

# Deterrence

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## Abstract

This essay reviews the evidence on the deterrent effect of police and imprisonment. Studies of changes in police presences, whether achieved by changes in police numbers or in their strategic deployment, consistently find evidence of deterrent effects. Studies of the deterrent effect of increases in already long prison sentences find at most a modest deterrent effect. Three high priority areas for future research are identified: developing and testing an integrated model of the effects of the threat and experience of punishment, measuring perceptions of sanction regimes, developing and estimating the deterrent effect of shorter prison sentences, and identifying high deterrence policies.

## INTRODUCTION

The criminal justice system dispenses justice by apprehending, prosecuting, and punishing individuals who break the law. These activities may also prevent crime by three distinct mechanisms—incapacitation, specific deterrence, and general deterrence. Convicted offenders are often punished with imprisonment. *Incapacitation* refers to the crimes averted by their physical isolation during the period of their incarceration. Specific deterrence and general deterrence involve possible behavioral responses. *Specific deterrence* refers to the reduction in reoffending that is presumed to follow from the *experience* of being punished. There are many sound reasons for suspecting that the experience of punishment might actually increase reoffending. The *threat* of punishment might also discourage potential and actual criminals in the general public from committing crime. This effect is known as *general deterrence* and is the subject of this essay.

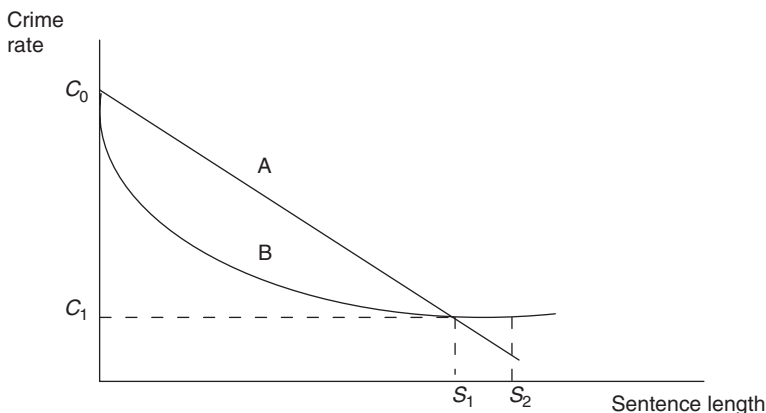
The theory of deterrence is predicated on the idea that if state-imposed sanction costs are sufficiently severe, criminal activity will be discouraged, at least for some. Thus, one of the key concepts of deterrence is the severity of punishment. Our review of severity effects focuses on research findings concerning imprisonment. Severity alone, however, cannot deter. Another key concept in deterrence theory is the certainty of punishment. In this regard

the most important set of actors are the police—absent detection and apprehension, there is no possibility of conviction or punishment. For this reason we discuss what is known about the deterrent effect of police.

### THE DETERRENT EFFECT OF IMPRISONMENT

Nagin (forthcoming) discusses six studies that report convincing evidence on whether and to what extent there is a deterrent effect of incarceration. They also nicely illustrate large differences in the deterrence response to the threat of imprisonment. Weisburd, Einat, and Kowalski (2008) and Hawken and Kleiman (2009) study the use of imprisonment to enforce fine payment and conditions of probation, respectively, and find substantial deterrent effects. Helland and Tabarrok (2007) analyze the deterrent effect of California’s third-strike provision and find a moderate deterrent effect. Raphael and Ludwig (2003) examine the deterrent effect of prison sentence enhancements for gun crimes and find no effect. Lee and McCrary (2009) and Hjalmarsson (2009) examine the heightened threat of imprisonment that attends aging into the jurisdiction of the adult criminal court at the age of majority and find no deterrent effect.

The six exemplar studies suggest several important sources for the large differences in the deterrent effect of imprisonment. One concerns the length of the sentence itself. Figure 1 depicts two alternative forms of the response function relating crime rate to sentence length. Both are downward sloping, which captures the idea that increases in sentence severity deter crime. At the status quo sentence length,  $S_1$ , the crime rate,  $C_1$ , is the same for both curves. The curves are drawn so that they predict the same crime rate for a zero sanction level. Thus, the “absolute” deterrent impact of the status



**Figure 1** Marginal versus absolute deterrent effects.

quo sanction level is the same for both curves. But because the two curves have different shapes, they also imply different responses to an incremental increase in sentence level to  $S_2$ . The linear curve (A) is meant to depict a response function in which there is a material deterrent effect accompanying the increase to  $S_2$ , whereas the nonlinear curve (B) is meant to depict a small crime reduction response, owing to the diminishing deterrent returns to increasing sentence length.

Our reading of the evidence on the deterrent effect of sentence length is that it implies that the relationship between the crime rate and sentence length more closely conforms to curve B than to curve A. For example, Raphael and Ludwig (2003) find no evidence that gun crime enhancements deter, Lee and McCrary (2009) and Hjalmarsson (2009) find no evidence that the more severe penalties that attend moving from the juvenile to the adult justice system deters, and Helland and Tabarrok (2007) find only a small deterrent effect of California's third strike provision. As a consequence, the deterrent return to increasing already long sentences is small, possibly zero.

The fine payment and Project Hope experiments also suggest that that curve B, not curve A, more closely resembles what, in medical jargon, would be described as the dose-response relationship between crime and sentence length. While neither of these studies is directed at the deterrence of criminal behavior, both suggest that, unlike increments to long sentences, incremental enhancements to short sentences do have a material deterrent effect on crime-prone populations.

## THE DETERRENT EFFECT OF POLICE

Research on the marginal deterrent effect of police has evolved in two distinct literatures. One has focused on the deterrent effect of police presence and crime, while the other has focused on the crime prevention effectiveness of different strategies for deploying police.

### POLICE PRESENCE AND CRIME

Some of the most convincing evidence on the effect of police presences on crime comes from before-and-after studies in circumstances in which an abrupt change in police presence is clearly attributable to an event unrelated to the crime rate. For example, in September 1944, German soldiers occupying Denmark arrested the entire Danish police force. According to an account by Andenaes (1974), crime rates rose immediately but not uniformly. The frequency of street crimes such as robbery, whose control depends heavily on visible police presence, rose sharply. By contrast, crimes such as fraud were less affected. Contemporary tests of the police-crime

relationship based on abrupt decreases in police presence investigate the impact of reductions in police presence and productivity as a result of large budget cuts or lawsuits following racial-profiling scandals. These studies consistently find that large reductions in police presence are followed by increases in crime.

The ongoing threat of terrorism has also provided a number of unique opportunities to study the impact of police resource allocation in cities around the world. For example, Klick and Tabarrok (2005) examine the effect on crime in the National Mall area of Washington, DC, of the color-coded alert system implemented in the aftermath of the September 11, 2001, terrorist attack. The purpose of the alerts was to signal federal, state, and local law enforcement agencies to occasions when it might be prudent to divert resources to sensitive locations, such as the National Mall. During high alerts, police presence increased by 50%. Such increases were associated with about a 15% reduction in crime.

#### POLICE DEPLOYMENT AND CRIME

Much research has examined the crime prevention effectiveness of alternative strategies for deploying police resources. One way to increase apprehension risk is to mobilize police in a manner that increases the probability that an offender is arrested after committing a crime. Strong evidence of a deterrent as opposed to an incapacitation effect resulting from the apprehension of criminals is limited. For example, studies of the effect of rapid response to calls for service find no evidence of a crime prevention effect, but this may be because most calls for service occur well after the crime event, with the result that the perpetrator has fled the scene. Thus, it is doubtful that rapid response materially affects apprehension risk.

The second source of deterrence from police activities involves averting crime in the first place. In this circumstance, there is no apprehension because there was no offense. In our view, this is the primary source of deterrence from the presence of police. Nagin (forthcoming) describes this as the sentinel role of policing. If an occupied police car is parked outside a liquor store, for example, a would-be robber of the store will likely be deterred because apprehension is all but certain.

One example of a police deployment strategy that has been shown to be effective in averting crime from occurring in the first place is "hot spots" policing. Weisburd and Eck (2004) propose a two-dimensional taxonomy of policing strategies. One dimension is "level of focus" and the other is "diversity of focus." Level of focus represents the degree to which police activities are targeted. Targeting can occur in variety of ways, but Weisburd and Eck give special attention to policing strategies that target police

resources in small geographic areas (e.g., blocks or specific addresses) that have very high levels of criminal activity—the so-called crime hot spots. Just like in the liquor store example, the rationale for concentrating police in crime hot spots is to create a prohibitively high risk of apprehension and thereby to deter crime at the hot spot by completely eliminating the opportunity to offend in the first place.

Braga (2008) informative review of hot spots policing summarizes the findings from nine experimental or quasi-experimental evaluations. All but two of the studies found evidence of significant reductions in crime. Further, no evidence was found of material crime displacement to immediately surrounding locations. On the contrary, some studies found evidence of crime reductions, not increases, in the surrounding locations—a “diffusion of crime-control benefits” to nontargeted locales.

The second dimension of the Weisburd and Eck taxonomy is diversity of approaches. This dimension concerns the variety of approaches that police use to impact public safety. Low diversity is associated with reliance on time-honored law enforcement strategies for affecting the threat of apprehension, for example, by dramatically increasing police presence. High diversity involves expanding beyond conventional practice to prevent crime. One example of a high diversity approach is problem-oriented policing. Problem-oriented policy comes in so many different forms that it is regrettably hard to define.

One of the most visible examples of problem-oriented policing is Boston’s Operation Cease Fire (Kennedy, Braga, Piehl, & Waring, 2001). The objective of the collaborative operation was to prevent intergang gun violence using two deterrence-based strategies. One was to target enforcement against weapons traffickers who were supplying weapons to Boston’s violent youth gangs. The second involved a more innovative use of “focused deterrence.” The youth gangs themselves were assembled (and reassembled) to send the message that the response to any instance of serious violence would be “pulling every lever” legally available to punish gang members collectively. This included a salient severity-related dimension—vigorous prosecution for unrelated, nonviolent crime such as drug dealing. Thus, the aim of Operation Cease Fire was to deter violent crime by increasing the certainty and severity of punishment but only in targeted circumstances, namely if the gang members were perpetrators of a violent crime. Just as important, Operation Cease Fire illustrates the potential for combining elements of both certainty and severity enhancement to generate a targeted deterrent effect.

## THREE TOPICS FOR FUTURE DETERRENCE RESEARCH

## AN INTEGRATED MODEL OF THE EFFECTS OF THE THREAT AND EXPERIENCE OF PUNISHMENT

At the outset of this review, we distinguished between what criminologists call specific deterrence and general deterrence. The former is the response to the experience of punishment, whereas the latter is the response to the threat of punishment. There is no logical contradiction between the conclusions that the experience of punishment actually increases the propensity for offending, even as the threat of punishment deters it. Indeed, a review by Nagin, Cullen, and Jonson (2009) of the effect of the experience of imprisonment on recidivism concluded that the great majority of studies point to a criminogenic effect of the prison experience on subsequent offending.

The logic of specific deterrence is grounded in the idea that if the experience of imprisonment is sufficiently distasteful, some of those who are punished may conclude that it is an experience not to be repeated. The experience of punishment may also affect the likelihood of future crime by decreasing the attractiveness of crime itself, or by expanding alternatives to crime through participation in rehabilitation programs. There are, however, a number of reasons for theorizing that the experience of punishment might increase an individual's future proclivity for crime. Prisons might be the so-called schools for crime in which inmates learn new crime skills even as their noncrime human capital depreciates. Associating with other, more experienced inmates could lead new inmates to adopt the older inmate's deviant value systems. Being punished may also elevate an offender's feelings of resentment against society. The experience of imprisonment may also increase future criminality by stigmatizing the individual socially and economically.

We see two major tasks related to developing an integrated model of the response to both the threat and experience of legal sanctions. One involves extending deterrence theory to account for how the proclivity for crime is affected by the experience of punishment. This will require, at a minimum, consideration of the effect of the experience of punishment on sanction risk perceptions, as well as the limiting of legal alternatives to criminal behavior owing to factors such as stigma and human capital erosion.

Because by construction this model will require a dynamic framework, consideration of the degree to which potential offenders anticipate and discount future consequences of crime and noncrime will be necessary. There is a vast literature that documents the present orientation of criminals. This raises difficult issues of how best to model this present orientation in the context of criminal decision making.

#### MEASURING PERCEPTIONS OF SANCTION REGIMES

A sanction regime defines the sanctions that are legally available for the punishment of various types of crime, in addition to the way that legal authority is actually administered. A major theoretical and empirical gap involves how active criminals and people on the margin of criminality perceive the sanction regime. As (general) deterrence is the behavioral response to perceptions of sanction threats, establishing the linkage between risk perceptions and actual sanction regimes is imperative. Unless perceptions adjust, however crudely, to changes in the prevailing sanction regime, the desired deterrent effect will not be achieved.

#### THE DETERRENT EFFECT OF SHORTER PRISON SENTENCES AND IDENTIFICATION OF HIGH-DETERRENCE POLICIES

Crime prevention by incapacitation necessarily requires higher imprisonment rates and the attendant social costs. By contrast, if crime can be deterred from occurring in the first place, there is no perpetrator to punish. Durlauf and Nagin (2011a) express skepticism that there are large numbers of policies involving increases in sentence length that produce substantial deterrent effects. The one exception may involve short prison sentences. Sentence lengths in Western European countries tend to be far shorter than in the United States (Durlauf & Nagin, 2011b). Research based on European data of the deterrent effect of shorter sentence lengths should be a priority.

Durlauf and Nagin (2011) also express optimism that viable police-deployment strategies hold promise for having large deterrent effects. Specifically, they speculate that strategies that result in large and visible shifts in apprehension risk are the most likely to have deterrent effects that are large enough to reduce imprisonment as well. Hot spots policing might have this characteristic. More generally, the types of problem-oriented policing strategies described and championed by Kennedy (2009) have the common feature of targeting enforcement resources on selected high-crime people or places. In addition, the multimodal approach to preventing crime among high-risk groups that combines deterrent and reintegration tactics described by Papachristos, Meares, and Fagan (2007) is a creative example of a carrot-and-stick approach to crime prevention. Although the effectiveness of these strategies for focusing police and other criminal justice resources has yet to be reliably demonstrated, priority attention should be given to their continued evaluation, particularly as they relate to the carrot component of the intervention. Indeed, the effectiveness of positive incentives as a crime preventive is an understudied topic.

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