DIRECTED INDEPENDENT STUDY PROJECT

**MINI-SYSTEMATIC REVIEW OF DETERRENCE & ITS ROLE IN ZERO TOLERANCE
SCHOOL DISCIPLINE POLICIES**

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I. INTRODUCTION:

Piquero and Pogarsky (2002: 153) once wrote, "Since the age of Enlightenment, scholars have pondered whether the threat of punishment deters crime." It has also been assumed that punishment deters, or at least discourages, misbehavior in homes, schools and society. This seemingly simplistic idea reflects the utilitarian tradition of punishing for the purpose of gaining greater social harmony in society as a whole by making certain actions, which would cause harm or distress, less desirable for the individual actors. It has gone by dozens of names, crossed different disciplines, and contributed to numerous theories.

In criminology, one such theory is deterrence. Deterrence theory purports that the perception of punishment will deter or dissuade individuals from committing crimes due to the severity of the punishment, certainty of the punishment, celerity (or swiftness) of the punishment, or some combination of the three (Mendes, 2004: 59; Paternoster & Iovanni, 1986: 752). Though some authors include elements of benefit or reward to provide a counterbalance to the costs associated with punishment (Miller & Anderson, 1986: 425), deterrence is primarily a theory to explain the effects of punishment alone. It is often combined with other criminological, behavioral and sociological theories, such as rational choice, social learning, operant learning, and operant conditioning.

In the discipline of education, the terminology used to describe utilitarian ideas of punishment comes from educational psychology, which relies heavily on behaviorism and operant learning theories. Even classical conditioning makes appearances in introductory texts and chapters on classroom management (Santrock, 2004: 215-225).

Classroom management reflects teacher-generated rules and consequences, which, in

turn, reflects broader school policies established by educational administrators, as well as

school board or district policies, state laws and national laws (such as the Gun-Free

Schools Act), established by local, state and federal politicians. The rules and policies,

from the classroom level upward, have fluctuated over time from relatively strict to more

lenient and back to more severe (Arum, 2003:10-14). In an effort to convey their

seriousness, schools often use phrases like "zero tolerance" to describe their conduct

codes. These codes call for punishments that have frequently been criticized as severe

with little, if any, room for discretion (Giroux, 2003; Advancement Project & Civil

Rights Project Harvard University[1], 2000; Ayers, Dorhn, & Ayers, 2001; Cronin, 2005;

Axtman, 2005; Stader, 2004; Cauchon, 1999; Halpin, 2005).

   While many books on classroom management mention rewards, few district-wide

or school-wide policies make explicit mention of rewards (though many policy writers

inherently appear to consider attending school to be a form of reward). Because school

conduct policies deal primarily in punishment, deterrence theory seems an appropriate

framework through which to examine such policies. Such policies, written or adopted by

schools and districts, are explained by Miller and Anderson (1986): "Common sense can

explain the deterrence doctrine: most individuals prefer to avoid prison and thus are

discouraged from engaging in criminal behavior" (418). Others have seen punishment as

more than merely prison, whether the sanction is formal or informal (Anderson, Chiricos,

& Waldo, 1977), though the idea that people generally wish to avoid anything unpleasant

is the same.

The "common sense" explanation has been the heart of utilitarian theories for centuries. Policy-makers often assume that "common sense" is a proven fact rather than an often-researched and frequently contested theory. For example, it has been suggested that zero tolerance, anchored heavily in deterrence ideas, "matches what young brains think about when they determine between right and wrong" (Cronin, 2005: 2, quoting Keith Baker). Other authors have suggested that the brains of children fail to process punishment and reward the way adults do (Harris, 1928: 212). Practitioners of zero tolerance have sometimes assumed, like some deterrence researchers, that "actual punishment practices…provide a reasonably good indicator" (Bailey & Lott, 1976: 99) of both effectiveness and the perceptions of individuals. Perceptions are essential, as they often guide actions. Assumptions aside, policy-makers have an ethical responsibility to consider research to the contrary (Zimring & Hawkins, 1973: 34-42). School administrators have a moral obligation to do what is in the best interest of their students, even if it's not always the easiest thing to do.

While this sounds rational, the reality of deterrence theory and zero tolerance policies is that testing the effectiveness of either cannot be done directly. Therefore, a certain amount of doubt will always be present in the conclusions reached. It is impossible to directly measure the number of students who are deterred from delinquent actions during the course of a school year, on campus or off, (Zimring and Hawkins, 1973: 327) because it is "inherently unobservable" (Cavender, 1979: 204). For every student who is not caught breaking a rule or law, it is simply not possible to determine if that student was deterred, not deterred but also not caught, or was not considering anything he or she was supposedly being deterred from doing. Thus, the "success" of

deterrence theory – and by extension, zero tolerance polices – cannot be witnessed and must be assumed or predicted based on surveys of individual or group perception, statistical trends in data collected over time, comparative studies (e.g. comparing incident rates at schools of similar size with different disciplinary policies), and retrospective analysis (before and after a particular policy was implemented).

There are deterrence studies, and in some cases, studies of school discipline policies, that utilize each of these research options to some degree. In dealing with human populations and human behavior, perfectly executed, statistically rigorous studies are unfeasible, if not impossible. Problems can include subjects supplying false information, third-party data being incomplete or inconsistently coded, sampling concerns such as self-selection and attrition, and the hurdles of ethics committees. By focusing on those studies that are the most sound, even if they fail to meet the "gold standard," it should be possible to gain some indication as whether or not harsher school discipline policies, those often called "zero tolerance" and those that are similarly harsh, appear to deter the intended behaviors.

The purpose of this paper is to do just that: to focus on the best of the studies conducted with secondary-school-age youth and try to determine if any research explains the current policy direction. Because little research is available examining the effectiveness of zero-tolerance-based disciplinary policies, examining the underlying theory behind the practices becomes the next best thing. Few school-based or pedagologically-originated studies focus on the deterrent ideal directly, but many mention concepts or elements of deterrence, or closely-correlated theories in other

disciplines. Criminologists, in performing deterrence research, rarely distinguish

between student delinquency (within schools) and general juvenile delinquency (both in

and outside of schools). The focus of this paper, then, will primarily be on literature

relating to deterrence theory, since that seems to be the criminological theory most

closely aligned with the principles of zero tolerance polices.

Perceptions play a large role in both deterrence and zero tolerance; therefore, all

of the studies reviewed examine the perceptions of the subjects. Measuring perceptions

of certainty and severity, though, may not be enough, as some researchers have suggested

that perceptions of authoritative power may also factor significantly into decisions to

commit delinquency (Arum, 2003; Ferguson, 2001). It is possible that some of the

explanatory or exogenous variables measured by deterrence researchers illustrate or

capture some of these suggestions. At least one study examines the effects of this type of

perception on zero tolerance effectiveness (Way, 2003).

In order to properly frame both deterrence theory and the kinds of harsh discipline

polices so often labeled "zero tolerance," an overview of literature for both is included in

this paper. Neither overview attempts to be comprehensive, as there is not room in a

paper of this length for in-depth analysis of both deterrence and school discipline. Both

are topics with long individual histories. The purpose of the overviews is to examine

enough of the two ideas to show a link between them.

II.   LITERATURE OVERVIEW OF DETERRENCE THEORY

Deterrence theory comes to criminology by way of Beccaria's 18th century classical theory, which saw people as generally governed by their own wants and desires (Beccaria, 1991, reprinted from Adam's copy of 1775). Around the same time Beccaria's ideas were being published, philosophers and political thinkers like Hobbes (Arum, 2003: 14), Montesquieu, and Bentham (Mendes, 2004: 61) were publishing similar utilitarian theories. Though scarcely the only ones who saw restraining value in the threat of punishment, their ideas have continued to shape public opinion and policy for hundreds of years. Beccaria's essay, originally published in the 1700s, included several assertions that were later incorporated into deterrence theory.

One of these ideas was immediate punishment. Beccaria reasoned that if the punishment immediately followed the crime, it would leave the most lasting impression (1991). The immediacy aspect of deterrence theory is commonly called celerity, or swiftness, and represents the length of the judgment process from commission of the act to sentencing. Little research attention has been given to this component, and while many articles and books mention it, few offer any assistance in determining its role in the effectiveness or ineffectiveness of deterrence policies (Bailey, 1980). This is likely due to the nature of law enforcement and court procedures that limit the immediacy of punishment in democratic countries.

The two most-empirically-tested components of deterrence are severity and certainty. The reason for this is likely twofold. Researchers have a very limited ability to shorten the time between a criminal act and the enactment of a punishment. Controlled

tests may illuminate certain aspects of human nature, but lab-generated celerity is hard to

generalize to a broader population that is confined by jurisprudential procedures. Partly

for this reason, it has been noted that when law enforcement and legislators choose to

"get tough" on criminals, they have slightly different ideas, based on their roles in the

process. For law enforcement, "getting tough" usually means more arrests and increasing

a criminal's risk of being caught, while legislators generally choose to enact tougher

penalties (Zimring & Hawkins, 1973: 19). This practice is supported by the certainty

element of deterrence theory and reflects the perceived probability of both arrest and

conviction (Paternoster & Iovanni, 1986: 754).

Beccaria states, "Crimes are more effectively prevented by the *certainty*, than the

severity of punishment" (1983: 62). Mendes (2004: 61-62) and others have postulated

that Beccaria, Bentham, and Montesquieu's emphasis on celerity and certainty has less to

do with the relative effectiveness and more to do with the exceedingly harsh punishments

that were prevalent during their era. Researchers have repeatedly attempted to determine

if certainty or severity played a larger role in the decision making of criminals. As with

deterrence research on the whole, results have been mixed enough that one could find

some support for many points of view within the overall framework of deterrence theory

(Mendes, 2004; Miller & Anderson, 1986; Kury, Ferdinand, & Obergfell-Fuchs, 2003).

Beyond its conceptual components, deterrence theory is operational in two

primary types of deterrence: general and specific. General deterrence is the expectation

that generalized rules and laws will deter the masses from criminal or delinquent

behavior. The idea, as Miller and Anderson (1986) point out, assumes that most people

would prefer to avoid punishment, (in the case of their research, prison), if it is within

their power to do so. General deterrence essentially requires that the public be aware of

the laws and the consequences, as in Beccaria's (1983) prediction that if laws are well

known and easy to understand, people will likely follow them,. Modern-day general

deterrence assumes that the general population wishes to avoid incarceration and will

therefore either avoid committing crimes or refrain from committing crimes for which

they perceive they are likely to be convicted. Zimring and Hawkins (1973) acknowledge,

though, that some people, whether because of age, a "present-time orientation" (99),

abhorrent personality (121-2), or any number of other reasons, may not be deterred or

may not use this logic.

Specific deterrence deals with recidivists and whether they will choose to

continue committing prohibited acts after having been punished (Stafford & Warr, 1993).

Whereas general deterrence applies to everyone, specific deterrence only means to deter

those who, in essence, failed to acknowledge general deterrence. Those people are also

subject to specific deterrence. If they did not avoid committing a crime or miscalculated

their likelihood of being caught, the punishment, in theory, will deter them from doing

the same thing again. Van Den Haag (1982: 770) prefers to think of "failures of specific

deterrence" as "failures of rehabilitation," but that only refers to recidivists for whom

treatment or therapy has been attempted. Not all convicted criminals experience any type

of rehabilitation, especially as rehabilitation has largely fallen out of favor (Walker,

1998). Deterrence is sometimes considered to be just another word for retribution.

Schwartz and Reiser (2001), in a discussion of school policies, explain the

distinction as follows:

> The premise of adult punishment is that adults, as rational decision makers, are
>
> capable of making cost-benefit analysis that deter them from misbehaving
>
> because of the impact of criminal sanctions *[(general deterrence)]*. Deterrence
>
> also works because individual adult offenders who are punished modify their
>
> behavior accordingly and are deterred from misbehaving again *[(specific*
>
> *deterrence)]*. Retribution is appropriate because society feels comfortable "getting
>
> even" with its most serious offenders…(129).

Deterrence theory, while considered "common sense" by some, delivers decidedly

mixed results when tested, though some of the contradictory results could be due to due

to slight variations in methodology (Akers, 1990; Pogarsky, Kim & Paternoster, 2005;

Wright, Caspi, Moffitt & Paternoster, 2004; Williams & Hawkins, 1986; Grasmick &

Bryjak, 1980; Mendes, 2004). "Deterrence-based laws or programs cannot be fully

effective until we learn why, for some individuals, [punishment] is not worth avoiding"

(Miller & Anderson, 1986: 438).

As previously mentioned, testing for deterrence directly is impossible, because it

attempts to explain the absence of a noticeable, abhorrent behavior. Some people may

"fail" to commit crimes because they have been deterred by formal sanctions, but others

may choose not to commit crimes for any number of reasons; e.g. because they view it as

morally wrong (Paternoster & Simpson, 1996), because they fear the loss of jobs or

respect (Paternoster, Saltzman, Waldo & Chiricos, 1982), or because it never occurred to them to commit the crime.

Another complication is that deterrence theory relies heavily on perceptions. Beccaria (1991) felt it was essential for people to know the potential consequences of criminal activity. Without knowing the consequences, they would have no way to be deterred. From there, perceptions of risk of being caught and punished as well as the perceived severity of the punishment were of varying importance (Miller & Anderson, 1986: 421; Mendes, 2004: 59).

Perceptions of informal sanctions such as the disapproval of family and friends (Williams & Hawkins, 1986: 558) and morality systems or personal values (Miller & Anderson, 423-424) also play large roles in the perceptual successes and failures of deterrence. Perceptions of severity and certainty appeared to be stronger when subjects were asked risks to themselves than when asked about perceptions of risks to generalized others (Williams & Hawkins, 1986: 550). Additionally, those who had committed crimes and escaped punishment tended to have lower expectations for their future risk of punishment (Piquero & Pogarsky, 2002: 178-179).

The last perception that requires mentioning is the perception of fairness and justice (Sherman, 1993), primarily because it is the perception of fairness that has been touted as a major benefit to and a potential drawback of school zero tolerance discipline policies. Some claim the policies are inherently fair because they prescribe the same punishment for everyone for a particular offense, regardless of personality, extenuating circumstances, or individual factors. Others argue that punishing a student for an honest

mistake in the same manner as a student with malicious intentions sends the wrong message and is unfair because it fails to see the person behind the action. Sherman's (1993) observations about the perceived legitimacy of sanctions and their effects on social bonds and pride are elaborated upon in defiance theory. The theory's supposition – that increases in sanctions can lead to increases in crime if the sanctions are perceived to be unfair – has relevance to the discipline policies discussed in the next section.

II.   LITERATURE OVERVIEW OF SCHOOL DISCIPLINE AND ZERO TOLERANCE

Literature in both the education and criminal justice fields links school performance with behavior. Typically, positive school performance is associated with good behavior and poor academic performance is associated with "at-risk" students and delinquents (Cox, 1999; Jenkins, 1997; Lawrence, 1998; Zingraff et al, 1994). Criminal justice researchers specifically mention school attachment and performance as a means of preventing or discouraging delinquency, and both attachment and performance are associated with non-delinquent or infrequently-delinquent juveniles (Dornbusch, Erickson, Laird & Wong, 2001; Maguin & Loeber, 1996; Gottfredson, 1986) Education researchers suggest that school attendance influences both performance (Clement, 2004: 17-21) and attachment (Christle, Nelson & Jolivette, 2004: 510). Attachment, like performance, is sometimes assumed to be negatively correlated with delinquency. This point becomes important when one considers the most publicized punishments (appearing in newspapers and popular magazine articles) listed under current school discipline

policies. These include the "harsher" punishments like expulsion and suspension that typically sever attachment to schools both physically and emotionally.

Current school policies have been formed primarily by a mélange composed of shifting ideas, philosophies, and social trends over time. Changes in attitudes toward student discipline, school safety and juvenile delinquency (particularly due to increased media reporting), court rulings and legislative acts, and standardized achievement tests had a profound effect on the way schools handled student misconduct.

"Discipline" has has been a concern of schools in the United States since the inception of organized education. While the word and basic concept have been a long-standing part of schools and school policies, its justifications and underlying philosophies have changed over the years. Goodman (2006) lists three such justifications that are broad enough to include most if not all variations. The first assumes "discipline is intrinsic to academic mastery," inseparable from the learning process "as rules are contained within a game" (Goodman, 2006: 214, 215). This justification is "largely disregarded by contemporary discipline policies" (Goodman, 2006: 214) as is the third in most schools. The second justification mentioned by Goodman is the one most often touted by the contemporary policies. It states that the establishment of order is necessary before learning can commence (Goodman, 2006: 214). It is the reason most used by teachers in explaining the purpose and rationale of class rules and consequences. (The third justification is that discipline "is an independent good" (Goodman, 2006: 214) and includes the moral dicta of colonial (Harris, 1928) and many contemporary religious schools.)

The common belief that discipline and education are connected in this way, that

one is necessary for the other, dates as far back as the mid-1800s, when "control" over

the behavior of young pupils was regarded as "primary" and necessary for "educative

growth" (Harris, 1928: 41). The concern over control has not vanished in the past

century. Opinions have changed with regard to the types of discipline applied (from

corporal punishment to the removal of privileges), but not the necessity for the

"commendable docility essential to learning" (340). When order is seen this way, as

indispensable to learning, it emerges "from the authority of the school personnel" and

"the limits on discretion dissipate" (Goodman, 2006: 415).

Dissipating discretion may have been part of the shift toward what came to be

known as "zero tolerance polices," but concern for the safety of students was the more

obvious reason. Reports of increases in victimization and violence (Jenkins, 1997: 337)

added a sense of urgency to those tasked with maintaining safety and order. Solutions

that appeared grounded in common sense and fairness (particularly those that appeared

easy to implement and enforce) had little trouble gaining supporters.

Support of such ideas may have seemed contrary to those familiar with the history

of the "zero tolerance" drug policies that began in the early 1980s (Johnston, 1999: 4;

Skiba & Peterson, 1999: 372), but schools were feeling pressured to find a solution to

their discipline problems and safety concerns. In school systems, the idea spread rapidly:

approximately 90 percent of school districts in all 50 states have implemented some form

of zero tolerance policy according to U.S. Department of Education estimates (Giroux,

2003: 62; Gorman & Pauken, 2003). Part of the reason for the receptiveness and the

proliferation, Arum (2003) argues, was the eroded authority of schools, or at least the erosion of the schools' legitimacy as a moral authority. He says legal decisions stripped schools of their ability to discipline and left students with a sense of empowerment and entitlement to question that had not existed prior to 1965 (Arum, 2003: 11-15). With fewer means of legal recourse and decreased student respect, schools loosened discipline rules to avoid costly litigation (Arum, 2003: 13-22). By the mid-1980s, however, court opinions shifted again, and schools appeared to be more consistently supported (Arum, 2003: 23-27).

About the same time that courts were reassessing school discipline, a "war" against drugs was mounting. It was from the anti-drug policies that the phrase "zero tolerance" was derived. In 1983, six Navy sub crewmembers were suspected of drug use and reassigned in the first known zero tolerance punishment (Skiba & Peterson, 1999: 372). Three years later, a program began in San Diego that allowed officials to impound any watercraft carrying even minute amounts of drugs (Skiba & Peterson, 1999: 372). By 1988, U.S. Customs was confiscating hundreds of boats and cars, including research vessels and vehicles operated by people other than the owners, and the program had become overwhelming and sometimes confusing to many enforcement officials (Johnston, 1999: 4; Skiba & Peterson, 1999: 372). Within eighteen months, the program had been revised – calling for citations and release for almost all but large-scale traffickers (Johnston, 1999: 4).

The drug policy idea of removing discretion while imposing harsh penalties was soon adopted by frustrated schools. Having lost a lot of their legitimacy and authority

(Arum, 2003), schools were looking for a solution to mounting student discipline

problems. Schools were also under pressure to deal with violence. School shootings

brought increased attention to bullying, threats, vandalism, and theft in schools.

Starting in 1989, in school districts from Orange County, CA to Louisville, KY

began implementing their own versions of "zero tolerance" polices (Skiba & Perterson,

1999: 372). The idea was to "get tough" on students to ensure order. Originally billed as

equitable and tough, the early policies were intended to discourage guns, drug use and

gang activity on campuses (Skiba & Peterson, 1999). Eventually, the policies spread to

include weapon look-alikes, hats, disruptions, (Skiba & Peterson, 1999: 372),

inappropriately-pointed chicken nuggets (Whitehead, 2001: 22), over-the-counter

medication such as Midol (Fisher, 2002: B01; Cauchon, 1999: 2), Sony Walkmans

(Cauchon, 1999: 5), and misused duck sauce (Taranto, 2001: A14).

Shortly after schools first adopted the new, tougher rules, the 1990 Gun-Free

School Zone Act was enacted. The Act was a legislative attempt to curb what was

viewed as growing violence in schools by creating harsh punishments for students who

brought guns to or within 100 feet of a school. The original act was struck down by the

Supreme Court due to its irrelevance to interstate commerce (though it was included in a

commerce bill) and the unconstitutionality of the federal government's interference with

local and state school policies. The Gun Free Schools Act of 1994 (GFSA) linked federal

funds to states' adoption of zero-tolerance policies and legislation with punishments of

suspension or expulsions of "not less than one year" for students found to have weapons

on school property. While the GFSA allowed for discretion on a "case-by-case basis" for

individual educational agency administrators, the policies most schools initially adopted

left little or no leeway, possibly in an attempt to avoid lawsuits or media criticism (Skiba

& Peterson, 1999).

Another significant legislative decision that affected how schools viewed

discipline was the No Child Left Behind Act of 2002 (NCLB). Among other things,

NCLB required schools to be more accountable for gaps in student achievement

(USDOE, 2003). Because of the belief in a negative correlation between academic

achievement and delinquency, NCLB gave schools another reason to support any policy

they believed decreased disorder and delinquency.

The concept of "zero tolerance," while seemingly easy for some journalists to

condemn or criticize (Axtman, 2005; Cauchon, 1999; Gorman & Pauken, 2003; Schwartz

& Rieser, 2001; Whitehead, 2001), essentially refers "to policies that punish all offenses

severely, no matter how minor" (Skiba & Peterson, 1999: 372). While some schools did

include discretion as an option, others felt this opened them up to possible lawsuits. A

clichéd phrase quoted by Gorman and Pauken sums up the relationship between schools

and the media: "You're damned if you do, damned if you don't…damned if you

zealously enforce zero tolerance, and damned if your school seems too lax on the

tolerance of weapons at your school" (2003: 28).

IV. **DETERRENCE & ZERO TOLERANCE – HOW THE THREE COMPONENTS OF DETERRENCE FIT WITH "ZERO TOLERANCE" POLICY APPLICATION**

An overview of zero tolerance policies and deterrence theory is necessary to understand the connection between the two. Arnold Goldstein, once a "strong supporter of zero-tolerance policies," saw a connection between the two. He explained punishment as an aspect of discipline in education that consisted of the "three components [of deterrence theory]: swiftness, certainty and severity" (Cauchon, quoting Goldstein, 1999: 6). Few make the connection between zero tolerance policies and deterrence theory as obvious, by using the same vocabulary to explain supposed effectiveness, but many allusions are made to the conceptual components of deterrence theory.

Initially, zero tolerance policies in schools had an advantage in terms of celerity over criminal laws because very little, if any, due process was required by courts. The punishment could, then, quickly follow the undesired behavior. The U.S. Supreme Court's decision on *Goss v. Lopez*, five years later, made "rudimentary due process a reality for students facing more serious disciplinary sanctions" (Arum, 2003: 13).

Schools still have a greater degree of freedom in exercising their rights to punish than do court systems, though students faced with extended exclusionary sanctions do have limited means of appeal. The GFSA also removed certain due process requirements from schools with regard to weapons on school property and even imposed mandatory minimum exclusionary sanctions on students found with certain weapons.

Such mandatory minimums, as well as some of the mandatory elements of individual school policies, also affect certainty. The name "zero tolerance" or the description "zero tolerance" that often appears in school policies is meant to convey a sense of certainty that any infraction will be caught and reprimanded. If a school or district states that anyone caught will receive the same punishment, the only question that can remain is whether or not an individual student perceives he or she will be caught. Whether or not students are able to adequately predict their chances of being caught would also be part of certainty, and despite any school's best efforts to enforce policies fairly and completely, some students will elude detection.

Early parent and student acceptance of school discipline, whether physical (e.g. corporal punishment) or depriving (e.g. expulsion), was nearly unconditional. Changes in court decisions led to changes in parent and student attitudes (Arum, 2003: 56). Schools were expected to come up with alternatives to the harsh punishments they had relied on Parents, meanwhile, gradually became less supportive of schools and more supportive of individual students (Arum, 2003: 56). Courts demanded that schools provide "the utmost in procedural due process," but schools rarely used such procedures when expelling students (Arum, 2003: 56). The introduction of the Gun Free Schools Act led to "mandatory" expulsions and suspensions of a least a year. In theory, the Act provided for discretion, but administrators were often reluctant to use their discretion for fear of repercussions. Schools and legislators felt this was a severe punishment, but students who lacked school attachment or perceived schools (or education) negatively were unlikely to find such a sanction severe. In fact, a common belief among educators and parents is that punishments that are supposed to be the most severe are only viewed

as such by the very students who create the least disorder and problematic behavior.

Students who dislike school or see no fairness or legitimacy in the authority of the school

are less likely to think of trips to the office, "punishing rooms," detention, suspension,

and expulsion in negative terms (Way, 2003; Ferguson, 2001; Santrock, 2004).

There appears to be a severe lack of research connecting these educational

impressions with the criminological theories on which many policies have been based.

The following sections include a small-scale systematic review of the available

deterrence research in hopes of determining how much research has been done, how it

relates to the topics, and what else is needed.

V.   EXPLANATION OF SYSTEMATIC REVIEW PROCESS

A systematic review utilizes a "clear criteria for assessing the quality of studies"

(Evans & Benefield, 2001: 529) in order to answer specific research questions. The

question in this case was to determine to what extent prior deterrence researchers have

found support for the theoretical foundations of zero tolerance policies. The purpose,

application, and extent of zero tolerance polices have been debated extensively, but little

research examining the theoretical foundations in practice has been published.

If deterrence appears to be the basis for much of the stricter school policies, it

would make sense to wonder if the components of deterrence appear to have any effect

on the behavior and decisions of student-aged offenders (those under eighteen years of

age). One would also want to know if other factors play as great or greater role in the

decisions of students as perceived severity, certainty, and to a lesser degree, celerity. In

other words, do zero tolerance polices offer anything that might deter students from

school delinquency?

I searched multiple databases, but primarily relied on the educational databases

JSTOR and Sage. I used various combinations of the keywords: delinquency, student,

behavior, deterrence, operant (as in conditioning and learning), school, zero tolerance,

discipline, policies, certainty, severity, punishment, conduct, and code. I did not limit my

searches to education or criminology so that any research done in other, related fields

such as sociology or psychology would also be included. I narrowed the available

research by concentrating on studies performed with secondary-school students or

juveniles, as opposed to those done with college students or adults, and eliminated purely

descriptive studies. I also studies eliminated that relied on incident data without concern

for underlying motivation or for perceptions about delinquent acts or school-based

incidents. Such secondhand data would not offer information related to a perceptual

theory and can be fraught with coding irregularities due to different methods for

collection and reporting. Research conducted outside the United States has also been

excluded as the school policies often dubbed "zero tolerance" are part of a cultural

phenomenon within the U.S. and because cultural differences in other countries could

have mediating effects on results that would not be replicated in U.S. studies.

I considered the years of the initial survey (if given) as well as the year of

publication (especially for those which did not include a survey year) because of the

drastic changes in school polices and legislation in the past twenty-five years. Studies

done prior to 1980 were dropped entirely because policy and legislative changes since that time (as discussed in more detail in previous sections) would have likely had too much impact on student perceptions to be an accurate reflection of current perceptions. Studies performed during the 1980s, and particularly those from the early 1980s, reflect student perceptions prior to the highly-publicized school shootings, the Gun Free Schools Act (GFSA), tighter anti-drug policies, "zero tolerance" language, and the No Child Left Behind (NCLB) legislation with its greater emphasis on standardized testing.

The initial attempt at school-based gun control occurred in 1990 (the Gun-Free School Zone Act), which seemed to initiate a trend focused on guns and drugs within schools. Only one study, of those I researched, could have been performed after 1990, though no date was given for the actual survey distribution. This is unfortunate, since some of the factors potentially influencing student behavior in schools today were not under consideration at the time most of the studies were performed. Nevertheless, only the broadest generalizations can be made from a review of this scale.

After locating seven possible studies for my review, I substantially modified the criteria used by Sherman et al. (1997) and Mackenzie (2000). The modifications necessary, however, rendered the original form nearly unrecognizable due to huge differences in the types of research being review. Sherman et al's (1997) form was designed to determine the scientific rigor of numerous types of statistical research and analysis, but relies heavily on pre-test, post-test, measurable outcomes, and other trappings of large-scale research designs to determine scientific rigor. It worked well with tests in corrections and tests of prevention and intervention programs, but deterrence

research has not typically been done with control groups and the like. Therefore, the

original form was modified to work better with survey research. Only six of the seven

possible studies were examined using the modified criteria, as the seventh was designed

in such as way as to make comparisons with the others largely impossible.

Because the whole concept of deterrence is a theoretical construct, deterrence

theory does not lend itself to direct observation and measurement. The closest

researchers can come to measuring the thoughts of subjects is to survey subjects.

Surveys inherently suffer from certain sampling problems. Respondents choose whether

to answer surveys; therefore the sample, because self-selected, leaves out many potential

explanations and answers in the process. Respondents also choose whether to be truthful

when responding to surveys, which can lead to reliability and validity concerns. Surveys

need to be well-designed, including enough questions to adequately answer the research

question while being concise enough to be completed.

Of the six studies I ended up examining more closely, one was a single-shot

survey and the other five were considered panel studies. Four of the panels were multi-

shot surveys distributed to tenth graders one year with a follow-up the succeeding year.

One panel surveyed students once each year, when the students were in tenth, eleventh,

and twelfth grade. The last drew from students in grades 8-12 and followed up the

following year with the same students. The last study did not explain whether twelfth

graders from the initial year were included in the second year if they had graduated or

dropped out. All of the studies suffer from the typical problems inherent in survey

research, though some more carefully accounted for or explained self-selection, the absence or attempt at random sampling, and attrition (for the panels).

Of the six studies examined in greater detail, most of the researchers used a good deal of consideration in selecting and combining variables, frequently relying on previous research and measures of reliability. One third of the studies were very carefully controlled, statistically, to ensure the greatest level of reliability and validity. The middle third were somewhat less stringent in their methods. The final third of the studies suffered either from limited information in the article (making it hard to determine stringency) or previously untested variables.

The first study examined was Bishop's (1984) panel analysis. Bishop used a composite scale comprised of thirteen delinquent acts with a sample consisting of 2,147 students in grades 8-12 (Bishop, 1984: 409). The study focused on thirteen schools in Virginia Beach, Virginia and another nine in neighboring Portsmouth, Virginia (409). Overall, the study was quite broad, but shallow in that it examined far more delinquent behaviors, but in less depth and with fewer statistical considerations than the other studies analyzed.

The Paternoster and Iovanni (1986) study was more stringent in selection and usage of variables. Paternoster and Iovanni also made use of composite scales of theoretical constructs, using one for each of their ten explanatory variables and two exogenous variables (perceived certainty and severity) (1986: 756-759). The sample consisted of the same 1,173 students at nine high schools, surveyed once in tenth grade and again in

eleventh. All the high schools were within one city with little explanation for potential

attrition (Paternoster & Iovanni, 1986: 758).

Paternoster (1989b) also used a sample of students from nine high schools. He

surveyed 1,250 tenth graders, surveying the same students again in both eleventh and

twelfth grades. Unlike previously-mentioned studies, he focused more on how his

eighteen chosen independent variables (grouped by: background factors, affective ties,

material considerations, opportunities, informal sanctions, formal sanctions, and moral

beliefs) interacted with four common teenage delinquencies. The delinquent behaviors

chosen were the most common among all the studies and included two kinds of substance

abuse (drinking "liquor," a status offense, and marijuana use) as well as two property

offenses (petty theft and vandalism) (Paternoster, 1989b: 13-20).

Paternoster (1989a) focused on the differences between absolute and restrictive

deterrence in terms of decision-making, but included the same four offenses and many of

the same exogenous variables as the Paternoster (1989b) study. Again, students in nine

schools were surveyed (Paternoster, 1989a: 293). The final sample size was 1,478 –

surveyed during consecutive years (1981-1982) when the students were in tenth and

eleventh grades – with careful accounting for attrition (Paternoster, 1989a: 294).

The Paternoster and Piquero (1995) study was again a panel survey of high school

students in nine schools. Surveys were distributed to the same group of students when in

tenth and then eleventh grades (also during 1981 and 1982). The sample size for the

Paternoster and Piquero (1995) research was 1,422, again with careful attention to

attrition issues (259-260). The research question centered on differences between

personal and vicarious experiences with punishment, utilizing composite scales for risk

perceptions as well as moral beliefs, supervision, attachments, friends' beliefs and

behavior, and experiences with punishment. All ten variables were related to substance

abuse only (Paternoster, 1989a: 260-264).

The final study analyzed using the modified criteria Foglia's (1997) examination of

the relationship between internalized norms and perceptual deterrence among "inner-city

teenagers" (414). Foglia's single-shot survey focused on seven high schools within a

large city where approximately 80 percent are "from low-income families" (423). The

sample size of 298 included students in grades 9 through 12 and the author admits the

author admits the students surveyed were merely convenient, making the survey

somewhat less rigorous than some of the others (Foglia, 1997: 423). Additionally,

because the survey respondents were also part of a different, education-based study, the

sample included no dropouts or truants. Foglia's dependent variables were the five

offenses chosen and included the two substance-abuse measures of marijuana and under-

age drinking, theft (no distinction is made between petty, grand, auto, etc.), assault

(again, no distinction or further explanation), and "delinquent behavior" (including use of

various illegal drugs (other than marijuana), drug selling, vandalism, use of a knife as a

weapon, and use of a gun as a weapon (Foglia, 1997: 426). The independent variables

included perception of risk for arrest, perceptions about punishment from friends or

parents, friends' behavior, "adult models," and the internalized norms measure (Foglia,

1997: 424-426).

The final piece of research examined was a dissertation from Way (2003) that used

The National Educational Longitudinal Study (NELS) data to "ascertain whether school

disorder influences…grades, graduation, test scores, educational commitment, classroom

disruptions, and fighting" (Way, 2003: 33). Because the research was not specifically

related to deterrence theory, it was somewhat difficult to compare with the others using

the same measures. In other ways, it may be the most important because of both its age

(being far more recent than most of the other available research) and because it devotes

an entire chapter to the "effects of school discipline on student behavior and

achievement" (Way, 2003: 115), which relates quite closely to the purpose of review.

The NELS data used sampled "over 25,000 8th grade students distributed across 1,052

schools" and followed up with the same students again in 1990, 1992, and finally in 1994

(Way, 2003: 45).

VI. FINDINGS

FORMAL SANCTIONS: SEVERITY & CERTAINTY

It seems appropriate to start with the findings for measures of formal sanctions,

sometimes separated into perceived certainty and perceived severity. Measuring

perceptions of certainty and severity can be difficult and separating perceptions of the

two can be equally challenging. Some researchers chose to ask about perceived risk of

arrest (which would be related to certainty, but does not necessarily measure certainty of

formal punishment, merely potential punishment) while others focused on perceptions

related to punishment (which could be a measure of certainty or severity, depending on

the perceived punishment). Questions related to punishments rarely addressed issues of

whether the perceived severity of a formal punishment (or sanction) impacted perceived

certainty of being punished. Difficulty distinguishing these two major components of

deterrence theory is unfortunate, given that those are the primary aspects of deterrence

that the justice system and schools are able to control.

Overall, measures of severity yielded little significance and even less support for

deterrence theory. Specifically, Paternoster & Iovanni (1986) found a "significant

inverse relationship between prior behavior and estimates of the likely severity of

punishment" (764). They attribute this to both a "reduction in fear hypothesis" and the

fairly-minor offenses measured (Paternoster & Iovanni, 1986: 764, 769). They theorized

that as one continued to operate undetected, one would feel less likely to be caught, but

that for offenses one would likely not be punished harshly for, there was little incentive to

stop. Paternoster & Iovanni (1986) found little support for certainty as well. Their most

notable finding with regard to certainty was that "the deterrent effect for perceived

certainty [was] strongest at the lowest level of perceived severity" (765).

Because they were testing measures of personal and vicarious experiences,

Paternoster and Piquero (1995) did not test severity and certainty separately. Instead,

they tested for "perceived risk to self" as well as "punishment avoidance" (Paternoster &

Piquero, 1995: 276-277). What they found was that "conventional attachments, parental

supervision, moral beliefs, punishment avoidance, friends' behavior, and the perceived

risk to others [were] all significantly related to the perceived risk to self" (Paternoster &

Piquero, 1995: 278). The implications of this for the question of whether zero tolerance

is an effective means of deterrence lie in that schools have very little control over most of the measures that were significantly related to the perception of certainty and severity. Furthermore, prior punishment was positively, rather than negatively, correlated to continued substance abuse (Paternoster & Piquero, 1995: 281), the only offense examined in the study.

Foglia (1997) had the smallest sample size with the least amount of statistical support for the sample subjects' inclusion, but retained merit due to the characteristics of the subjects. All were considered "inner-city teenagers" (414) and attended a school in an economically-depressed area of a city. Foglia's focus on students from backgrounds drastically different than those of the other studies' subjects was an important element, though the study included no measure or control for socio-economic status (SES). Perceptions of certainty were measured as a "perceived risk of arrest" (Foglia, 1997: 428). A separate measure of formal severity was not considered, though Foglia suggests that perceptions of severity would not be any stronger than perceptions of certainty (1997: 436).

In tests of severity, Paternoster (1989b) found "virtually no effect on the decision to offend or to quit offending" and "very little deterrent effect for perceptions of the costs of punishment" (37). Paternoster's (1989b) results for certainty were a little more complicated and slightly more "supportive of the deterrence doctrine" (38), but only weakly and inconsistently so for some offenses (primarily substance abuse).

Paternoster (1989a) examined absolute deterrence (what has been described previously as the deterrence theory or doctrine) and restrictive deterrence (when one

decreases his or her offending due to some aspect of deterrence theory, but does not cease

offending altogether) (290). Only the measure of marijuana use showed significance in

deterring (absolute deterrence) and only for the certainty measure (Paternoster, 1989a:

298). Certainty did appear to have an effect on decisions to restrict offending

(Paternoster, 1989a: 301). Severity offered no significant effect for any offense either

absolutely or restrictively (Paternoster, 1989: 298, 301).

The Bishop (1984) study was the weakest of the group. It measured far more

offenses than any of the others, but only considered Likert scales for "perceived risk of

legal sanctioning," "perceived risk of informal sanctioning," and "internalized normative

constraint," which was most similar to other studies' measures of moral beliefs or internal

norms though it could also encompass self-restraint related to such beliefs and norms.

(Bishop, 1984: 410-411). The legal sanctioning scale also only considered the perception

for a "generalized other" (Bishop, 1984: 410). Measures of conjectures subjects may

make about risks to other people – whether friends or abstract, unspecified persons –

have been suggested to be weaker than measures that relate risk to the survey subject

(Williams & Hawkins, 1986: 550). Bishop (1984) did, find the risk of formal sanctions

to "have a meaningful predictive role" on the internalized norm measure (413), but the

finding could be considered questionable due to the study's construction.

Way's (2003) measures for severity were based on perceptions of school-based

punishments and, thus, would have likely been considered a measure of informal

sanctions by deterrence researchers. The measures were also used and analyzed in terms

of their relationship to other school-based measures such as educational attachment and disorder. For these reasons, a discussion of Way's findings is located in the next section.

INFORMAL SANCTIONS & INFORMAL SOCIAL CONTROLS

Informal sanctions and informal social controls are not direct components of deterrence theory. Despite this, most researchers agree that punishments delivered by peers, parents, teachers, schools, and workplaces (i.e. informal sanctions) and informal restraints such as parental supervision, moral beliefs, and peer influence can affect behavior. Additionally, as Stafford and Warr (1993) point out, these "explanatory variables" may, indeed, operate as deterrence variables in some situations and studies (also Paternoster & Piquero, 1995: 278-9). For these reasons, the findings on informal sanctions and controls have also been included below.

With regard to informal sanctions, which overall appeared to be much stronger deterrents than formal sanctions, Paternoster & Iovanni (1986) found the most significant to be the general measure of "social sanctions," or those imposed by friends and peers (768). What seemed to be far more predictive than even informal sanctions, though, were what Paternoster & Iovanni called "informal sources of social control" (767), including gender, the behavior of friends, internalized beliefs, and parental supervision (767-768).

Paternoster and Piquero (1995) theorize that their "contrary" findings with regard to punishment appearing to increase offending may show support for "Sherman's (1993) notion that sanctions may backfire and produce defiance rather than deterrence"

especially when "sanctions are imposed without procedural fairness" (281). With regard to zero tolerance policies, this may explain why some students appear to increase offending even after being disciplined.

What had the greatest effect on Foglia's (1997) inner-city teenage subjects was the behavior of friends (though the Cronbach's alpha for the composite measure was a little low), followed by internalized norms and informal sanctions from parents and peers (429). Foglia (1997) found little correlation with age or gender, with the exception "that older subjects drank more alcohol" (428). There was also some indication that the modeled behavior of adults could have some effect, but again, the Cronbach's alpha for the combined measure was a little less than idea.

Paternoster's (1989b) informal findings were very mixed depending on the type of offense and time period being measured, giving a clearer picture of the relationship between offenders and informal interactions. Gender was significant more often for petty theft and vandalism, while "social activities" were a better predictor of marijuana or alcohol use. Peer involvement, parental supervision and peer sanction measures were also somewhat significantly related to substance abuse, though "peer involvement was a significant determinant of marijuana use" and "peer sanction was the more important consideration for those who decided to drink liquor" (Paternoster, 1989b: 27). Paternoster (1989b) suggested this was due to marijuana being less readily available and requiring a kind of initiation from "experienced others" (27). In this study, measures of morals or norms were rarely significant. Grades, educational attachment, and other

school-related measures offered very little significance in any of the tests run

(Paternoster, 1989b).

Overall, measures of informal sanctions and interactions had more effect than

perceptions of formal sanctions (Paternoster, 1989a: 299). Activities commonly thought

of as more social in nature (marijuana use, alcohol consumption and vandalism), were

more likely to be significantly affected by peer involvement (Paternoster, 1989a: 299),

especially with regard to the onset – or beginning – of offending behavior (301). Once

begun, "the frequency of offending [was] strongly related to those factors that may

facilitate (peer involvement, social activities) and restrict (parental supervision) the

opportunity to commit delinquent acts" (Paternoster, 1989a: 304). Peer sanctions and

peer approval appeared to encourage frequency, whereas there was a slight tendency for

students with success or moorings in other areas (such as better grades, religious

activities or moral beliefs) to be delinquent less often (Paternoster, 1989a: 304-305).

Way (2003) examined the interactions between school disorder, test scores,

perceived severity and strictness of punishment, school rules, legitimacy of those rules,

and educational commitment (among many others). Way reiterated the notion that

deterrence, as applied to school discipline, should utilize strict rules and severe

punishments to decrease disorder and fighting while increasing commitment and test

scores (122). The results were somewhat mixed, though Way did note that "severity had

no significance on any of the dependent variables (Way, 2003: 127). Perceptions of

"strictness" (which was related to both the number of rules and enforcement of them, but

not a measure of either) was "not significantly related to punishment" (Way, 2003: 123)

despite the denotative relationship between the words and concepts.   Even more

confusing, the number of school rules, while positively correlated with the measure of

strictness, showed no relational significance (Way, 2003: 123).   Additionally, Way

(2003) found that increased rules appeared to increase educational commitment, but

lower test scores, the measure of academic achievement used (127-128). Way offered

several conjectures about this, but none were tested. An unrelated observation about the

numbers of rules suggested such increases were symptomatic of "deeper problems with

authority and disorder (Way, 2003: 142).

Way (2003) did find that increased supervision and restrictions decreased both

student disorder and test scores (127-128). Additionally, "contrary to prediction from

deterrence theory, students who view school discipline to be strict in tenth grade tend to

have higher disruptive behavior" levels (Way, 2003: 128). These findings appeared to be

related to measures of legitimacy and authority. Way (2003) also found that when

students believed in the legitimacy of school and teacher authority, they were less likely

to be disruptive and more likely to have higher educational attainment and grades (133).

Way summarized the interactions by saying that: "Overall, students in orderly schools

respond better to discipline than students in schools that are marked by higher levels of

disorder. Ironically, strict discipline regimes are often implemented as a response to high

levels of disorder" (Way, 2003: 138).

Finally, when perceptions of fairness were considered, there was a significant

decrease in the likelihood of student disruptions and fighting (Way, 2003: 133). Fairness

also increased test scores, grades, educational commitment, and graduation rates (Way,

2003: 133). Way (2003) was unable to determine if any of the relationships discussed

were causal (in either direction), but the results leave many possibilities for future

research.

VII. CONCLUSION

So many of the studies were performed prior to the recent changes in school

policies and legislation that attempting to make predictions for present-day student

behavior based on their findings seems futile. In fact, it has been more than twenty years

since some of the more statistically stringent surveys were distributed. With that said, it

seems unlikely that a survey or study performed now would offer any clearer results or

stronger support for the deterrence doctrine. Based on the findings above, it would

appear that informal sanctions, relationships with peers and the behaviors of those peers

are stronger predictors of behavior that expected punishments, not matter how severe.

It is also possible that perceptions of severity, and even certainty, in the studies

discussed were lower due to the types of offenses examined by most of the researchers.

Particularly during the early 1980s, when several of the panel studies were performed,

students could expect minor punishments in many schools for drinking alcohol, using

marijuana, petty theft, or vandalism. Students in 2006, caught committing any one of

those four offenses could be expected, at the least, to be suspended and possibly be

referred to police and the juvenile justice system. Within the juvenile system, as Foglia's

(1997) study illustrated, some students are less likely to find the experience unpleasant, and therefore not much of a deterrent.

Overall, there is a great deal of room in this area for future research. Not only would it be informative to find out how formal and informal sanctions, peer involvement and activities, moral or normative beliefs, and educational or conventional attachments interacted with the decisions of students in the present decade, it could also be extremely instructive to include measures of perceived fairness, perceived strictness, and legitimacy of authority. As concerns over safety and security within schools vies for national attention with standardized testing scores, it would also be informative and perhaps instructive, to learn if students' risk assessments and educational attachment can positively be influenced by such measures.

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