9 th	16.5%
10 th	11.3%
11 th	1.3%
12 th	0.4%
Missing	53.8%
<i>Offenses type</i>	
Property	35.2%
Person	18.7%
Drug	11.7%
Other*	23.9%
Missing	10.4%

*Other offenses include: truancy, violation of probation, incorrigibility, curfew, weapons violations, fleeing police, insubordination, and uttering in public.

As was outlined in the previous chapter, several scales will be used to test specific delinquency types in the deterrence model. Specifically, delinquency, perception, peer association, and morality scales will be used for property and personal crimes and substance use. Tables 4-7 provide basic descriptive data for these scales. Greater explanation of the variables included in the scales was presented in Table 1. Please note that missing cases were removed from every level of analysis.

Table 4. Univariate Statistics for Perception Scales. N = 189-209

Scale		Missing	Mean	Std. Dev.	Min	Max
<i>Perceptions</i>						
t1	Property	21	82.4	56.5	0	200
	Personal	21	74.3	55.9	0	200
	Substance	21	56.3	61.5	0	200
t2	Property	36	72.3	51.0	0	200
	Personal	36	72.4	53.2	0	200
	Substance	37	48.7	55.5	0	200
t3	Property	35	68.4	53.4	0	200
	Personal	34	72.5	52.1	0	200
	Substance	34	37.9	46.9	0	200
t4	Property	41	65.8	50.7	0	200
	Personal	40	70.3	53.1	0	200
	Substance	41	41.7	53.9	0	200

Table 5. Univariate Statistics for Delinquency Scales. N = 190-196

Scale		Missing	Mean	Std. Dev.	Min	Max
<i>Delinquency</i>						
t1	Property	23	12.0	82.7	0	1020
	Personal	21	27.4	189.5	0	2003
	Substance	21	23.8	122.1	0	1400
t2	Property	37	4.2	15.7	0	136
	Personal	36	3.7	12.6	0	122
	Substance	35	13.8	58.6	0	550
t3	Property	34	1.8	11.1	0	130
	Personal	34	2.6	7.9	0	55
	Substance	34	2.7	16.6	0	200
t4	Property	40	1.1	7.8	0	100
	Personal	40	1.3	3.2	0	20
	Substance	40	2.2	14.4	0	182

Table 6. Univariate Statistics for Peer Association Scales. N = 189-209

Scale		Missing	Mean	Std. Dev.	Min	Max
<i>Peer Association</i>						
t1	Property	24	4.6	2.3	2	10
	Personal	23	4.9	2.3	2	10
	Substance	24	6.2	2.6	2	10
t2	Property	36	4.8	2.3	2	10
	Personal	36	5.2	2.5	2	10
	Substance	37	6.3	2.7	2	10
t3	Property	36	4.1	2.1	2	10
	Personal	38	4.6	2.4	2	10
	Substance	37	5.7	2.8	2	10
t4	Property	46	3.8	2.0	2	10
	Personal	45	4.0	2.1	2	10
	Substance	44	5.4	2.8	2	10

Table 7. Univariate Statistics for Morality Scales. N = 184-208

Scale		Missing	Mean	Std. Dev.	Min	Max
<i>Morality</i>						
t1	Property	23	7.35	1.05	2	8
	*Personal	22	3.62	.67	1	4
	Substance	22	6.36	1.77	2	8
t2	Property	35	7.36	.98	3	8
	*Personal	35	3.60	.71	1	4
	Substance	37	6.34	1.76	2	8
t3	Property	34	7.39	.94	3	8
	*Personal	34	3.64	.60	1	4
	Substance	36	6.44	1.73	2	8
t4	Property	46	3.80	1.99	2	8
	*Personal	40	3.65	.54	1	4
	Substance	40	6.54	1.63	2	8

*Personal measure is only one variable

As can be seen in Table 4, respondents reported that they perceived the likelihood of apprehension for substance abuse crimes to be lower than that for personal or property crimes. Also, except for t_1 , youth believed the likelihood of apprehension for personal crimes to be greater than for property crimes. In Table 5, high standard deviations and low means indicate a highly dispersed sample distribution. Also noteworthy is the high numbers of reported delinquent acts. For example, one youth reported 2003 personal crimes during the 12 months prior to t_1 . These outliers may have negatively affected the analysis, and in the future may be removed.

In Table 6, it is revealed that most respondents had more friends engaging in substance use than personal or property crimes. Surprisingly, though, youth reported that more friends committed personal crimes than property crimes. Finally, Table 7 presents information about how immoral the youth perceived the specific crimes. It is evident that the morality of the crime types did not change significantly from one time to another, save property crimes at t_4 for some unknown reason.

Bivariate

To test for a deterrent effect, correlations were computed between perceptions at time 1 (t_1) and delinquent behavior at 6-month intervals following the initial interview (t_2 , t_3 , and t_4). At the initial interview, youth were asked about the likelihood of being apprehended for a number of proscribed activities. For a deterrent effect to emerge, delinquent behavior must depend on previously held

perceptions of the certainty of punishment. Theoretically, youth would think about the likelihood of being apprehended when deciding whether or not to commit an act. A theoretical diagram of this bivariate relationship is illustrated below.

Figure 1. Theorized Bivariate Causal Diagram



This illustration shows the theory being tested here – that perceptions cause delinquent behavior. That is, if one’s perception of the certainty of punishment is high, he or she will not engage in delinquent activity. In turn, if one believes that the likelihood of apprehension is low, he or she may engage in more deviant behavior.

Table 8 shows that there are no significant correlations between perceptions and delinquency at any interval. Also important is the finding that only some of the correlations are negative. If deterrence theory were supported, there would be a significant negative correlation between all of the variables tested here. Clearly delinquent behavior is not dependent on perceptions in this population.

Table 8. Bivariate Correlation between Perceptions of Arrest and Delinquency

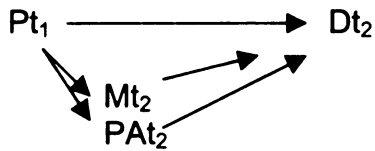
Offense Type/Lag	N	Pearson Correlation	Sig.
<i>Property</i>			
6 months	172	-.051	.506
12 months	178	.026	.730
18 months	174	.020	.791
<i>Personal</i>			
6 months	173	.034	.653
12 months	178	-.020	.795
18 months	174	-.025	.745
<i>Substance Use</i>			
6 months	174	-.092	.225
12 months	178	.012	.873
18 months	174	-.034	.653

Multivariate

Three additional variables were included in the multivariate model.

Previous deterrence research has included these variables, and separately each variable has had some association to delinquency in other research. Peer association, morality, and ethnicity are the control variables included. The theoretical relationship is displayed in Figure 2. Ethnicity is not included in the pictorial model because its inclusion is simply an attempt to exclude a rival causal factor. Note that perceptions at t_1 may influence the dependent variable (delinquency) as well as the other independent variables (peer associations and morality) at t_2 .

Figure 2. Theorized Multivariate Causal Diagram



Ordinary least-squares regression was employed to determine how much of the variation in delinquency is explained by perceptions of apprehension certainty and other important variables discussed above. Results of this statistical test are presented in Tables 9-11 below.

Table 9. Multiple Regression Model Statistics (Property Crimes). $R^2=.008$

Variable	B	Beta	t	Sig.
Constant	6.506			
Perceptions Scale	-.011	-.062	-.789	.431
Peer Association Scale	-.168	-.036	-.452	.652
Morality Scale	-.112	-.010	-.131	.896
Is Respondent Black?	-1.500	-.065	-.831	.407

Table 10. Multiple Regression Model Statistics (Personal Crimes). $R^2=.050$

Variable	B	Beta	t	Sig.
Constant	-.380			
Perceptions Scale	-.005	.026	.330	.742
Peer Association Scale	.615	.139	1.787	.076
Morality Scale	.792	.049	.641	.522
Is Respondent Black?	-4.045	-.167	-2.154	.033*

Table 11. Multiple Regression Model Statistics (Substance Use). $R^2=.040$

Variable	B	Beta	t	Sig.
Constant	-3.236			
Perceptions Scale	-.040	-.048	-.609	.543
Peer Association Scale	2.848	.156	1.911	.058
Morality Scale	.652	.024	.296	.767
Is Respondent Black?	-8.857	-.083	1.079	.282

*p < .05

As is evident from the tables above, delinquent behavior is not dependent on previously held perceptions while controlling for peer associations, morality, and ethnicity. Moreover, the entire model explains less than 5% of the variation in delinquency levels for any offense type. Notably, Black youth in this sample are likely to commit approximately 4 fewer personal offenses on the delinquency scale. This relationship was the only one that proved to be statistically significant.

While this analysis was computed using perceptions at t_1 and delinquency, peer associations, and morality at t_2 , (6 month lag) additional analysis was calculated at each of the other lags (12 and 18 months). The results of this analysis did not differ significantly from that in tables 9-11, and therefore was not reported.

Perceptual Stability

The other purpose of this research was to determine the extent to which perceptions vary from one point in time to another. Perceptual stability, it was argued, would provide strength to previous cross-sectional research supporting a

modest deterrent effect. For this stage of the analysis, a matched pairs t-test was employed to statistically test variations in perceptions from t_1 to t_2 , t_3 , and t_4 . Perceptual stability was determined by calculating the mean perceived risk of arrest at time one (t_1) and comparing it to time two (t_2), time three (t_3) and time four (t_4) using the matched pairs t-test. Each time period is 6 months from the previous measure. The results of this test are summarized in Table 12.

Table 12. Matched Pairs T-Test

Lag	N	Mean Diff.	t	Significance
<i>Property</i>				
6 months	173	7.15	1.446	.150
12 months	173	-1.52	-.311	.756
18 months	173	4.97	.989	.324
<i>Personal</i>				
6 months	177	13.81	2.723	.007**
12 months	178	-.43	-.094	.925
18 months	178	15.89	3.389	.001**
<i>Substance Use</i>				
6 months	173	17.54	3.402	.001**
12 months	174	2.19	.415	.678
18 months	173	13.22	2.336	.021*

*p < .05

**p < .01

In the majority of offense types and time lags, perceptions of arrest certainty increased (exceptions include all property crimes, personal crimes, and substance use with a 12 month lag). Surprisingly, in every case perceptions increased six months later (significantly for personal crimes and substance use), decreased to near what was reported at t_1 , then increased again to t_2 levels.

These findings indicate that perceptions do vary markedly in a relatively short span of time (between 6 and 18 months). The implication of this is that previous cross-sectional studies that were criticized for measuring an experiential effect may in fact be missing the deterrence process.

CHAPTER V

DISCUSSION

Findings

Several important findings emerged from this study. Notably, deterrence did not appear to be the primary motivation influencing the behavior of the youth in this sample. While controlling for peer associations, morality, and ethnicity, there was no significant relationship between perceptions of apprehension certainty and delinquent behavior. Consistent with the deterrence thesis, in all instances relationships were negative, though statistically insignificant.

Another significant finding that was uncovered was that perceptions appear to vary over time. In all cases, perceptions of apprehension certainty increased at six months, decrease to near original levels at 12 months, then increased once again at 18 months. In short, the youth's perceptions of certainty of punishment were not stable for any of the offense types studied here.

The reasons for the instability in perceptions are unclear. The obvious pattern that emerged, however, indicates that some phenomena occurred 12 months after initial placement in the program where youth seemed to alter their perceptions to previous levels. Since the program these youth were sentenced to typically lasted 9-12 months, at the 12-month period the youth may have returned to a pre-program state. That is, they returned to their old habits and previous lifestyle.

Limitations

There are several limitations of this research that merit mentioning. First, the analysis is based on a relatively small sample size. As is problematic with longitudinal endeavors, sample attrition affected the number of cases analyzed in any given function. In some instances, the number of valid cases ranged from 175-200. Statistically, this shortcoming results in difficulty in obtaining significant relationships. Therefore, the few significant findings uncovered carry more weight, and other significant relationships may likely emerge with a larger sample size.

While the study claims to be longitudinal, it actually only covers the course of 18 months. Whether or not this is enough time to determine changes in perceptions is yet to be determined. The appropriate lag for deterrence research has not been specified. In every instance in this sample, though, deterrence was not supported at any length of lag (6, 12, and 18 months).

In addition, the population from which the sample was drawn consists only of adjudicated youth who were committed to the state for some type of disposition. As such, the findings can only be generalized to a very specific population. No comparison group of non-delinquents was available. No conclusions, then, can be made based on youth in general. Also, since the sample included youth who were already involved in the juvenile system at some level, it is probable that they had very little to lose, and were therefore undeterred because the punishment was not threatening to them. If a comparative sample could have been secured, this explanation might have been clarified.

Conclusions and Policy Recommendations

Results of this study add further fuel to the deterrence debate. Two important findings were revealed: The deterrence process was not supported and perceptions of the certainty of punishment appear to change over time. These findings do not support the view of deterrence theory as an applicable explanation of criminal behavior. Delinquency rates did not appear to vary according to previously held perceptions. Cross-sectional studies that had uncovered a deterrent effect may not be useful because perceptions can change markedly over a short period of time.

As perceptions did vary in this sample, the next stage for this research would seek to determine why perceptions changed. Some speculations were presented above, however very few empirical efforts have been focused in this area. Clearly, uncovering what variables contribute to changing a person's views about apprehension certainty is important. If these variables could be isolated, then it may be possible to use deterrence as a way to alleviate deviant tendencies at certain stages. That is, of course, if delinquent behavior was dependent on perceptions, which was not the case in this sample.

The crux of this argument relates to the transformation of the juvenile court into one that is more punitive than in the past. This contention is far from exclusively supported and the reasons given for this assertion are scarcely adequate to support this thesis. Moreover, even if the arguments were such that an academic were convinced, it is not to say that a youth would understand, let alone agree. Therefore, if the juvenile court has shifted as has been suggested

in this paper, it is doubtful that the subjects of the study, adjudicated youth, have the capacity or understanding to know that the change has occurred.

It is important to continue scholastic exploration into the causes of crime. This study cannot adequately prove or debunk any particular theory. It is doubtful that even ten studies could accomplish this goal. Additional analysis not presented revealed a significant relationship between delinquency and peer associations at the bivariate level. Furthermore, the relationship between morality and delinquency was significant at the bivariate level. In fact, when peer association and morality were included in a multivariate model, several significant relationships emerged with a greater amount of explained variance. However, once included in a model with perceptions of apprehension certainty, these significant relationships disappear.

These findings lead this author to believe that other theories may have more merit than deterrence. Differential association, postulated by Edwin H. Sutherland in the 1930's and 1940's, addresses the relationship between peer associations and delinquency thoroughly. Essentially, Sutherland argues that criminal behavior is learned through interactions with others (Vold, Bernard, & Snipes, 1998). The sample tested here provides more support for this explanation than that of deterrence. Bivariate analyses conducted on this sample not presented in this study indicated a small, yet significant relationship between peer association and delinquency.

Alternatively, any singular theory may not explain all types of behavior. What is needed is the expansion of integrated theories of crime that combine the

essential aspects of many theories. For example, Gottfredson and Hirschi (1990) proffered a "general theory of crime" which incorporates measures of self-control, opportunity, and other social control mechanisms. While they attribute the majority of behavior to a person's level of self-control, they integrate this idea with aspects of other theories that have stood the test of time. Thornberry's interactional theory incorporates elements from Hirschi's social bonding and Sutherland's learning theory into one explanation (Siegel & Senna, 1997). This theory asserts that criminals seek out other criminals due to weakened attachment to parents and deterioration of social bond to prosocial institutions such as school and church. Both the general and interactional theories are in their infantile stages relative to other theories, and are therefore being tested to see if their principals can hold across time and space.

In conclusion, continued scholastic examination of criminological theories, such as deterrence, is the only way to generate more useful models for explaining crime and deviance. While is difficult to uncover convincing evidence to contradict any given theory, it is inherently impossible to expose verification or universal proof for a theory. As such, the engineering of a theory is merely a small piece of the task; perpetual applicability is the challenge every explanation must endure.

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