

Experiments in Punishment:  
Explaining Differences in the Scope of Penal Sanctioning in the American States

by

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A mes parents, Jean et Jacqueline,  
et à ma soeur Mathilde,  
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## **ABSTRACT**

Despite the vast literature on the unprecedented expansion of US prison populations since the 1970s, scholars are only beginning to understand why punishment practices in the states are fragmented. This dissertation is part of a growing body of macro-sociological research that uses shifts in penology, political economy, demography and policy to analyze the country's penal overindulgence. Using pooled time-series cross sectional data, this project investigates differences in the scope of penal sanctioning in the American states over a thirty-year period (1978-2007). The analyses, informed by the theories used to explain front end (court) sentencing, replicate and expand prior research examining the determinants of incarceration rates, and explore whether this theoretical framework can be usefully applied to back end sentencing (parole revocation).

In so doing, the research presented here offers a window into the changing historical understanding of the philosophy, the form, and the function of punishment in the United States, and makes three distinct contributions to the literature. First it expands the analytical time frame and broadens the scope of theoretical explanations. Second, it examines how the determinants of sentencing practices have changed over time. Finally, it develops a framework for analyzing variations in state parole revocation rates—the only study to date to attempt to shed some light on this crucial, yet overlooked, criminal justice steering mechanism.

The results indicate that states have responded to similar policy problems with idiosyncratic policy solutions shaped by local social, political, economic and cultural conditions, and that these dynamics are historically contingent. In addition, the results demonstrate that front end and back end sentencing are influenced by the same factors, but in rather different ways. For the most part, the findings are congruent with empirical patterns uncovered in prior research; crime, symbolic threats, practical constraints, and sentencing factors all explain changes and differences in state incarceration rates and parole revocation rates. However, in comparison to findings in prior research, the results of this study provide weak support for the influence of political factors. They point to the importance of practices of civic engagement instead, suggesting that penal sanctioning is driven by “top down” policies as well as “bottom up” democratic processes.

## **CHAPTER 1 INTRODUCTION**

One of the defining characteristics of the late twentieth century social, political and cultural life in the United States has been an intense focus on the “crime problem”—urban violent crime, especially—and the unprecedented expansion of the penal system designed to contain it. Starting in the 1970s, prison populations grew sharply through the 1990s. By the end of 2007, US prisons and jails held over 2.29 million men and women—a five-fold increase since 1972 and a rate six to ten times that of most comparable countries—and this in spite of declining crime rates. In 2007, the national incarceration rate reached 773 per 100,000 US residents, up from 150 in 1972. New prison admissions contributed substantially to this increase, but so did parole revocations: in 1980, 18% of prison populations were parolees returned to incarceration. By 2000, this number had reached 34% (Travis 2007), contributing to a dynamic variously referred to as the “revolving door,” or “catch and release (and catch again).” By all accounts, the breadth and size of this prison explosion have been nothing short of stunning, and a very large body of research has been devoted to exploring the causes, contours, and consequences of a phenomenon that has strained state and correctional resources and has had a concentrated impact on minorities and the poor (Clear 2007; Jacobson 2006; Mauer and King 2007; Pager 2007; Western 2006).

These increases in the use of imprisonment have been pervasive, affecting every state in the nation. As a result, scholars have tended to treat mass imprisonment as a national problem and to analyze it that way (Lynch 2011). However, this approach homogenizes important subnational variations. While all states have seen their prison populations increase, the extent and the rate at which they have changed vary dramatically from state to state: in 2009 for example, the incarceration rate was 150 in Maine, but 881 in Louisiana. And between 1979 and 2009, states saw prison population increases that ranged from 45 percent in Nevada, to 744 percent in North Dakota (Mauer 2011). The character of penal sanctioning also varies considerably: while Arizona reinstated chain gangs, Washington, Oregon, and Ohio have quietly adopted policies of de-escalation, community sanctions, and diversion (Barker 2009). Not only does analyzing aggregated national-level trend data preclude us from understanding how the states have contributed to the incarceration explosion, it is also problematic because it assumes that explanatory factors mean the same thing, and work the same way, across time and space. But the evidence shows that states have reacted to the same policy problems (say, rising crime rates) in very different ways. These variations in the use of punishment both within and between states have yet to be “fully documented, understood, or explained” (Barker 2009: 4). In particular, as Lin, Grattet and Petersilia (2010) point out, the significance of back-end sentencing has been largely overlooked in analyses of prison population dynamics. Without an investigation of the factors that drive both front door and back door prison intake, our understanding of the empirical reality of mass incarceration remains incomplete and perhaps inaccurate.

### **A new penological paradigm?**

These far-reaching quantitative changes in the use of incarceration in the last forty years have been accompanied by equally profound shifts in penal discourse, techniques, and objectives. After operating for a century under a positivist model, the criminal justice system saw its philosophical principles shatter as penal welfarism and the rehabilitative ideal came under attack in the 1970s. Prior to the 1970s, rehabilitation was widely accepted as a legitimate goal of incarceration. However the 1970s saw a dramatic shift in the power balance between the competing goals of rehabilitation and punishment (Andrews and Bonta 1998; Bonta 1997; Cullen and Gendreau 1989). As crime increased criminology experts, corrections practitioners, and the American public became equally disillusioned about the effectiveness of rehabilitation programs (Cullen, Fischer and Applegate 2000). The backlash against rehabilitation was further amplified by Martinson's (1974) influential review, which became synonymous with the 'nothing works' doctrine. As Garland (2001) explains,

“[t]his fall from grace of rehabilitation was hugely significant. Its decline was the first indication that the modernist framework ... was coming undone. Rehabilitation had been the field's central structural support, the keystone in an arch of mutually supportive practices and ideologies. When faith in this ideal collapsed, it began to unravel the whole fabric of assumptions, values and practices upon which modern penalty had been built.” (8)

Accompanied by growing levels of insecurity and fear of crime, the focus turned from rehabilitation to crime prevention (policing), risk management, and deterrence and retribution through punitive sanctions.

It is tempting to see these changes as a radical break from the past, a new penological paradigm. This notion has been articulated most extensively by Feeley and

Simon's (1992) work, which delineates three characteristics of the postmodern penal era: (1) rather than the transformation of offenders into pro-social citizens, the new penal discourse emphasizes risk and probability as applied to offenders, with (2) the objective to protect the public and manage criminals through (3) the implementation of efficient techniques (drug testing, electronic monitoring, ...), actuarial methods (sentencing guidelines) to evaluate, classify, and control risk. The new penology, then, is "neither about punishing nor rehabilitating individuals ... it is about identifying and managing unruly groups" (Feeley and Simon 1992: 455). But several commentators have pointed out that one cannot ignore the punitive overtones that dominate contemporary penalty (Bottoms 1995; Garland 1996). The new penology may not perform this expressive function, they argue, but it does facilitate retributive punishment. Rather than being indicative of the formation of a new, post-modern penal order, it is more likely that the changes we are witnessing mark the continuation and acceleration (facilitated by advances in statistics and computer technology) of trends that may date back several hundred years.<sup>1</sup> The reality of American penal sanctioning is also much more complicated, fragmented, and multi-dimensional than the new penology implies.

### **Dissertation goals and contributions**

This purpose of this project is to examine the following questions: Why do some states rely on confinement more than others? Why do incarceration and parole revocation rates vary over time? Are the determinants of front-end sentencing the same

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<sup>1</sup> Rigakos and Hadden (2001) argue that the use of actuarialism in criminal justice dates back to the 1600s, when the emerging English bourgeoisie used it to monitor the social groups that presented a potential threat to its economic ascendancy.

as the determinants of back-end sentencing? In addressing these questions, this dissertation has two major (and interrelated) goals. The first is to review and synthesize the extensive prison boom literature in order to build a theoretical framework with which to analyze penal sanctioning in the states. Research on the American penal overindulgence has identified a number of macro-social and demographic factors (shifts in crime, political culture, population demographics, sentencing structure, and economic conditions) thought to capture salient dimensions of state variation as sources of change in the size of state prison populations, but studies offer rather hollow theorizations of what could arguably be the most salient dimension of all: the state itself. Recent scholarship on the impact of democratic process on policy-making may help to build better theoretical models to explain the choices states have made regarding the use of imprisonment.

The second goal is to apply this expanded theoretical framework to the analysis of differences in the scope of penal sanctioning in the American states, with a particular focus on examining variation in state incarceration rates and state parole revocation rates over a thirty-year period (1978-2007). Since to date, no study has analyzed the determinants of back-end sentencing, the results of these analyses can then be used to suggest whether a separate theoretical model is needed to explain parole revocation.

The research presented here makes three distinct contributions to the literature. First it expands the analytical time frame and broadens the scope of theoretical explanations. Second, it examines how the determinants of sentencing practices have changed over time. Finally, it develops a framework for analyzing variations in state

parole revocation rates—the only study to date to attempt to shed some light on this overlooked, yet crucial, criminal justice steering mechanism.

### **Overview of the dissertation**

In Chapter 2 I provide a genealogical account of the prison boom. Relying on the very large body of research examining how and why the country embarked on an aggressive program of prison expansion in the 1970s, I tease out the social, political, economic, and cultural forces that were responsible for the build up in imprisonment and have continued to drive prison populations to historically unprecedented sizes. Studies have investigated penal sanctioning with uneven focus and intensity, leaving some aspects of the processes that contributed to the incarceration explosion theoretically and empirically underdeveloped: researchers have concentrated almost exclusively on "front-end sentences" (offenders sent to prison through court sentences), and largely ignored back-end sentences (parolees returned to custody). Chapter 3 attempts to fill this gap in our understanding of mass incarceration by unpacking the "black box" of the parole revocation process in order to contextualize the meaning of revocation as a sanction, and to identify salient dimensions upon which a conceptual model of the use of revocation can be built.

The analyses in Chapters 5 and 6 are based on an original dataset that contains information on all fifty states for every year in the study period (1978-2007). Chapter 4 describes the data collection techniques, the operationalization and measurement of the variables, and the analytic strategy used in this dissertation to investigate the state-level

determinants of incarceration rates and parole revocation rates in the United States between 1978 and 2007.

Chapter 5 examines front-end sentencing using negative binomial regression. The analyses replicate and extend prior analyses of the predictors of incarceration rates by elaborating and refining prevailing theoretical frameworks. The models also examine whether and how the drivers of imprisonment vary over time. In Chapter 6 I apply the same analytic and modeling strategy to analyze parole revocation rates. I argue that numerous factors including those related to crime, symbolic threats, practical constraints, sentencing policies, and the democratic process are important determinants of penal sanctioning both at the front end and at the back end, but it is important to recognize that their impact is historically contingent. In addition, I make the case that the ways in which these factors influence front door and back door prison intake are different enough that we must build analytical models specific to parole revocation.

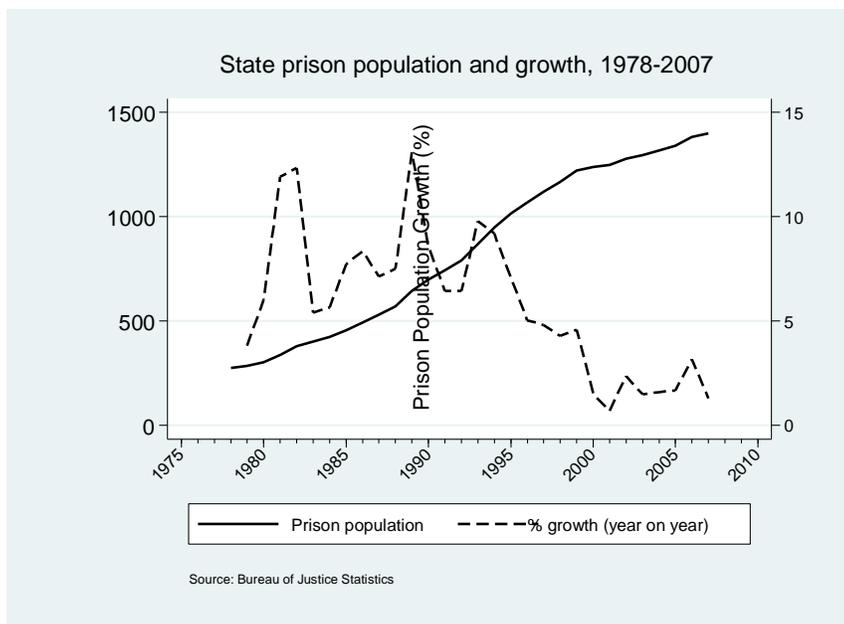
## **CHAPTER 2 A GENEALOGY OF THE PRISON BOOM**

In 1973 the National Advisory Commission on Criminal Justice Standards and Goals, charged with evaluating the state of the judicial system, recommended closing down juvenile detention centers and freezing prison construction for a decade. The Commission's recommendations were based on a decade of declining prison populations, as well as the concern that prisons were criminogenic and should therefore be replaced by alternative sentences: "the prison, the reformatory, and the jail have achieved a shocking record of failure. There is overwhelming evidence that these institutions create crime rather than prevent it," the Commission famously concluded (1973: 597). In a sudden and unprecedented development, however, prison populations started growing by leaps and bounds until, at the turn of the twenty-first century, US jails and prisons held more than two million inmates. If it were a city, the current US carceral system would be the country's fourth largest metropolis (Wacquant 2009: 114).

### **How did we get here from there?**

In the span of three short decades, the way in which this country punishes and manages crime was radically transformed. This spectacular turnabout has perplexed scholars and observers, and a large body of empirical research has been devoted to understanding the causes of the country's penal overindulgence. From a purely

descriptive point of view, penologists who study prison growth (Blumstein and Beck 1999, 2005; Raphael and Stoll 2007, 2009; Raphael 2009; Pfaff 2009) have shown that, at the most basic level, the dramatic thirty-year upward trend in incarceration rates (Figure 2.1) was the result of too many people entering prison and staying there too long—what some have called the “iron law of prison populations” (Clear and Austin 2009: 308).



**Figure 2.1 State prison population and annual growth rate, 1978-2007**

These studies differ in methods and ways of estimating variables such as time served, but they typically identify the different stages of the criminal justice system that have a significant impact on the prison population—most notably arrests, prison admissions, and length of stay—and endeavor to quantify their respective contributions to prison growth. The most basic of such models of prison growth is the stock-and-flow

model used by Blumstein and Beck (2005). Blumstein and Beck examined the contribution of three factors – crime rates, prison admission, and time served in prison<sup>2</sup> – to the growth of the prison population in two time periods, 1980 to 1991 and 1991 to 2002. They found that in the early period, (1980-91) prison admissions accounted for the bulk of prison population growth (63 percent), followed by time served (40 percent), and crime rates (22 percent). In the later period (1991-2002), further increases in prison population were driven largely by time served (60 percent), followed by new admissions (40 percent), while crime rates – which were declining through most of the later period – were no longer a factor driving prison growth.

Another approach, used by Raphael and Stoll (2009), relies on a steady-state model of the incarceration process that decomposes changes in prison populations into behavioral components (crime), prison admissions, and time served.<sup>3</sup> Their study explicitly incorporates the endogenous relationship between crime and incarceration to correct for possible overestimates of the effects of policy responses to crime. Although Raphael and Stoll's approach to decomposing prison growth is different from Blumstein and Beck's, their estimates of the effect of changes in crime rates on changes in the prison population are consistent with those derived by Blumstein and Beck. They find that crime accounts for 17 percent of the prison population growth between 1984 and 2002, while increases in time served and prison admissions explain 35 percent and 48 percent of the total change in incarceration rates respectively.

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<sup>2</sup> Expected time served was calculated as the ratio of the total prison stock to the number of new court commitments. This measure includes the probability that a new court commitment will be returned to incarceration and serve additional time for violating the terms of his conditional release.

<sup>3</sup> By using data from the National Corrections Reporting Program, Raphael and Stoll are able to calculate actual time served rather than having to estimate it.

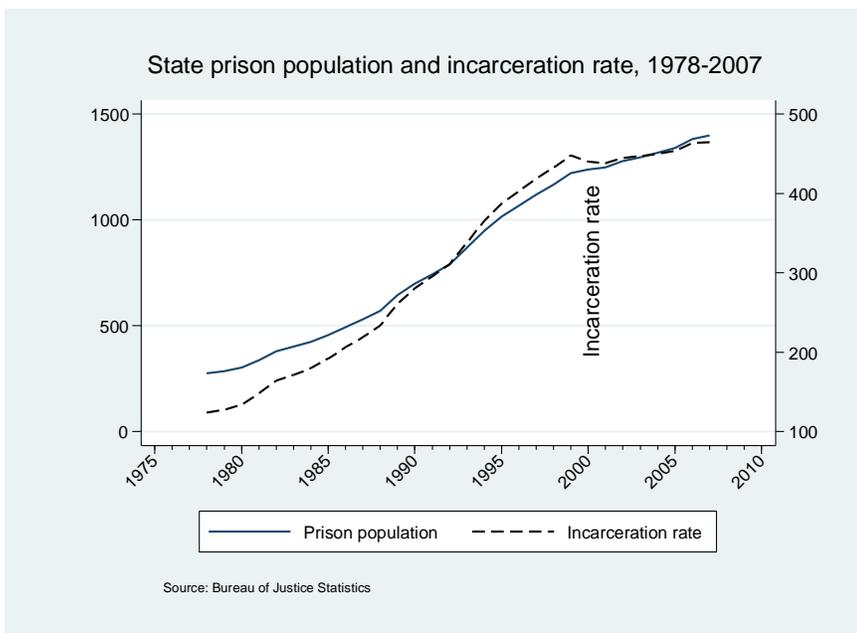
Relying on yet a different approach, Pfaff (2009) uses counterfactual analyses to examine the effects of prison admissions and time served on correctional population growth in eleven states over the period 1983-2002. Unlike Raphael and Stoll who computed mean time served from their distribution by assuming expected values for time served for the intervals of their empirical distribution, Pfaff calculates the actual percentiles of the distribution of time served, and reports the median, 75<sup>th</sup>, and 90<sup>th</sup> percentiles of the distribution for each state in his sample. This allows him to show that the trends in distribution of time served are comparatively constant over time. He then simulates prison growth, first keeping the level of admissions fixed at an initial year and allowing releases to vary according to their actual patterns; then keeping the release patterns fixed at an initial year and allowing admissions to vary according to their actual patterns. Although the magnitude of the effects is not quantified, his results indicate that changes in admissions account for more of the prison growth than release patterns (which include time served).

Collectively these studies suggest that it is policy factors affecting admissions and time served that are largely responsible for the growth of prison populations during the last two decades of the twentieth century. By further breaking their analysis down into two time periods, Blumstein and Beck are also able to demonstrate that the components of the growth changed in the 1990s: the influence of crime rates disappeared and the role of admissions decreased, while time served accounted for a greater share of the growth. These shifts coincided with the end of the era of major sentencing reforms,<sup>4</sup> and a marked

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<sup>4</sup> By 1996, the sentencing reform movement was over in most states (Stemen 2005).

decrease in the rate of prison growth: as Figure 2.1 shows, annual growth rates peaked at 13% in the early 1990s, and have been declining consistently since the mid-1990s to settle at less than 2% in recent years. In-keeping with the slowing in the growth of prison populations, the number of offenders in state prisons and the incarceration rate of state prisoners have started to diverge, with a leveling off in the incarceration rate during the 2000s (Figure 2.2) that suggests that prison populations are now roughly keeping pace with the rate of growth of the US resident population.



**Figure 2.2 State prison population and incarceration rate, 1978-2007**

The sentencing reform movement that swept through the US introduced a now well-known panoply of policies—including various forms of structured or guideline-based sentencing practices, minimum sentencing requirements, truth-in-sentencing reforms (mandating that offenders serve at least 70, 85 or, in some cases/states, 100

percent of the sentence imposed by the court), violent offender provisions, and habitual offender laws (also known as “three strikes” laws)—that changed how court sentences were handed down at the “front end” of the system, while also curtailing or reducing parole boards’ authority to make release decisions at the “back end.” Between 1975 and 2002, 19 states abolished discretionary parole, nine states adopted presumptive sentencing systems, and 17 instituted some form of sentencing guidelines—resulting in different combinations of determinate/indeterminate and structured/unstructured sentencing systems, and a patchwork of sentencing practices across the country (Table 2.1).

**Table 2.1 Determinate and structured sentencing in the states, 2002**

State	Determinacy		Structure		
	No parole	Parole	Presumptive sentencing	Presumptive guidelines	Voluntary guidelines
Alabama		•			
Alaska		•	•		
Arizona	•		•		
Arkansas		•			•
California	•		•		
Colorado		•	•		
Connecticut		•			
Delaware	•				•
Florida	•			•	
Georgia		•			
Hawaii		•			
Idaho		•			
Illinois	•				
Indiana	•		•		
Iowa		•			
Kansas	•			•	
Kentucky		•			
Louisiana		•			•
Maine	•				
Maryland		•			•
Massachusetts		•			
Michigan		•		•	
Minnesota	•			•	
Mississippi	•				
Missouri		•			•
Montana		•			
Nebraska		•			
Nevada		•			

State	Determinacy		Structure		
	No parole	Parole	Presumptive sentencing	Presumptive guidelines	Voluntary guidelines
New Hampshire		•			
New Jersey		•	•		
New Mexico	•		•		
New York		•			
North Carolina	•			•	
North Dakota		•			
Ohio	•		•		
Oklahoma		•			
Oregon	•			•	
Pennsylvania		•		•	
Rhode Island		•	•		
South Carolina		•			
South Dakota		•			
Tennessee		•		•	
Texas		•			
Utah		•			•
Vermont		•			
Virginia	•				•
Washington	•			•	
West Virginia		•			
Wisconsin	•				•
Wyoming		•			

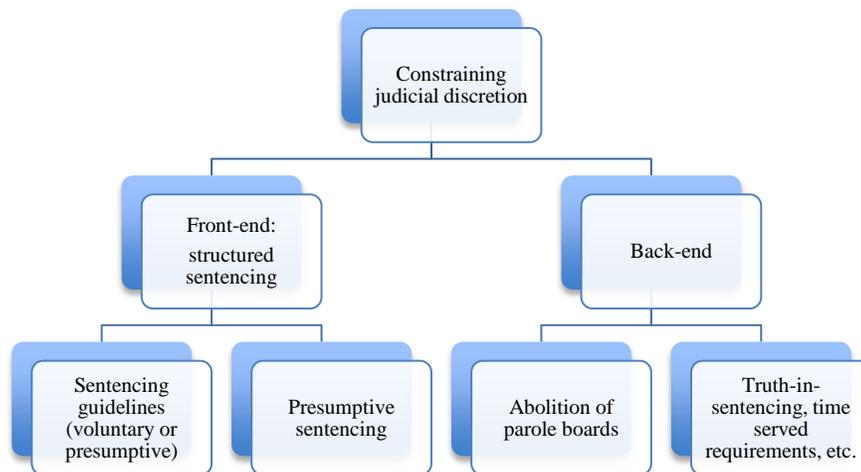
Source: Stemen (2005)

The implementation of these policies marked a significant change in the sentencing system under which the country had been operating for close to a hundred years. Until the early 1970s, the US operated under an indeterminate sentencing model that was organized around the twin goals of individualization and rehabilitation. It was believed that rehabilitation could be achieved by tailoring punishment based on the unique characteristics of the offender. Consequently states set few restrictions on judges' discretion to impose specific sanctions or sentences of a particular length, and parole boards had full authority to release offenders when they deemed it appropriate (Frase 1991; Griset 1991; Reitz 2001; Rothman 1983; Tonry 1997). The cornerstone of the system, judicial discretion, came under sustained attack in the 1970s: for some, it resulted in sentences that were considered too lenient or too short. Others were concerned about the potential for abuse and discrimination. One point that many critics agreed on was that

sentencing should be more structured and more determinate (Bales 2010). Criticized by both progressives and conservatives, the penal welfare framework gave way in the 1970s to a system based on retributive ideals and punitive sanctions.

Striking changes to sentencing and parole policies followed as the states and the federal system sought to remove variability and arbitrariness and restore fairness to sentencing and release decisions. As Figure 2.3 indicates, states accomplished this goal by constraining judicial discretion through the implementation of structured sentencing, and/or shifting the locus of discretion by eliminating or limiting parole boards' authority: the former controls sentencing decisions and the length of the prison terms imposed at the front end, while the latter controls releases and time served at the back end. Specifically, at the front end, states introduced structure into their sentencing systems through one of two similar, yet distinct, mechanisms (Stemen 2005). The first, presumptive sentencing is a system of single recommended prison terms or narrow sentence ranges within the wider statutory sentence range *for each offense or offense class*. It is termed “presumptive” because it is presumed that the judge will impose the recommended prison term or a term from within the narrow recommended range. The second mechanism, sentencing guidelines, is a system of multiple recommended sentences and dispositions, and a set of procedures designed to guide judicial sentencing decisions and sentencing outcomes, and to ensure that all offenders committing similar offenses and with similar criminal histories receive similar sentences. Under sentencing guidelines, each offense or offense class will have multiple sentence recommendations based on the prior criminal history of the offender, and recommended prison terms are generally determined according to the severity of the offense committed *and* the prior criminal history of the

offender.<sup>5</sup> Sentencing guidelines can be either presumptive or voluntary, depending on the degree to which states use formal legal authority to constrain judicial sentencing decisions.



**Figure 2.3 Reforms constraining judicial discretion at the front- and back-ends of state sentencing systems**

At the back end, states moved toward determinate sentencing systems—i.e., systems *without* discretionary parole release as a mechanism for releasing offenders from prison (Reitz and Reitz 1993; Stemen 2005; Tonry 1987). Without discretionary parole release, offenders are automatically released from prison after serving a statutorily-determined portion of the term imposed (e.g. 85 percent of their sentence). The “determinacy” in the system refers to the effort to ensure that time served by offenders is

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<sup>5</sup> This differs from presumptive sentencing systems, where recommended sentences are determined entirely by the severity of the current offense.

primarily determined by the length of the sentence imposed by the judge rather than by the discretionary release decision-making of the parole board.

Scholars have not yet formed a consensus about the precise impact of these sentencing reforms on prison admissions and time served,<sup>6</sup> but they have suspected that sentencing reforms may affect incarceration rates by shifting the locus of sentencing discretion and power from the judiciary (judges and parole boards) to the executive (prosecutors) and the legislative branches. This "hydraulic displacement of discretion" (McCoy 1984; Tonry and Coffee 1987) has been hypothesized to give more power to prosecutors to coerce defendants into taking guilty pleas, and to mask the very sentencing disparities that structured sentencing was designed to eliminate (Rathke 1982; Savelsberg 1994; Ulmer 1996).<sup>7</sup> This theory, while popular, has received little empirical attention. However, in their studies of case dispositions before and after the implementation of guidelines in Minnesota and Ohio, respectively, Miethe (1987) and Wooldredge and Griffin (2005) find that sentencing reforms did not, in fact, result in harsher sentencing decisions or greater disparities in case disposition. But Wooldredge and Griffin also note that their data showed considerable differences in disposition rates across the 24 jurisdictions they examined. The impact of the displacement of discretion might be more readily apparent when looking at parole revocations since the abolition of parole boards (or the curtailment of their authority) was aimed precisely at restricting discretion in an

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<sup>6</sup> Early studies of guidelines and determinate sentencing laws suffered from methodological shortcomings that hindered researchers' ability to parse the role of sentencing policies in the dynamics of prison population change and separate the impacts of sentencing policies from long-term trends in corrections (Casper and Brereton 1984; Hewitt and Clear 1983; Kautt and Delone 2006; Lipson and Peterson 1980).

<sup>7</sup> Ulmer and Kramer, for example, show that loose guidelines provide a "menu of sentencing options" (1998: 403) with windows of discretion that allow decision-makers to use substantive rationality and extralegal factors to adapt sentencing decisions to the specific characteristics of the local context.

effort to ensure that offenders were not "let off too easy," but this hypothesis has yet to be empirically tested.

The extent to which the hydraulic displacement of discretion affects incarceration rates remains unclear then. Neither do we understand the precise mechanisms through which this may happen. What the research investigating sentencing reforms does show, however, is that the direction and magnitude of the effects of the new sentencing policies may depend on three factors. The first, and perhaps most obvious, is that different types of policies have different impacts: Stemen and his colleagues (2005) found that mandatory sentencing laws, three strikes laws, and the creation and enforcement of drug laws had a significant, positive effect on incarceration rates, but their results did not support the argument that time served requirements (such as truth-in-sentencing laws) are associated with higher incarceration rates. Second, sentencing policies may have a different effect depending on whether they were adopted with the intention of being "tough on crime" or of curbing the run-away growth of prison populations and corrections budgets. For example, Marvell's (1995) longitudinal study of sentencing guidelines in nine states between 1974 and 1993 determined that guidelines had a moderating effect on incarceration rates in states where the guidelines were tied to legislative directives to consider prison capacity and correctional resources. He also found that guidelines did not have a significant impact on admission rates. In a subsequent study Marvell and Moody (1996) showed that determinate sentencing laws were associated with prison growth and increased court commitments in only two of the 10 states they examined (Indiana and California), but reduced populations in the others. They conclude that the direction (positive or negative) of the effect of determinate

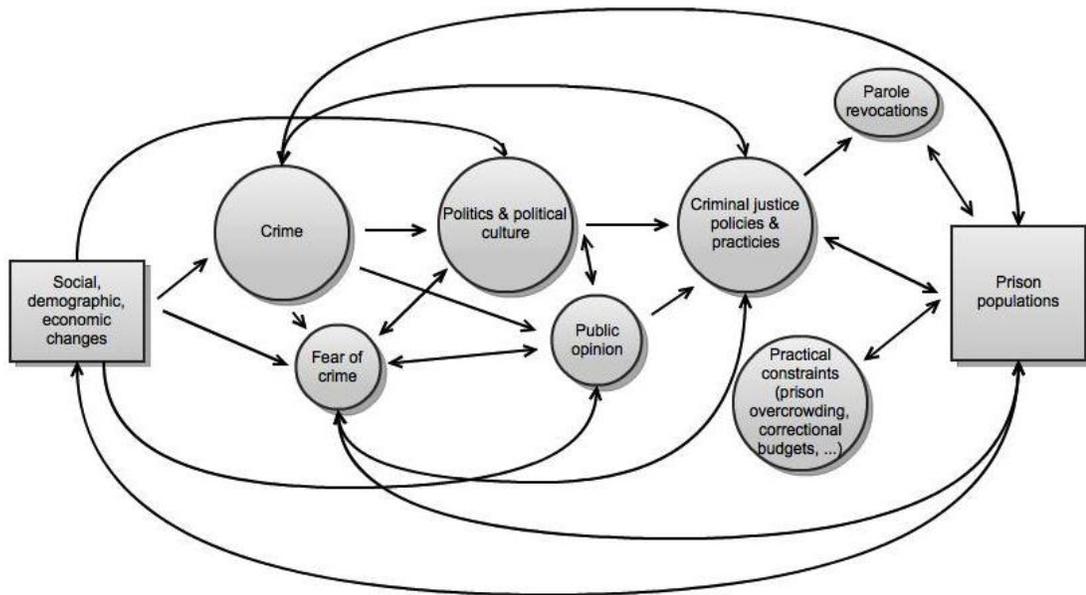
sentencing laws on correctional populations hinged upon policymakers' framing of the laws as either "tough on crime" measures or population reduction measures. Their findings support Kramer's (1992) analysis of the implementation of guidelines in Pennsylvania. Kramer shows that the state adopted guidelines as part of a sentencing scheme designed to produce more commitments, longer sentences, and higher incarceration rates, and they were indeed associated with an increase in the latter. In contrast, in states such as Minnesota, Washington, and Oregon, where guidelines were explicitly linked with capacity and correctional resources, prison population sizes leveled off or decreased (Alschuler 1991; Frase 1995; Tonry 1991, 1996). Nicholson-Crotty (2004), in a pooled time-series analysis of the impact of guidelines in the 50 states between 1975 and 1998, came to a similar conclusion. His findings show a relationship between mandatory guidelines and increased commitment and incarceration rates in states where sentencing decisions are *not* linked to capacity and expenditures. Where they are resource-driven, the impact on prison populations is either negative or insignificant. Finally, the impact of sentencing reforms may be tied to the combined effects of policies, as Stemen's (2005) findings suggest. His results show that the combination of determinate sentencing and *presumptive* sentencing guidelines resulted in lower incarceration rates and smaller prison population growth. This was not true of states with determinate sentencing and *voluntary* sentencing guidelines, where incarceration rates were higher and prison population growth was greater than in other states.

Although the research that is necessary to get a firmer grasp of the effects of sentencing policies on state prison populations is just starting to emerge, the new policies

that were put in place in the 1980s and 1990s played a significant role in the growth of the carceral system; that much seems clear. But what “tangle of transformative forces” (Garland 2001: 2) paved the way for the adoption of these new policies? Why did our response to crime take the form that it did, when it did?

### **The path of least resistance**

In his book *The Culture of Control* (2001), David Garland argues that: “to investigate the new patterns of crime control is [...] to investigate the remaking of society and its institutions for the production of order” (6). The complex historical processes that took us from a welfare state in the early 1970s to a full-blown penal state thirty years later defy simplification, as the path diagram in Figure 2.4 demonstrates: the various factors associated with changes in the size and growth of prison populations coexist in messy, sometimes contradictory, relationships. Any attempt to weave them together into an account of our contemporary practices of crime and punishment necessarily imposes an artificial and perhaps misleading organization and coherence upon a confusing, spatially-differentiated, multi-dimensional historical process. It is, however, a place from which the analysis can begin. Scholars have drawn attention to two sets of transformative forces that helped to facilitate the introduction of a law-and-order regime and the re-invention of the prison. The first set of forces consists of social and economic changes that eroded the foundations of New Deal liberalism in the 1960-1970s. These changes in turn resulted in major political and cultural realignments that formed the terrain upon which crime control policies were built and prison expansion took off in the following two decades.



**Figure 2.4 Conceptual diagram of the main factors influencing the size and growth of prison populations in the US**

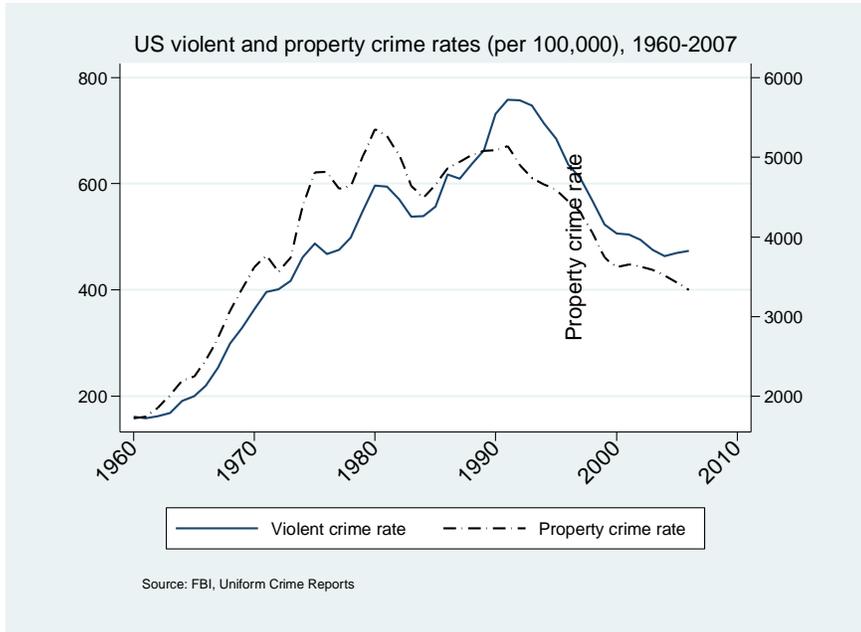
### The crisis of New Deal Liberalism

The post-World War II political order was characterized by two decades of peace and stability, sustained economic growth, political optimism, and progressivism that raised expectations about the role of government in managing economic life and guaranteeing the wellbeing and prosperity of its population. The rising standards of living funded a “politics of solidarity” and a strategy of welfarist governance in which the state provided social services, health care, education, housing, and unemployment benefits for its citizens. This commitment to social democracy extended to the penal realm, where the rehabilitative model promoted progressive penal policies based upon the individualized treatment of offenders (Garland 2001; Reitz 2000; Simon 2007).

Rehabilitation of criminals was viewed as possible, and their reintegration into society,

desirable, and penal welfarism sought to achieve these goals through professional treatment, education, and social work support (Garland 2001). This mode of governance was destabilized and eventually collapsed however, as demographic changes, the social crises of the 1960-70s (urban race riots, violent civil rights struggles, anti-war demonstrations, and political assassinations), and deteriorating economic conditions in the 1970s made US society more crime-prone; shook confidence in the welfarist framework; and created a governmental crisis.

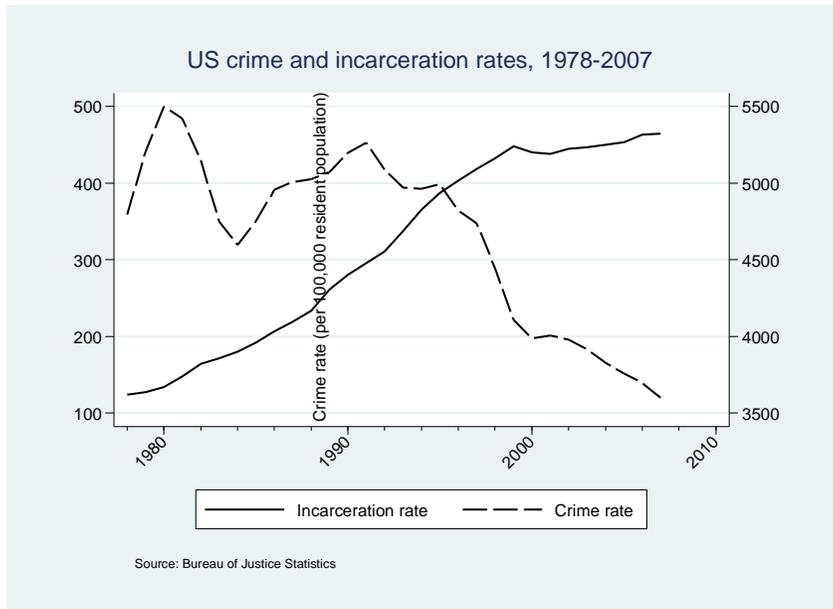
Crime rates rose sharply across all major offense categories (including property crimes) in the 1960s and 1970s. As Figure 2.5 indicates, property and violent crime rates roughly tripled in twenty years, and continued to climb until the early to mid-1990s, when they reached their peak and proceeded to fall as steeply as they had gone up. Scholars have linked the sustained increase in crime in the 1960-70s to a number of socio-demographic and cultural changes that, together: increased opportunities for crime (higher standards of living and mass consumption meant that the new targets for theft in the form of high value, portable goods, appeared on the market); reduced situational controls (women entered the workforce, and people moved out of densely populated neighborhoods and into sprawling suburban subdivisions); increased the size of the population most prone to criminal behavior (a large cohort of young males came of age); and relaxed informal social control and social norms (Bottom and Wiles 1995; Felson and Cohen 1980; Garland 2001; LaFree 1998).



**Figure 2.5 Violent and property crime rates, US, 1960-2007**

Since punishment is a direct response to crime, one would expect more crime to result in higher incarceration rates—especially when increases in crime rates (both violent and property crime—Figure 2.5) are as substantial and as sustained as they were in the US from the 1960s through the mid-1990s. This functionalist argument is supported by some of the research that shows a positive, significant relationship between crime rates and incarceration rates (Langan 1991; Sykes, Ouimet and Tremblay 1996; Vito and McElrath 1987). Researchers have struggled to quantify accurately the degree to which increases in crime translate into prison growth however, because the relationship between crime and incarceration is notoriously complex: more crime may lead to higher incarceration rates, and mass incarceration may deter crime. Failure to appropriately control for the feedback loop created by the reciprocal relationship between crime rates and prison population growth (i.e. treating crime as an exogenous variable in

regression models of incarceration rates) leads to biased estimates (Listokin 2003; Pfaff 2007), but addressing endogeneity is challenging, and very few studies do so convincingly.<sup>8</sup>



**Figure 2.6 US crime and incarceration rates, 1978-2007**

Moreover, as Figure 2.6 demonstrates, the effect of crime on incarceration is not as intuitive, straightforward, or mechanical as this functionalist argument would suggest, which would also explain why tests of this relationship are often met with mixed results.

More significantly perhaps, the “crime problem” became the solution to the crisis of the New Deal political order (Simon 2007). The social instability brought about by rising crime, deteriorating race relations, anti-war demonstrations, and civil rights

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<sup>8</sup> In his meta-analysis of the prison boom literature, Pfaff argues that Listokin’s (2003) is the only study that explicitly and convincingly controls for the endogenous relationship. He does so by using abortion as an instrument for crime. His results show a doubling of the magnitude of crime’s effect on prison admissions.

struggles in the 1960s and 70s, not only generated anxiety among the American public about the decline of civility, but also contributed to a broad social malaise about seemingly intractable social and economic problems (inflation, unemployment, the collapse of industrial production, and the increasing precariousness of the labor market) that the post-war political order appeared powerless to solve (Scheingold 1991, 1995). As a result people, especially in the middle-class, started to question the legitimacy and effectiveness of welfare institutions that appeared to be benefitting undeserving and dangerous segments of the population. As economic conditions worsened with the 1973 oil crisis and the country entered into a recession, the middle-class grew more resentful, and more reluctant to support expensive welfare policies that they deemed at odds with their own economic interests (Garland 2001). This governmental crisis gave politicians competing for support powerful incentives to reframe anxieties about social and economic problems while lowering expectations about what the government could and should do to address these issues. Of the various programs around which they could rally (environmentalism, the expansion of social insurance programs, the civil rights movement), crime offered the least political or legal resistance to governmental action (Garland 2001; Scheingold 1991; Simon 2007).

For political elites to use crime and punishment in response to social and economic problems is hardly without historical precedent. One of the basic functions of the State is to guarantee social order, and the power to punish its citizens is a fundamental component of its authority (Foucault 1977; Garland 1990; Jacobs and Carmichael 2001). When faced with what Garland calls “a Marxist problem of order” stemming from the social and political instability caused by class antagonisms and precarious labor market

conditions,<sup>9</sup> states have used penal sanctioning as a way to “manage the underclass” and preserve established structures of power and privilege (Adamson 1984; Chambliss 1994; Foucault 1995; Garland 1990; Savelsberg 1994). For example, Rusche and Kirchheimer (1939) showed that transformations in European penal systems (and the rise of imprisonment more specifically) between the 16<sup>th</sup> and 19<sup>th</sup> century corresponded to phases of economic development and changes in the labor market. Michael Ignatieff (1978) and David Rothman (1990) further elaborated on this theory, arguing that as capitalism weakened traditional forms of control, it came to rely on the prison to establish social stability. Economic threat theory has been criticized for economic reductionism and historical revisionism (Garland 1990), as well as for its implicit assumption of coordinated social control. Nevertheless, it draws our attention to the importance of economic conditions as a driver of prison population growth.

There is some empirical support for the theory. In their meta-analysis, Chiricos and Delone (1992) show that 60 percent of the 147 studies they examined reported that states with worse economic conditions (measured through the unemployment rate, for instance) are associated with higher incarceration rates (Cappell and Sykes 1991; Chiricos and Delone 1992; Greenberg 1977; Greenberg and West 2001; Jacobs and Carmichael 2001; Lessan 1991; Western 2006). However it is difficult to draw solid

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<sup>9</sup> In the Marxist view, the capitalist system creates problem populations that must be controlled in order to preserve social relations of production. Marx noted that capitalist accumulation “constantly produces a population which is superfluous to capital’s average requirements for its own valorization, and is therefore a surplus population,” a “disposable industrial reserve army” (1977:782). During good economic times, this surplus labor serves to keep employed workers’ wages down and maintain profits for the ruling class. During downward swings in the industrial cycle however a criminal underclass culled from surplus labor can arise—a potential political threat and an economic drain on the resources of the state. Punishment is therefore seen as reflecting both crime- and class-control objectives that are themselves linked to the larger economic context.

conclusions from these findings because the magnitude of estimates varies a great deal between studies, and appear to be sensitive to small changes in model specification: when Greenberg and West add unemployment-year interaction terms to their model, for example, the effect of the unemployment rate changes direction (it becomes negative), and loses its statistical significance. Studies using measures of economic inequality (Gini coefficient, poverty rate, or average personal income) to predict incarceration rates yield similarly erratic findings. A non-linear relationship between economic threat and punitive sanctions may account for these inconsistent results, but even the stronger studies of the drivers of the prison boom ignore this possibility.

#### Rightward drift

Politically, crime provided an important wedge to construct a new political order. With the decline of Jim Crow and the enactment of the Civil Rights Act of 1964, conservative politicians needed to retreat from explicit support for legal racial segregation and rebuild themselves around a more race-neutral agenda, which they found in the themes of the Goldwater campaign of 1964: anti-communism, states' rights, mistrust of New Deal-style government, public morality, and crime (Alexander 2010; Beckett 1997). The burgeoning Republican Southern strategy exploited racial fears and antagonisms and mobilized the resentment of white working-class voters who were most directly affected by racial integration measures and racial equality laws: "[They] were suddenly forced to compete on equal terms with Blacks for jobs and status and [they] lived in neighborhoods adjoining Black ghettos. Their children ... attended schools most likely to fall under busing orders" (Alexander 2010: 46; Edsall and Edsall 1992). This

(often racialized) political rhetoric shaped the nature and direction of debates about crime, and eventually the nation's repressive crime control policies (Beckett 1997; Erikson, Wright and McIver 1989; Scheingold 1998; Wacquant 2005).

The Republican Party — long considered the party of "law and order" —proved particularly adept at exploiting fears of crime and widespread social insecurities and setting off the contemporary thrust of "governing through crime" (Simon 2007). It is not surprising, then, that studies tend to find that a strong Republican Party is associated with increased corrections spending (Caldeira and Cowart 1980; Caldeira 1983; Stucky et al. 2005), higher incarceration rates (Jacobs and Carmichael 2001; Stemen 2005; Western 2006), and faster prison population growth (Jacobs and Helms 1999). This is not to say that Democrats have defended liberal positions on crime—far from it. Responding to the same public pressures to be "tough on crime," and in an effort to wrest control of the crime and drug issues from Republicans, Democrats, too, have backed strong crime control measures (Alexander 2010; Finckenauer 1978). For example, when seeking the Presidency, Bill Clinton highlighted his record of being tough on crime as Governor of Arkansas—which included the execution of a mentally-impaired man (Ricky Ray)—boasting, "I can be nicked a lot, but no one can say that I'm soft on crime" (quoted in Alexander 2010:56). He went on to pass some of the toughest sentencing laws and preside over the largest increases in state and federal prison populations of any president in American history. As a result of these changes in the political culture, then, the crime policy-making process became highly politicized—though some have suggested that one would expect partisan differences and the influence of the Republican Party on crime policy to become less significant over time as politicians from both parties compete to be

seen as more punitive (Beckett and Sasson 2000; Greenberg and West 2001). This hypothesis has yet to be rigorously tested.

The question of how Republican strength leads to higher incarceration rates and faster prison growth remains fairly open. One of the ways in which increased Republican political strength in the states may have fed the prison boom is through the vast redirecting of resources toward the criminal justice system. Corrections spending grew 350 percent in the 1980s and 1990s—or an increase from 1.6 to 3 percent of total state expenditures (Maguire and Pastore 2002). By 2005, the states were spending \$43 billion per year on corrections (Pfaff 2008). Studies show that Republican presidential administrations devoted more resources to corrections and other criminal justice programs, compared to Democratic administrations (Caldeira and Cowart 1980), and that increases in Republican strength are associated with increases in corrections spending (Jacobs and Helms 1999) or capital spending on prisons (Spelman 2009). Spelman also reports a positive relationship between prison capital spending and prison population growth, but this finding is problematic because the relationship may be endogenous: more spending on corrections may lead to more prisoners, but more prisoners may lead to more spending on corrections. There is little systematic research examining whether greater Republican strength in the states produces more severe penal sanctions or an escalation in the punishments stipulated by law for specific criminal acts, but studies conducted by Dyke (2003) and Huber and Gordon (2004) show that prosecutors (Dyke) and judges (Huber and Gordon) were more punitive in years when they faced elections: prosecutors dismissed fewer charges, and judges were more likely to favor prison sentences over alternative sentences (fines, probation) and to sentence defendants to

longer terms. These findings may reflect the need to attract voters with tough-on-crime stances, especially in Republican-dominated states.

But perhaps the most important way in which partisan politics influenced the expansion of the penal system is through the covert emphasis on race in the law-and-order rhetoric that came to dominate political discourse in the 1980s and 1990s. Racial threat theory contends that when a large or expanding minority group begins to threaten a dominant group's position, sharp reactions to such threats can be expected (Blumer 1980; Bobo and Hutchings 1996): severe punitive measures that (at least indirectly) target minorities, restrict the threat of a growing Black population and maintain a social distance between middle-class Whites and underclass Blacks. Examining the recent history of racial relations in the US, Loic Wacquant for instance argues that this form of racialized social control is the latest in a long series of institutions designed to dominate minorities: "the prison in the era of the jobless ghetto functions to warehouse a population made superfluous by urban deindustrialization, but radicalized by the social movements of the 1960s" (Western 2006:56, summarizing Wacquant's argument). Michelle Alexander, in her book *The New Jim Crow* (2010), provides some evidence for this claim. She describes how supposedly colorblind policies like the War on Drugs are recreating many of the conditions of Jim Crow and perpetuating a "black undercaste" characterized by what Wacquant terms "a closed circuit of perpetual marginality" (2000).

There is considerable support for these arguments in the empirical literature. Minorities have undoubtedly borne the brunt of the prison boom—especially young Black and Hispanic males who are vastly overrepresented in correctional populations. In part, this is due to the racial differences in the crimes that can be expected to lead to

imprisonment (Bridges and Crutchfield 1988): for example, as Keen and Jacobs (2009) point out, between 1983-1999, the mean Black violent crime arrest rate was 7.7 higher than the same rate for Whites. However, a number of studies suggest that this cannot be the only explanation for the racial prison admission ratios, and that one must examine the disparate racial impacts of colorblind sentencing policies (Schlesinger 2011; Tonry 1995).<sup>10</sup> A large body of research confirms a positive, significant relationship between the size (and, sometimes, the growth) of Black populations and nearly every aspect of the criminal justice system: from fear of crime (Britt 2000; Spohn and Holleran 2000; Spohn 2000; Steffensmeier and Demuth 2001); police strength (Huff and Stahura 1980; Jackson and Carroll 1981; Liska et al. 1981); and corrections spending (Jacobs and Helms 1999; Stucky et al. 2007); to sentencing severity (Ulmer and Johnson 2004), incarceration rates (Greenberg and West 2001; Marvell and Moody 1996; Nicholson-Crotty 2004; Sorenson and Stemen 2002), and the use of the death penalty (Jacobs et al. 2007). More recently, a few studies have suggested that the relationship between African American presence and severe criminal justice outcomes may not be a linear one, however. Keen and Jacobs (2009), for example, find an inverted, U-shaped, relationship between the size of Black populations and racial disparities in imprisonment. They hypothesize that "growth in African-American proportions beyond ... a threshold can be expected to give this racial minority enough potential votes to weaken policies that lead to higher African-American incarceration rates relative to Whites" (215).

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<sup>10</sup> For instance in her recently published analysis of mandatory terms and sentencing enhancements, Traci Schlesinger (2011) finds that these policies increase overall prison admission rates, but the effects are larger for black men.

Interestingly, tests of the minority threat hypothesis yield different results for Latinos: with the exception of Stemen (2005), most studies find no relationship between the size of Hispanic populations and incarceration rates. There are several possible reasons for these findings. For one, the relationship may be historically contingent: while Latinos were a small percentage of the US population in 1980, they have recently passed African-Americans as the largest US minority group. As one of the fastest growing demographic, they may become more "threatening" as time passes and their visibility increases. Studies conducted earlier, or focusing on earlier periods, would not have been able to show this. In addition, Latino populations tend to be concentrated in certain states/regions; the impact of their numbers would be diluted in aggregate analyses. Or it may be that African-Americans are singled out as an exceptionally threatening racial group because of the social construction of blackness as synonymous with criminality and racial inferiority in the US (Dixon 2006; Muhammad 2010). Whatever the reason, the possible differential, time-varying, impact of Black and Hispanic populations on state punitive reactions merits further exploration.

The rightward political drift was accompanied by a substantial cultural realignment that may have contributed to the prison boom as well. One aspect of this realignment is that, as fear of crime acquired new salience, so did the weight of public opinion and citizen ideology in the policy-making process, independent of the influence of partisan politics. Based on the premise that conservatives tend to be more punitive than liberals (Van Dijk and Steinmetz 1988), a few studies have explored whether citizen ideology is associated with harsher crime control measures. Findings have positively

linked conservative ideology with incarceration rates (Greenberg and West 2001; Griset 1999; Jacobs and Carmichael 2001; Jacobs and Helms 2001; Sorenson and Stemen 2002; Vaughn 1993), sentence length (Bowers and Waltman 1993), and sanction severity (Tyler and Boeckmann 1997). Jacobs and Helms (1996) also demonstrated that the adoption and implementation of determinate sentencing can be explained by changes in ideology.

A second factor in this cultural realignment was a shift toward the exclusionary (Young 1999), exemplified by—but not limited to—higher levels of imprisonment. This shift toward the exclusionary is related to both the political rhetoric of law and order and the country's growing ideological conservatism. Together these elements helped critics of the welfare state reject the view of criminals as poorly socialized or maladjusted individuals, and put forward instead the volunteeristic view that, in the words of former British Prime Minister John Major, "crime is a decision, not a disease" (quoted in Garland 2001:191). It became morally legitimate, then, to curtail welfare benefits and education spending, historically used as an informal system of social control, and rely on the formal system of corrections for social control instead (Beckett and Western 2001; Colvin 1990; Garland 1985; Greenberg and West 2001; Piven and Cloward 1972). Scholars have shown that indeed there appears to be a relationship between welfare and imprisonment. Sutton (2000) and Greenberg (1999), for example, show in cross-national studies that countries that provide greater welfare benefits tend to be more reluctant to use incarceration compared to other countries. Beckett and Western (2001) demonstrate a similar relationship in the US.

## **Different states, different choices?**

### Stateless state variation

Early studies of the determinants of the prison boom used aggregate national data and therefore treated these processes as a relatively uniform, national-level phenomenon. As recognition of the need to take into account state-specific developments emerged in more recent research, a number of scholars have demonstrated the complex, temporally- and spatially-specific nature of penal policymaking (Barker 2006; Beckett and Western 2001; Gilmore 2007; Gottschalk 2006; Lynch 2010; Savelsberg 1994; Whitman 2003). Their analyses suggest that attention to state and regional differences provides a useful framework for understanding variations in the scope of penal sanctioning among the states, while also offering valuable insights into the underpinnings of the contemporary use of punishment.

These efforts to analyze state variation remain, however, surprisingly “stateless.” Studies have identified a number of macro-social and demographic factors thought to capture salient dimensions of state variation, but they offer rather hollow theorizations of what could arguably be the most salient dimension of all: the state itself. States have not pursued the same kinds of policies in response to the same kinds of policy problems. Faced with similar conditions, state punitive efforts have followed different paths and patterns that we may not be able to fully understand without bringing the state back into our analyses. However, with the exception of Barker (2006, 2009), few scholars (especially in the quantitative literature) have attempted to unpack the essential properties of this variable that plays a central role in much comparative historical research (Skocpol and Amenta 1986; Weir, Orloff, and Skocpol 1988); conceptualize its role in penality;

and model how state-specific patterns of governance may have created the patchwork of punishment practices that we see in the US today.

Neo-Marxian scholars, for instance, treat the state as largely epiphenomenal. Like other aspects of society, the state simply reflects existing social relations and the needs of the capitalist economy to preserve relations of production. Its purpose, therefore, is one of social control and, if necessary, repression. As discussed earlier, this perspective has been criticized for presenting an overly structural and economically over-determined view of the state. By conceptualizing the state as emerging from social interaction, Foucault (1995) offers a more complex view that brings attention to the insidious ways in which state power shapes, regulates, manages (and represses, when necessary) all aspects of social relations. State power at once socializes and controls, constructs its subjects and subjugates them, in a dispersion of power through practices, institutions, and interactions that renders the state almost invisible. Because Foucault rejects the idea that power is a thing that is "held" by someone, his view of the state is devoid of agents and makes no mention of the ideological struggles that shape policy decisions. His theorization therefore reduces the state to a "bare technological scaffolding" (Garland 1990:171), and the pure, disembodied, exercise of power. While theoretically interesting, these perspectives offer conceptualizations of the state that are difficult, if not impossible, to operationalize. Pluralistic approaches are no more helpful. According to this view, it is the actions of politicians, individuals, and interest groups that take center-stage; the state becomes merely the backdrop for their activities. Besides under-theorizing the state, this perspective ignores that actors must contend with bureaucratic and structural institutional arrangements.

Bringing the state back in

The institutionalist view offers a more theoretically promising and fruitful way to treat the state, which is seen in the Weberian tradition as a highly complex organization, made up of "a set of multiple and overlapping institutions invested with administrative, legal, extractive, and coercive powers" (Barker 2009: 30). While it runs the risk of reducing the state to an administrative structure with greater or lesser capacity, and institutions to collections of bureaucrats with more or less autonomy and initiative, this approach brings to our attention the central role that institutions play in structuring political and social life and in processing pressures from political and economic interests, as well as organized groups. "Public vengeance," Barker argues, "depends on certain political institutions and collective agency to give it a legal and political expression" (2009: 12).

While few studies provide systematic analyses of the effects of constitutional structure on social policy formation, Immergut's (1992) research on health insurance in Switzerland, France and Sweden shows that structures do matter. Her findings indicate that political institutions in these three countries decisively shaped the ability of different groups to activate power resources and influence the making of health-insurance policies. Where power is centralized and executive power is insulated from parliamentary and electoral pressures, she argues, there is a greater likelihood that reforms that significantly alter the status quo will be implemented. Where power is dispersed in representative institutions, however, relatively small interest groups are able to block reform legislation. Similarly, Barker's (2009) analysis of the politics of imprisonment in the states of New

York, California, and Washington demonstrates that crucial differences in these states' political institutions account for differences in their penal regimes.

But this perspective also challenges the view of the state as a monolithic, impersonal force that defines patterns in politics, by taking into account the influence that special interests, political and economic groups, and citizens broadly speaking, have on institutions and policy. As Barker (2009) shows, civic engagement—the degree to which ordinary citizens get involved in state politics—influences the nature of the policies created by state political institutions, as well as the extent to which states rely on confinement, by keeping a check on the repressive powers of the state. Together, political structures and practices of civic engagement (i.e. collective agency) form modes of governance upon which better models of carceral state development can be built.

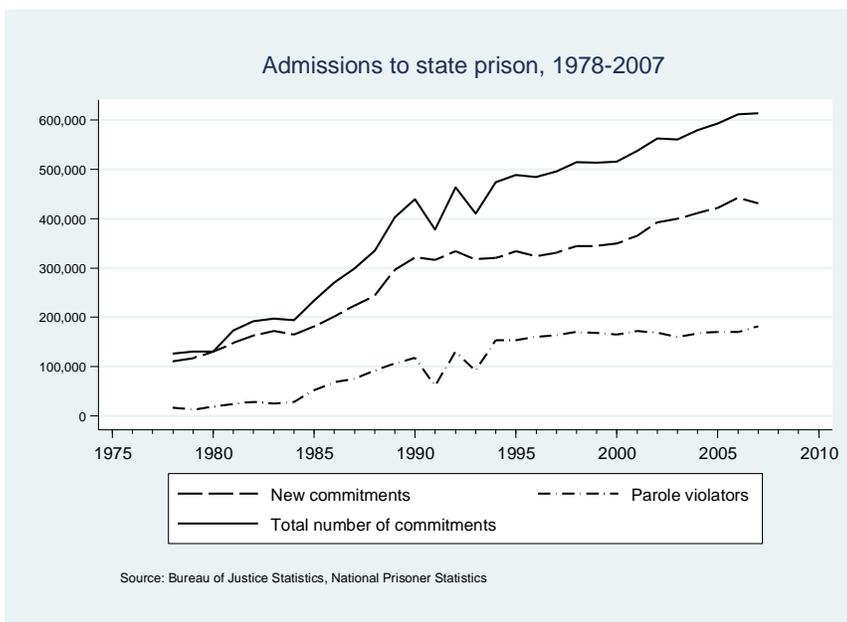
In this chapter, I traced the genealogy of the late modern transformation of criminal punishment in the US and discussed what we have learned from the vast body of theoretical and empirical research regarding the social, political, and cultural processes upon which state penal policies and practices have been built. This literature has identified five broad categories of factors that can be used to build a framework with which to analyze the recent expansion of the penal system. As Figure 2.4 indicates, these factors are not distinct from each other; sentencing policies are tied to a certain political rhetoric that seized on crime as a solution to a broader governmental crisis stemming from social and economic changes. And state-specific modes of governance may mediate the effects of these factors to produce different paths of carceral state development. For the sake of simplicity, however, we can say that they view changes

and differences in the scope of penal sanctioning as: (1) an outcome of criminal behavior; (2) a mechanism for the social control of racial minorities and economically marginalized populations; (3) an artifact of electoral politics and ideological conflicts; (4) a product of state governance and practices of civic engagement; and (5) the result of policy choices.

A major limitation of the prison boom literature stems from its myopic focus on incarceration, which constitutes only one aspect of the criminal justice system. Studies have concentrated almost exclusively on "front-end sentences" (offenders sent to prison through court sentences), ignoring back-end sentencing (parole revocations) in spite of the fact that it has become a major dynamic of prison intake. This gap in our understanding of the prison boom may stem from the assumption that the factors that explain court sentences are the same as those that affect decisions to revoke a parolee's conditional release. However, as I show in Chapter 3, this may overstate the similarities between "front-end" and "back-end" sentencing.

### CHAPTER 3 TOWARD A CONCEPTUAL MODEL OF PAROLE REVOCATION RATES

Since 1980, the number of parolees revoked and returned to incarceration has grown sevenfold, from 27,000 to about 200,000 (Figure 3.1). This is partly the artifact of a society that has been locking up a staggering number of its citizens over the last 40 years. With the rare exceptions of the people who die in prison, more than 95 percent of inmates are eventually released (Burke 2003), and the vast majority of those (about 80 percent, according to the Bureau of Justice Statistics) are sentenced to a term of supervision upon their release, even when this release was decided by statutes and not by



**Figure 3.1 Admissions to state prison, 1978-2007**

a parole board. As prison populations grow, so does the number of people on supervision; and greater numbers of people on supervision in turn means a larger population at risk of being recommitted for violating parole conditions. Not only has the absolute number of parolees revoked and recommitted increased but, as Figure 3.2 indicates, the relative contribution of parolees to prison admissions has grown as well—from 17% of prison admissions nationally in 1980, to about 30% in the first decade of the twenty-first century (Glaze and Palla 2005). Since it is doubtful that changes in parolee behavior are behind the increase, this doubling of the contribution of parole revocations to prison admissions suggests that the *use of revocation as a sanction* has changed.



**Figure 3.2 Parole violators as percentage of prison admissions, 1978-2007**

This is something we do not understand very well because little attention has been paid to a parole system that has been shifting the landscape of prison admissions. Indeed,

the extensive literature devoted to documenting, explaining, and theorizing the changing nature of penal sanctioning in the US has been myopically focused on incarceration: "It is safe to say that parole programs have received less research attention than any other correctional component in recent years" writes Joan Petersilia. "A congressionally mandated evaluation of state and local crime prevention programs included just one parole evaluation among the hundreds of recent studies that were summarized for that effort" (1999:524). This relative lack of interest extends beyond questions about parole's effectiveness in reducing recidivism and improving reentry outcomes. Parole is a key component of the US criminal justice system, and revocation has become a crucial back-end steering mechanism, yet scholars have neglected to pay sufficient attention to the profound changes in the way that the parole system is managed, how it has responded to the "punitive turn" (i.e. the increasingly punitive criminal justice response to crime that has permeated the culture and the criminal justice system's philosophy of punishment over the last 40 years), and the relationship between parole revocations and the growth of our prison system.

This chapter attempts to unpack the "black box" of the parole revocation process in order to contextualize the meaning of revocation as a sanction, and to identify salient dimensions upon which a conceptual model of the use of revocation can be built.

## Some background

Origins of the modern parole system<sup>11</sup>

The origins of the modern parole system—i.e. a system of early release from prison in exchange for an inmate’s promise that he will not commit new crimes and that he will abide by the conditions placed upon his release—can be traced to the seventeenth century conditional pardons and indentures of servitude, but parole did not become a full-fledged concept until late into the nineteenth century (when widespread transformations in penology started taking place in Western Europe and the United States), and it did not come to be known as “parole” until its introduction in the United States in the 1870s. Until then, the main goals of punishment were deterrence, retribution, and incapacitation. Accordingly, prisoners were subjected to harsh living and working conditions, as well as brutal physical punishment to ensure obedience. Sentences involved no positive conditioning, and once they had served their term, inmates were released into society unconditionally.

Alexander Maconochie (who was in charge of the British penal colony on Norfolk Island, off the coast of Australia, in the mid-1800s) and Sir Walter Crofton (chairman of the Irish Prison Board) are usually credited for developing the concept of the parole system (Petersilia 2003; Ruggles-Brise 1921; Witmer 1927). Crofton’s Irish Convict System, for example, was a graduated system aimed at reforming convicts who could earn marks for work, good behavior, and educational improvement, until eventually they earned a ticket of leave and their release on parole. While on parole, they were required

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<sup>11</sup> For more thorough accounts of the development of the modern parole system, see Bottomley (1990); Petersilia (1996); Rothman (1980); or Simon (1993).

to report monthly to the police, and they were assigned a special civilian inspector (the ancestor of the modern parole agent) who helped them find work and re-integrate the community (Petersilia 2003).

In the United States, good time laws that permitted a reduction of time served on the basis of good behavior had been on the books since 1817, when New York first introduced such legislation. The purpose of these laws was to give prison administrators some control over inmates' behavior, to relieve prison overcrowding, and to help rehabilitate inmates. However good time legislation alone could not address institutional problems and overcrowding, therefore in the 1850-60s states (Michigan first among them) began to take steps toward instituting a system of early release by formalizing the powers of the governor to grant conditional pardons (Bottomley 1990). But it was not until the 1870s that American penologists followed in the footsteps of European prison reformers and adapted the "Irish system" to the specific needs of the American penal and political context. Michigan penologist Zebulon Brockway, who was appointed superintendent at the newly established Elmira Reformatory for young offenders in New York in 1876, put in place the first parole system—a two-pronged strategy designed to manage prison populations (through indeterminate sentencing) and prepare inmates for release (parole supervision). The concept spread quickly: by 1900, twenty states had introduced parole statutes. This number reached 32 by 1910, 44 by 1922, and by 1930 every state had adopted both indeterminate sentencing and parole release (Bottomley 1990:322).

## Modern parole

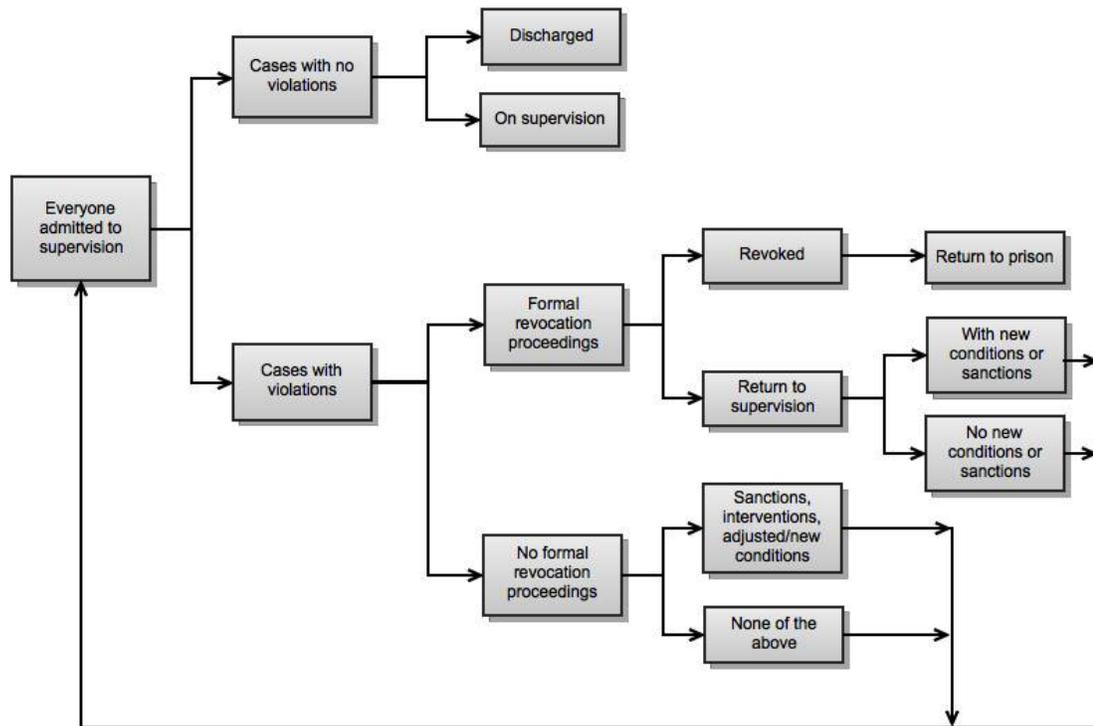
Today's parole system strikes an awkward balance between the twin goals of surveillance and service. It is still structured around the same organizing principles of release, supervision and revocation. However, it has also become more closely aligned with the law enforcement community, and the philosophy of punishment upon which parole was based until the 1970s, as well as the way parole operates, have shifted.

The activities and responsibilities of the modern parole system are carried out by two organizational entities—parole boards and departments of corrections—that work either separately (in the case of release and supervision) or together (revocation). Parole release refers to the discretionary authority vested in a governmental entity (some jurisdictions refer to their paroling authority as parole board, others as parole commission, or board of pardons and paroles, etc.) established by law or constitution to release offenders from prison prior to the completion of their sentence. The authority of parole boards was severely challenged starting in the 1970s. Parole boards were criticized for having too much discretion, and their decisions were seen as arbitrary and capricious by some, while others worried that the system was too lenient and offenders were being "let off easy." States moved toward determinate sentencing structures which limited the power of judges and parole boards to set prison terms and transferred this power to legislatures. While the move to abolish parole boards ended in 1996 (APAI 2005), efforts to impose limits on their authority have continued with the implementation of mandatory minimums, truth-in-sentencing laws, and the exclusion of specific crimes or classes of offenders from consideration for parole (Figure 2.3). As a result, nationally about 18 percent of prison inmates are released mandatorily and unconditionally – that is,

under no supervision and without any conditions (Hughes, Wilson, and Beck 2001). The rest, about 4 in 5 prison inmates, are either released discretionarily, or released mandatorily but with supervision conditions. In other words, many of the boards that have little to no authority over *when* to release inmates still have responsibility over the vast majority of offenders for other parole functions such as: reviewing release plans, setting parole conditions, approving good time, and handling revocations. Boards also retain full releasing authority over offenders convicted prior to the state's adoption of determinate sentencing (i.e. the abolition of the parole board).

Parole supervision refers to the responsibility vested in a public agency — usually a state department of corrections — for the supervision of offenders during some period of conditional release following incarceration. Just as parole boards came under criticism in the 1970s, so did parole supervision. Support for parole-as-rehabilitation waned, and safety and security became the guiding principles of supervision. Parole officers, whose role used to be to help ensure reentry success by brokering needed services (job assistance, counseling, chemical dependency programs), have become more surveillance and policing oriented. Drug testing, electronic monitoring, and the enforcement of curfews are commonly used, and new technologies make it easier for parole agents to detect violations. Parolees are required to abide by certain conditions; failure to do so can result in revocation of parole. Standard conditions apply to all parolees and include reporting to the parole agent upon release from prison and meeting with him regularly (the frequency is determined by the level of supervision), not carrying weapons, not committing crimes, seeking and maintaining employment, not leaving the jurisdiction without prior approval from the parole agent, and submitting to searches by police and

parole agents. Special conditions are tailored to particular offenders, such as submitting to regular drug testing for substance abusers, or staying away from parks, schools, etc. for sex offenders. Parole agents are responsible for ensuring that parolees abide by the conditions of their parole contract. They have the legal authority to carry a weapon, search places, persons and property without a warrant, arrest parolees without probably cause, and confine them without bail – making parole agents "walking court systems" (Petersilia 1999: 482; Simon 1993).



**Figure 3.3 Map of the outcomes of parole violations**

Parole revocation refers to the action that paroling authorities are empowered to take in response to an offender's non-compliance with the conditions of her release or for new criminal conduct. The offender's conditional release is revoked and she is returned

to custody for all or part of the remainder of her sentence. Though parolees do have some rights (they must be given written notice of the nature of the violation and the evidence obtained, and they have the right to confront and cross-examine their accusers), the standards of due process are minimal because while under supervision parolees are technically still in the custody of the state.

Figure 3.3 describes the revocation process. This map oversimplifies the process for the sake of clarity. In reality, the parole revocation process is rather complex. In New Jersey, for instance, the parole revocation process involves 5 supervising parole officers, 14 district supervisors, 26 assistant district supervisors, a large number of senior parole officers, recruits, and the electronic monitoring unit, as well as the prosecutor, police, potential witnesses, counsel for the parolee, and at least two members of the parole board (Burke 2004). The process can take several weeks and varies from state to state. Typically a violation will come to the attention of the parole agent, who investigates and determines whether it is a criminal violation (which is usually handled as a new crime and referred to the court system), or a technical violation; and in the case of a technical violation, whether it is severe enough to warrant revocation, or it can be addressed through the use of alternative sanctions in the community (for example, requiring that the parolee attend drug counseling, or report more frequently to his parole agent). If the violation is considered serious, the supervising agency (the parole agent and his supervisor) initiates revocation procedures by reporting violations to the Board, and a warrant is issued for the violator's arrest. The parole board then holds a hearing and makes the final revocation decision. If the board decides to revoke parole, the parolee is returned to incarceration to serve the remainder of his sentence. What happens

between the detection of the violation and the revocation recommendation to the Board, varies from state to state, depending on the extent to which supervising agencies (are required to) use guidelines and risk assessment tools to make decisions about the handling of violations, whether and what range of graduated sanctions they are allowed to use, what violations are subject to mandatory referrals to the Board, how much discretion parole agents have in responding to violations, and whether policy is clearly delineated and communicated.

### Invisible punishment

It could be argued that the revocation decision at the “back end” of the criminal justice system is merely the continuing application the original sentence imposed at the “front end” by the courts. The defendant is aware when the sentence is imposed—and it is understood by everyone else involved in the sentencing process—that following his release from prison, he will be subjected to a term of supervision, with conditions, and that failure to abide by those conditions could result in his being re-incarcerated. But Jeremy Travis (2007) argues that parole revocation is a form of punishment—failure to recognize it as such has allowed it to remain invisible and to escape the scrutiny of the debates about sentencing (Travis 2002, 2007). The process of adjudicating parole violations should therefore be seen as a sentencing system in its own right—albeit one that shares conceptual and operational similarities with the court sentencing system: in both systems, the enforcement agencies of the state (police or parole) are used to detect violations of rules (criminal laws or conditions of supervision), arrest and detain those suspected of those infractions (defendants or parole violators), bring cases and suspects

before a neutral adjudicative entity (judge or hearing officer), provide an opportunity for determinations of fact through adversarial process (with some distinctions between the systems), determine guilt (with differing levels of proof) and impose sanctions for violations of those rules, up to and including deprivation of liberty.

But back-end sentencing also departs in important ways from sentencing handled through the court system. For one, parole is an administrative agency rather than a political one. Unlike judges and prosecutors, who are elected, parole actors are state employees (parole agents) or they are appointed to their position (parole board). Parole revocation operates somewhat autonomously from the rest of the criminal justice system, according to different rules,<sup>12</sup> with limited exposure to public and judicial scrutiny. Because the standard of evidence used (preponderance of evidence) is more lenient than is required in a court of law (beyond a reasonable doubt), parole revocation is an attractive, easy, low-cost alternative to criminal sanctioning, and in some states (such as California) parole boards handle criminal violation cases that county courts do not successfully prosecute (Grattet, Lin, and Petersilia 2009).

#### The changing mission of parole

If parole revocation is a form of sentencing, it is important for us to understand its meaning as a sanction. A good place to start is by examining the mission of parole in relation to the changing paradigm of punishment. As Zimring (2001) and many others have pointed out, the growth of imprisonment in the US since the 1970s can be parsed

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<sup>12</sup> The landmark case *Morrissey v. Brewer* (408 U.S. 417, 1972) only established minimum procedural requirements for parole revocations.

into different eras of expansion, each dominated by a different penological paradigm, a different sanctioning and correctional emphasis. As the mainstream goals of sentencing evolved, so did the mission of parole. This evolution is summarized in Table 3.1.

*Rehabilitation.* Parole was instituted during the Progressive Era (1870s-1930s), when the long-standing punishment principles of retribution and deterrence were being revisited and penal policy was shaped by the prevailing belief that criminals could be reformed through individualized treatment. Reformers believed that criminality was not primarily the product of offenders' personal moral failures, but the result of the influence of environmental conditions combined with deficiencies in offenders' attributes and capacities. Crime, therefore, was thought to have easily identifiable and treatable causes. Progressives also believed that the criminal justice system should attempt to rehabilitate as many offenders as possible by tailoring sentences to the specific needs and characteristics of the individual (Rothman 1980; Simon 1993). Judges were to decide prison sentences based on the offender's crime and circumstances, and expressed as a range between the earliest possible time of release (minimum), and the expiration of the sentence (maximum). Prison officials, parole boards, and parole officers were to tailor programs, decide release dates, and create a supervision plan based on the individual's needs and progress toward rehabilitation. Extensive discretion was the cornerstone of the indeterminate system. But while rehabilitation may have been the penological ideal of the time, the system struggled to keep its rehabilitative promises. Bottomley cautions against romanticizing the rehabilitative intentions behind early parole systems:

“It is doubtful,” he explains, “whether [parole] ever really operated consistently ... either in principle or in practice according to the true canons of the rehabilitative model. From that point of view, it was a

straw man that never realized the ideals of its more fervent advocates but reacted to the more pressing demands of an ever-increasing prison population and the wider issues of social control” (1990: 326).

Nevertheless, parole did gain legitimacy as the positivist approach to crime and criminals changed penological beliefs about the purpose of punishment, and it became a symbol of the rehabilitative model that shaped punitive practices for most of the twentieth century—so much so, as a matter of fact, that when penal welfarism and the rehabilitative ideal came under attack in the 1970s, parole bore the brunt of the criticisms.

*Just deserts.* In the 1960s and 1970s skepticism about the effectiveness of treatment, combined with criticism of a sentencing decisionmaking model that produced sentences seen as arbitrary, capricious, unjustifiably disparate, and racially biased, undermined the credibility of indeterminate and individualized sentencing. States moved away from rehabilitation as the primary purpose of punishment, and adopted a “just deserts” approach that emphasized sentencing goals based on greater determinacy, proportionality, and consistency instead. In the process, legislatures in more than a dozen states eliminated discretionary parole release, and several more severely reduced the authority of their parole boards.

**Table 3.1 Overview of sentencing trends and parole discretion, US, 1920-2007**

Sanctioning/correctional emphasis	1920-1970	1970-1980	1980-2000	2000-2007
Rehabilitation	X			
Just deserts		X		
Incapacitation/deterrence			X	
Evidence-based interventions				X
Parole discretion	Extensive	Reduced or eliminated	Some increase but with high structure	Increasing in some states

Source: Burke (2003)

*Deterrence and incapacitation.* During the 1980s and 1990s, the law-and-order rhetoric gave rise to calls for harsher crime control measures. The just deserts approach, with its emphasis on equity and proportionality, was abandoned in favor of approaches based on incapacitation and deterrence. Tough-on-crime proponents argued that lengthy and mandatory sentences reduced crime by deterring would-be offenders, and states proceeded to adopt a panoply of harsh punishments such as mandatory minimum sentences, three-strikes laws, and truth-in-sentencing. Parole was once again criticized as a symbol of an earlier, “softer” approach to crime. To show their toughness, parole organizations in many states increased the rates at which parole was revoked (see Figure 3.2). Rehabilitation efforts, such as they had become, were limited by diminishing resources for prison programming (education, drug and mental health treatment, job training). Moreover, the elimination of discretionary parole release in many states has removed incentives for inmates to participate in programming. Parole practices, then, by increasing time served, decreasing parole releases, and increasing parole revocations, stayed very much in step with the mainstream goals of sentencing and corrections and the larger sentencing paradigm (Tonry 2004).

In the last ten years or so, this larger paradigm has begun to show signs of changing again. Public opinion surveys now indicate that Americans believe that crime prevention is better achieved through rehabilitation than harsh penalties; struggling state economies are forcing political leaders to find ways to curb the unsustainable growth of prisons and corrections budgets; and the rapid growth of the re-entry movement is

shifting the focus away from incapacitation and deterrence, and suggesting the need for a new role for parole—one very much reminiscent of parole’s origins 150 years ago.

The last ten years notwithstanding, it is tempting to take growing incarceration and parole revocation rates as evidence of a “punitive turn” in criminal justice policies that has resulted in increasingly punitive sanctions. It is widely accepted practice in the criminological literature to consider states with high incarceration rates as more punitive than states with low incarceration rates, for example. But Frost (2008) cautions that “although imprisonment rates do say something about the punitiveness of a place ... those rates mask substantial and potentially important variations in punitiveness across places” (280). What exactly does punitiveness mean, and how do we know whether penal sanctioning outcomes are a true reflection of this punitiveness, she asks? Frost shows that punitiveness has two components: the increasing *propensity* to incarcerate (or revoke parole), and the increase in the duration of incarceration (which she terms *intensity*). Growing prison populations might be the reflection of changes in one or the other dimension, or most likely a combination of the two. Using data from the National Corrections Reporting Program in 2000, she constructs measures of propensity and intensity and assigns states a score on each. This allows her to classify states based on the distribution of scores. Scores greater or less than 1 and -1 indicate that these states are over- or under-punitive compared to other states. Table 3.2 summarizes her findings, which show that states that rank high on propensity, do not necessarily rank high on intensity.

**Table 3.2 Classifying states on measures of punitiveness, 2000 (N=34)**

		<b>Intensity</b>		
		<i>Under punitive</i>	<i>Average</i>	<i>Over punitive</i>
<b>Propensity</b>	<i>Under punitive</i>	Minnesota	New York	Maine
			Utah	Pennsylvania
	<i>Average</i>	Missouri	17 states	Florida
		South Dakota		Maryland
		West Virginia		Michigan
				Ohio
				Texas
	<i>Over punitive</i>	North Dakota	Iowa	Oklahoma
			Nevada	

Source: Frost (2008)

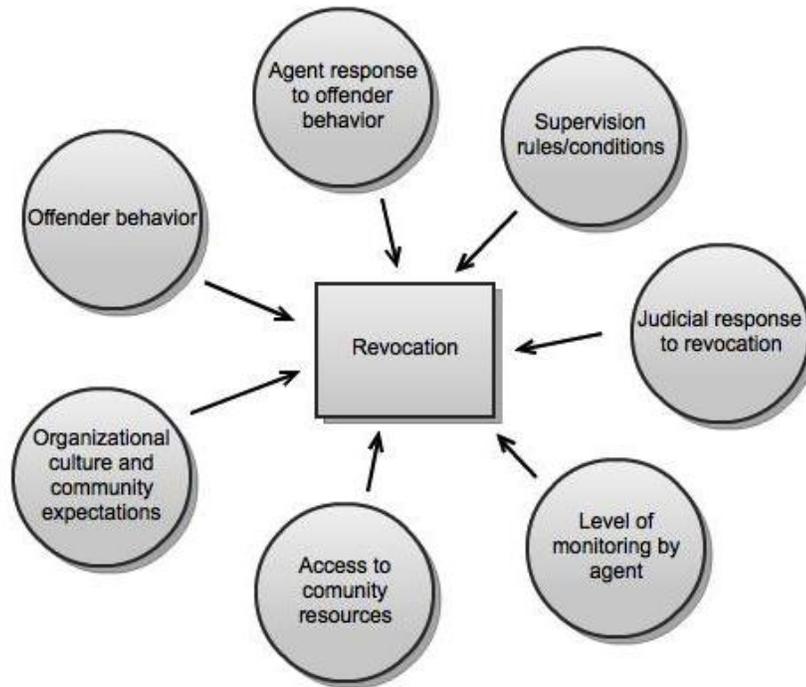
Although Frost’s analysis focuses on punitiveness in relation to incarceration rates, combined with other salient dimensions of the organization of parole and the revocation process, her approach to punitiveness can help us develop a conceptual framework that can be used to assess the meaning of parole revocation as a sanction, and to make sense of state variation in parole revocation rates. Deconstructing the meaning of revocation as a sanction is particularly important, because changes in parole revocation rates may not be a reflection of the influence of punitive policies, as much as a sign that parole is adapting to practical constraints (prison overcrowding, for instance), or perhaps the lack of viable alternative sanctions in the community.

### **Building a conceptual model of parole revocation**

Factors affecting rates of parole revocation

Whether a parolee successfully completes the term of her supervision is generally understood to be a function of three main factors: characteristics of the individual, community environment, and the administration of parole (Grattet et al. 2009).

Individual-level characteristics — which include static factors (race, gender, age, criminal history) and dynamic factors (substance abuse, mental health issues, etc.) — have been a primary focus of the research on recidivism and parole violations, and their effects are by now well documented (for a review of this extensive literature, see Harcourt 2007). While individual characteristics do have an important influence on criminal behavior, recidivism and violations of parole, criminologists as far back as the 1940s have hypothesized that neighborhood dynamics mediate this relationship. Social disorganization theorists, for example, have long emphasized the role of poverty, ethnic heterogeneity, and residential turnover, arguing that these elements increase the attractiveness of crime and undermine informal social control in a neighborhood (Bursik and Grasmick 1993; Sampson, Raudenbush, and Earls 1997; Shaw and McKay 1942). Moreover, a recent study (Kubrin and Stewart 2006) of recidivism among parolees found economic disadvantage to be correlated with the risk of parolee recidivism (Kubrin and Stewart 2006), which dovetails with studies showing that communities plagued by crime, poverty, and unemployment lack the resources and social support necessary to help ex-offenders transition back into society successfully (Fagan, West, and Holland 2003; Gephart 1997; Harding 2003; Morenoff, Sampson, and Raudenbush 2001; Sampson, Morenoff, and Gannon-Rowley 2002; Sampson, Morenoff, and Raudenbush 2005).



**Figure 3.4 Factors that can impact rates of revocation**

As helpful as the theoretical and empirical scholarship on individual characteristics and neighborhood contexts is in understanding criminal (re)offending, it sheds little light on the institutional factors—i.e., variation in the way the criminal justice system responds to parole violations or behavior that could potentially lead to violations—that are perhaps the most proximate determinants of spatial, and maybe temporal, variation in rates of parole revocation. The forces driving revocations are complex and difficult to assess. As shown in Figure 3.4, revocations stem from a combination of the failure of the offender to comply with some condition of parole, along with the combined actions of a parole supervision agency and of a paroling authority. The revocation process involves multiple stakeholders, with a complex set of procedural requirements, and with typically very little policy guidance or oversight. Not

surprisingly, this can result in significant variation in the rate of revocation. A 1995 study commissioned by the North Carolina legislature to investigate parole revocation processes in the state illustrates this point. The study found that the types of violations that resulted in revocation varied between the counties observed and also between officers within the same agency. They also found that the programming available to parolees varied widely between counties. Finally, they found that responses to initial violations varied among parole officers, with some relying on a variety of treatment programs and others immediately filing for revocation (North Carolina Division of Adult Probation and Parole Revocation Task Force 1995).

According to a National Institute of Corrections study of parole violations and prison admissions in Georgia, Kansas, New Jersey and Rhode Island, parole violations are quite common: 71-84 percent of all cases under supervision had at least one violation noted in the file (Burke 2004). The fact that revocation rates in the four states included in the study ranged from 20 to 60 percent suggests that the states do not respond uniformly to violations. Understanding parole revocation rates therefore necessitates unpacking the social, political, economic and institutional processes that underlie state parole policies and practices—work that scholars have yet to undertake.

This gap in the literature leaves one with little direction. Insofar as parole is an intrinsic part of the criminal justice system, one can assume that, to a great extent, parole policies and practices are subjected to the same macro-level processes that have shaped and transformed the system as a whole. As Garland (2001a) and others (Allen 1981) have described, we have seen in the last four decades a reversal of the assumptions that shaped crime control and punishment for the better part of the 20<sup>th</sup> century—including

parole. Perhaps even more than other elements of the criminal justice system, all aspects of parole (release, supervision, and revocation) came under criticism in the 1960s and 70s, and the decades that followed saw the nature and application of parole toughen from supervision and the provision of services, to surveillance and punishment through recommitment—a reflection of the widespread transformations of crime control in the US. However the proposition that front-end and back-end sentencing have been affected by, and have responded to, these changes in similar ways has yet to be rigorously tested. This discussion also demonstrates that organizational factors are likely to play a greater role in parole revocation rates than they do for incarceration rates.

#### Limitations of analyses of parole revocation rates

There is a major obstacle (and perhaps one of the reasons parole has been neglected in the literature) that researchers come across when trying to study the determinants of parole revocation: the lack of available aggregate data. States themselves often collect only the most rudimentary data. As part of the National Corrections Reporting Program (NCRP) run by the Bureau of Justice Statistics, states are asked to report aggregate data on their prison populations, as well as parole, but not all states contribute their data, and NCRP has notoriously poor, unreliable data on parole revocations. As a result, quantitative studies are missing salient dimensions of revocation rates. It is difficult to assess the influence of caseloads on parole revocation rates for example, because data on parole agents are difficult to locate. Short of contacting each state (or perhaps even each country) individually, researchers have no way of knowing

how many parole agents are employed by each state's supervising agency. This is an important limitation that future research will need to overcome.

## **CHAPTER 4 DATA AND METHODS**

In this chapter I describe the data collection techniques, the operationalization and measurement of the variables, and the analytic strategy used in this dissertation to investigate the state-level determinants of incarceration rates and parole revocation rates in the United States between 1978 and 2007. Prior research provided an initial reference point for the types of factors or general areas likely to have an impact on incarceration rates and parole revocation rates. As outlined Chapter 2, these broke down into the six general categories—crime; symbolic threats; political culture; state governance; sentencing structure; and demographic controls—which I used to develop my conceptual framework and construct my dataset.

### **Data**

#### Operationalization and measurement of variables

Table 4.1 gives a summary of all variables used in the empirical chapters (including information about data sources). The variables are organized according to the concepts they measure. Descriptive statistics for the entire dataset as well as descriptive statistics stratified by time period (1978-88; 1989-98; 1999-2007) are provided in Tables 3.2-3.5.

**Table 4.1 Description of variables**

Concepts	Measures	Type/Unit	Data sources	Years
	Number incarcerated	Count	Bureau of Justice Statistics	1978-2007
	Number of parolees revoked	Count	Bureau of Justice Statistics	1978-79, 1981-2007
<i>Crime</i>				
	Violent crime rate	Rate	Bureau of Justice Statistics	1978-2007
	Property crime rate	Rate	Bureau of Justice Statistics	1978-2007
<i>Symbolic threats</i>				
	% African American	Rate	US Census Bureau	1978-2007
	% Hispanic	Rate	US Census Bureau	1981-2007
	% employed	Rate	Bureau of Labor Statistics	1978-2007
	% below poverty level	Rate	US Census Bureau	1980-2007
	Personal income per capita	2007 dollars	US Census Bureau	1978-2007
<i>Political culture</i>				
	Governor's party affiliation	Categorical	Carl Klarner	1978-2007
	Citizen political ideology	Index	Berry et al.	1978-2007
<i>State governance</i>				
	Gubernatorial power	Index	Thad Beyle	1978-2007
	State social capital	Index	Robert Putnam	1978-2007
	Voter turnout	Rate	United States Elections Project	1980-2008
<i>Practical constraints</i>				
	Corrections expenditures per capita	2007 dollars	US Census Bureau	1978-2007
<i>Sentencing structure</i>				
	Structured sentencing	Categorical	Don Stemen	1978-2007
	Sentencing guidelines	Categorical	Don Stemen	1978-2007
	Parole board authority	Categorical	APAI	1978-2007
	Determinate sentencing	Dichotomous	Don Stemen	1978-2007
<i>Demographic controls</i>				
	% population aged 18-24	Rate	US Census Bureau	1978-2007
	% metropolitan population	Rate	Statistical Abstracts and US Census Bureau	1978-80, 1983-88, 1990-2007
	Marriage rate	Rate	Statistical Abstracts and US National Center for Health Statistics	1978-80, 1985, 1987-98, 2000-07
	State population	Count	US Census Bureau	1978-2007

**Table 4.2 Descriptive statistics**

<b>Variable</b>	<b>N</b>	<b>Mean</b>	<b>SD</b>	<b>Min</b>	<b>Max</b>
Prison population	1500	16816.72	25093.74	186	175512
Incarceration rate	1500	294.71	170.27	28.48	926.69
Parole population	1489	9831.63	19664.6	28	123764
Total # of revocations	1345	2422.63	8009.31	0	81431
Crime index	1500	2.20e-10	1	-1.96	3.50
Economic threat index	1500	-1.04991	1	-3.31	2.26
% Black	1500	9.75	9.32	.22	37.34
% Hispanic	1500	6.26	8.22	.02	44.35
Citizen ideology	1500	48.16	15.45	8.44	95.97
Party of governor	1500	.50	.53	0	2
Civic engagement	1498	2.82e-10	1	-4.01	2.80
Gubernatorial power	1500	3.57	.56	1.8	5
Corrections index	1500	5.83e-10	1	-1.98	3.86
Discretionary release	1500	.25	.44	0	1
Voluntary guidelines	1500	.28	.45	0	1
Presumptive guidelines	1500	.10	.31	0	1
State population	1500	5164239	5628873	401851	3.66e+07
Marriage rate	1500	10.96	12.96	4.52	159.29
Metropolitan population	1500	66.91	21.06	11.57	102.34
% 18-24-yr olds	1500	10.90	1.53	7.95	15.66

**Table 4.3 Descriptive statistics, 1978-1988**

<b>Variable</b>	<b>N</b>	<b>Mean</b>	<b>SD</b>	<b>Min</b>	<b>Max</b>
Prison population	550	8094.57	9716.68	186	76171
Incarceration rate	550	167.35	85.99	28.49	493.65
Parole population	543	5019.35	8552.41	93	77827
Total # of revocations	465	913.61	2986.37	0	42851
Crime index	550	.13	1.01	-1.83	3.32
Economic threat index	550	-.50	.95	-3.06	2.27
% Black	550	9.30	9.12	.22	35.40
% Hispanic	550	4.43	6.84	.02	37.95
Citizen ideology	550	46.09	16.31	9.75	93.91
Party of governor	550	.38	.49	0	2
Civic engagement	548	-.01	1.03	-4.01	2.80
Gubernatorial power	550	3.76	.69	1.8	5
Corrections index	550	-.71	.68	-1.98	1.74
Discretionary release	550	.18	.38	0	1
Voluntary guidelines	550	.2	.40	0	1
Presumptive guidelines	550	.04	.19	0	1
State population	550	4657762	4901615	401851	2.85e+07
Marriage rate	550	12.58	16.54	6.74	159.29
Metropolitan population	550	62.99	22.23	11.57	102.34
% 18-24-yr olds	550	12.47	1.08	9.36	15.66

**Table 4.4 Descriptive statistics, 1989-1998**

<b>Variable</b>	<b>N</b>	<b>Mean</b>	<b>SD</b>	<b>Min</b>	<b>Max</b>
Prison population	500	18123.03	24540.33	451.00	160127
Incarceration rate	500	317.10	141.14	69.78	746.98
Parole population	498	11701.92	22118.67	33.00	121141
Total # of revocations	485	2698.80	7705.07	0.00	70135
Crime index	500	0.27	1.05	-1.77	3.50
Economic threat index	500	-1.14	0.88	-3.32	1.49
% Black	500	9.80	9.41	0.26	37.22
% Hispanic	500	6.17	8.12	0.43	42.62
Citizen ideology	500	48.11	13.89	9.25	89.57
Party of governor	500	0.55	0.56	0.00	2.00
Civic engagement	500	0.01	1.01	-2.40	2.48
Gubernatorial power	500	3.46	0.44	2.30	4.70
Corrections index	500	0.21	0.91	-1.76	3.24
Discretionary release	500	0.26	0.44	0	1
Voluntary guidelines	500	0.31	0.46	0	1
Presumptive guidelines	500	0.13	0.34	0	1
State population	500	5163906	5631734	453401	32700000
Marriage rate	500	10.84	11.76	5.43	103.92
Metropolitan population	500	67.27	20.89	25.83	100.00
% 18-24-yr olds	500	10.00	0.83	7.95	13.65

**Table 4.5 Descriptive statistics, 1999-2007**

<b>Variable</b>	<b>N</b>	<b>Mean</b>	<b>SD</b>	<b>Min</b>	<b>Max</b>
Prison population	450	26025.67	33726.01	943	175512
Incarceration rate	450	425.50	167.45	124.99	926.69
Parole population	448	13585.34	24666.96	28	123764
Total # of revocations	395	3859.97	11425.34	0	81431
Crime index	450	-0.46	0.74	-1.96	1.50
Economic threat index	450	-1.623	0.81	-3.24	0.55
% Black	450	10.26	9.46	0.33	37.34
% Hispanic	450	8.60	9.25	0.57	44.35
Citizen ideology	450	50.76	15.66	8.45	95.97
Party of governor	450	0.59	0.53	0	2
Civic engagement	450	0.002	0.96	-2.08	2.49
Gubernatorial power	450	3.47	0.43	2.7	4.3
Corrections index	450	0.63	0.88	-1.26	3.87
Discretionary release	450	0.34	0.47	0	1
Voluntary guidelines	450	0.34	0.47	0	1
Presumptive guidelines	450	0.16	0.37	0	1
State population	450	5783635	6360411	479602	3.66E+07
Marriage rate	450	9.11	8.12	4.51	71.49
Metropolitan population	450	71.30	18.79	27.70	99.99
% 18-24-yr olds	450	9.97	0.90	7.95	14.14

### *Dependent variables*

The dependent variables in the analyses are the incarceration rate (Chapter 5), and the parole revocation rate (Chapter 6). In both cases data were obtained from the Bureau of Justice Statistics (BJS).

The main source of data on prisoner counts is the BJS's *National Prisoner Statistics* series (NPS), which has been collecting statistics on prisoners since 1926. NPS reports provide annual and semiannual national and state-level data on the number of prisoners in state and federal prison facilities, as well as aggregate inmate demographics (age, race, and sex); inmates held in private facilities and local jails; system capacity; noncitizens; and persons under age 18. The BJS collects data from the 50 state departments of corrections and from the District of Columbia. In Chapter 5, the analyses use the raw counts as the dependent variable. When analyzing parole revocation rates in Chapter 6, incarceration *rates*—the number of prisoners under state or federal jurisdiction sentenced to more than one year, per 100,000 state residents—is used as an independent variable (this variable is one of the items in the *corrections index*).

Because there is no single consistent source of data for parole revocations, state parole revocation data were drawn from various data collections published by BJS: the *Correctional Populations* series, *Prisoners* series, and *Probation and Parole in the US* series. These reports provide information on the number of adults on state and federal parole at the beginning and end of each year, the number of adults entering and exiting (including type of exit: completion of supervision; revocation for a technical violation; or return to incarceration with a new sentence) parole supervision during the year, and the characteristics of adults under the supervision of parole agencies. For the period 1999-

2005, BJS provided unpublished data from the *Annual Parole Survey* series. No parole revocation data were available for 1980.

### *Independent variables*

Crime. I use property and index crime<sup>13</sup> figures from the FBI's Uniform Crime Reports (UCR), available from BJS. The UCR is a voluntary law enforcement program that provides a nationwide view of crime based on the submission of statistics by law enforcement agencies throughout the country. Crime rates represent the numbers of property and violent crimes per 100,000 resident population. These data are imperfect: their reliability is limited by the extent to which reported crime rates reflect local policing practices that target certain crimes or neighborhoods, variations in how police agencies count crimes, and victim reporting behaviors. In addition, because not all law enforcement agencies provide data for complete reporting periods, the FBI use estimation techniques to impute missing data. However, the UCR are the most common source of crime data and the most likely to be used by lawmakers when making decisions about criminal justice policies. Based on the results of the factor analysis, property and violent crime rates were combined into a *crime* index; the index is used in the analyses.

Symbolic threats. Consistent with past research (Britt 2000; Kautt 2002; Ulmer and Johnson 2004), and as advocated by Kane (2003), the contextual effects of racial and ethnic threat are examined separately. They are measured by the *percentage* of a state's population that is *Black* and *Hispanic*, respectively. The US Census Bureau provided

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<sup>13</sup> Index crime includes rates of reported murder, rape, robbery, aggravated assault, burglary, larceny, and auto theft.

data on state Black populations for 1978-1990. Since the Census Bureau did not collect data on Hispanic populations pre-1980, only 1981-2007 data are included in the analysis. For the remainder of the period (1990-2007) both Black and Hispanic population data were obtained from the Centers for Disease Control bridged-race population estimates. To account for the possible non-linear effects of racial composition (Bridges and Crutchfield 1988; Kane 2003; Hawkins and Hardy 1989; Oliver and Yocom 2004; Yates 1997; Yates and Fording 2005), percentage Black was transformed into a variable coded "0" = "0-2% Black," "1" = "2-15% Black," and "2" = "Over 15% Black," and entered into the analysis as a set of dummy variables.

The contextual effects of economically marginalized populations are assessed using three different measures. The first, percent employed, refers to the annual average of the percentage of civilian non-institutionalized population 16 years and over that is employed. Unemployment figures only take into account people who are actively looking for a job—they do not include discouraged workers who have stopped looking for work—which underestimates unemployment and presents an overly optimistic view of economic conditions. Consequently I chose to use the employment rate in my analyses. Annual employment data were drawn from the Bureau of Labor Statistics. The US Census Bureau's *Current Population Survey* provided data for the second measure of economic marginalization: poverty rate. The poverty rate is the percentage of the resident population below the established poverty level. The third measure is personal income per capita, a variable that measures the wealth of a state. These data were obtained from the US Census Bureau *Annual Survey of State Government Finances and*

*Census of Governments*. All values were adjusted to 2007 constant dollars using the Consumer-Production Index and are expressed per capita.

Political culture. Republican control of the executive branch is captured with a variable coded "0" = "Democrat," "1" = "Republican," and "2" if the governorship switched parties mid-year, or the governor was an Independent. These data were compiled by Carl Klarner<sup>14</sup> from the *Book of the States* publications. They are entered into the analysis as a set of dummy variables (the reference category is Democrat).

To investigate the influence of the ideological preferences of the state's residents, the models include a validated (Brace et al. 2004; Schneider & Jacoby 2006) measure of *citizen political ideology* originally developed by Berry, Ringquist, Fording and Hanson (1998). After estimating the ideology of citizens in each congressional district by inferring public opinion based on interest group ratings of elected representatives, Berry and colleagues average scores across districts to yield a state-level measure of citizen ideology (on a scale of 0-100, "0" being the most conservative, and "100" being the most liberal) for every year since 1975. This method for estimating citizen ideology rests on the assumption that there is a strong correspondence between the ideological preferences of voters and elected officials. Though the correlation should be positive, the correspondence is not perfect because people vote for candidates for reasons beyond ideology including partisanship, incumbency, and policy positions (Cohen 2006). While imperfect, this measure of citizen ideology<sup>15</sup> is superior to data from national surveys because national surveys use a sampling design aimed to accurately describe the nation,

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<sup>14</sup> <http://www.indstate.edu/polisci/klarnerpolitics.htm> (accessed July 2010).

<sup>15</sup> Citizen ideology data updated through 2008 were downloaded from <http://www.uky.edu/~rford/stateideology.html> (August 2010).

not individual states. As a result, state-level estimates of citizen ideology may be imprecise or biased (Brace et al. 2002).

State governance. Consistent with arguments presented by Barker (2003, 2006) and others, *gubernatorial power* is used as an indicator of the degree of centralization of political authority in the state: the stronger the governors' powers, the more centralized the political authority. The Index of Governors' Institutional Powers (Beyle 2004<sup>16</sup>) is a 5-point scale that measures the degree to which governors control budgets, legislation, appointments, political parties, the strength of veto power, and the length of tenure, including the presence or absence of term limits. Beyle computed scores for each state starting in 1960. *Civic engagement* is measured with two variables: voter turnout rate, and the state's social capital score. Data for voter turnout rates are drawn from the United States Election Project.<sup>17</sup> This measure of voter turnout is based on the vote for highest office divided by the voting-eligible population (VEP). The VEP is constructed by adjusting the voting-age population (VAP) for non-citizens and ineligible felons, based on state law. Because of the difficulty in finding pre-1980 data on disenfranchised felons and on citizen voting-age population estimates, the United States Election Project does not provide voter turnout rates prior to 1980. I also rely on Putnam's (2000) computations of state social capital scores. Putnam used two sources of data, the *General Social Surveys* and the *DDB Needham Life Style surveys* to create a measure of social capital based on civic participation: how often people attend local town meetings, participate in local and state politics, how much people trust one another, etc. Voter

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<sup>16</sup> <http://www.unc.edu/~beyle/gubnewpwr.html> (accessed July 2010).

<sup>17</sup> [http://elections.gmu.edu/voter\\_turnout.htm](http://elections.gmu.edu/voter_turnout.htm) (August 2010)

turnout rate and social capital were combined into a *civic engagement* index, where higher values indicate higher levels of civic participation.

Sentencing structure. As explained in Chapter 2, policies may influence sentencing by constraining judicial discretion through the implementation of structured sentencing, and/or shifting the locus of discretion by eliminating or limiting parole boards' authority (see Figure 2.3): the former controls sentencing decisions and the length of the prison terms imposed at the front-end, while the latter controls releases and time served at the back-end (Stemen 2005). Data on states' sentencing structures were compiled from multiple official and secondary sources.

At the front-end, states sought to create more "structure" in their system through two similar but distinct mechanisms. The first, presumptive sentencing, requires judges to impose the sentences, based solely on the severity of offenses, recommended by statutes. The second, sentencing guidelines, are procedures guiding sentencing decisions based on the severity of the offense committed as well as the criminal history of the offender. Guidelines can be presumptive (judges are required to impose the recommended sentence), or voluntary (judges are not required to impose the recommended sentence). The variable *presumptive sentencing* is a dummy variable coded "1" to denote the presence of presumptive sentencing in a state. Two dummy variables, *voluntary guidelines* and *presumptive guidelines*, indicate whether states use voluntary or presumptive guidelines.

Parole board authority is used as a proximate measure of discretion at the back-end of the system. Even in states where parole has not been abolished, the authority of the parole board varies widely. A number of parole boards still enjoy full authority,

while others have seen their powers greatly limited by statutes. The Association of Paroling Authorities International (APAI) has been surveying releasing authorities in all 50 states annually since 1997. The surveys collect data on a variety of topics, from the structure of the releasing authority, the general sentencing framework within which the releasing authority operates, parole release decision-making processes, conditions of supervision, and supervision levels; to the paroling authority's role (if any) with offenders who were supervised in the community, paroling authority's role and process (if any) in responding to violations of community supervision and revoking conditional release. APAI's survey data (1997-2007) were used to create the variable *parole board authority*, coded according to APAI's classification scheme: "0" if the state parole board has no authority, "1" if its authority is limited, "2" if the board enjoys full authority. Since APAI started its surveys in 1997, no information was produced for the period between 1978 and 1996. Filling this gap involved researching the recent history of each state's paroling authority, locating relevant policies and their changes, and consulting secondary sources (reports by state-level professional organizations, for example). The information gathered was then used to calculate parole board authority scores for the period 1978-1996. This measure appears in the analyses as a series of dummy variables with "no parole board authority" as the reference category.

### *Control variables*

The analyses include three control variables.<sup>18</sup> In-keeping with the argument that the decrease in informal social control associated with breakdowns in the family, or larger relative numbers of non-intact families, may be accompanied by a greater reliance on formal social control (such as corrections), this study includes a *marriage rate* variable. Marriage rate is the number of marriages per 1,000 persons. Data on marriages were collected from the Statistical Abstracts.

Similarly one might expect that larger urban states devote more resources to formal social control because informal social control decreases with larger populations (Wirth 1938; Land, McCall, and Cohen 1990). Therefore the models include a measure of *metropolitan population*, defined as the percentage of the state's population living in areas categorized by the US Census Bureau as metropolitan statistical areas (MSAs).

Finally, the models control for the percentage of the population that is between the ages of 18 and 24 because those in their late teens and early twenties are most prone to criminal behavior. Data were obtained from the US Census Bureau.

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<sup>18</sup> Citing the fact that there is a high incidence of mental illness among inmates, and that the mentally ill are more likely to commit crimes, some scholars have argued that the de-institutionalization of the mentally ill (which started in the 1960s), may be partly responsible for the increases in incarceration rates (Harcourt 2006; Palermo, Smith and Liska 1991). However there are several reasons to believe that these claims exaggerate the role of de-institutionalization in the prison boom. Demographic differences between inmates and mental patients are one reason: inmates tend to be young, male, and minority. By contrast, mental patients tend to be older and female. In addition, some studies (Raphael 2008) show that deinstitutionalization accounts for no more than five percent of the increases in incarceration in recent decades. Consequently I chose *not* to control for this demographic factor in my analyses.

### *Data reduction techniques*

The dataset contains a large number of variables, some of which are highly correlated. I used principal factor analysis to explore the underlying structure of the data. Examination of the rotated solutions yielded four stable and interpretable factors (based on the eigenvalue-one—or Kaiser—criterion, and interpretability). I averaged the items in each scale, then standardized the resulting index. In the case of the economic threat index, I also reverse-coded the scale so higher scores would indicate higher levels of economic threat. Table 4.6 indicates which items were used in the scales and provides each scale's alpha coefficient.

**Table 4.6 Summary of scales**

<b>Scales</b>	<b>Measures</b>	<b>Cronbach's alpha</b>
<i>Crime</i>	Violent crime rate Property crime rate	.7458
<i>Economic threat</i>	% employed Poverty rate Personal income per capita	.8157
<i>Civic engagement</i>	Voter turnout rate State social capital score	.8608
<i>Corrections</i>	Corrections spending Incarceration rate	.7652

Missing data for poverty rate were imputed prior to averaging the items into the scale.

### *Missing data and imputation*

Whenever possible, data were collected for all states (N=50) and all years (T=30) in the study. However some data were not available for a few variables in a few state-

years. This was the case for marriage rates (missing 1981-84, 1986, and 1999); metropolitan population (missing 1981-82 and 1989); and poverty rate (missing 1978-79). I used linear interpolation to estimate the missing data with the Stata command “ipolate” (for example: by id: ipolate var year, gen(newvar)). I do not view using interpolated data as an important limitation because the amount of missing data is rather small, and marriage rates, urbanization, and poverty rates generally follow stable, uniform growth patterns.

I opted *not* to impute missing parole revocation data because doing so would be methodologically problematic and conceptually unsound. Consequently, 204 state-years were lost to missing data in the analyses of parole revocation rates. Pooled time-series estimators, however, are considered robust to disparate missing value patterns (Johnson and DiNardo 1997; Woolridge 2002).

#### Data collection

I relied on three types of sources to collect the data I needed. The majority of the data were obtained from published and unpublished reports by state government or federal agencies such as the US Census Bureau or the Bureau of Justice Statistics. The data on crime, symbolic threats, practical constraints and demographic controls were all obtained from these official sources. For the most part, the most recent data were available in electronic form that could be downloaded directly into Excel spreadsheets. However some reports covering the early years in the study were only available in hard copy; these data had to be located in library archives (or purchased from government agencies) and entered into Excel manually.

My analyses also use validated scales or indices created by other researchers. This is the case for the measures of citizen ideology (Berry, Ringquist, Fording and Hanson 1998), gubernatorial power (Beyle 2004), voter turnout (United States Elections Project 2010), and social capital (Putnam 2000), which I describe more fully in the next section. These data and all associated documentation are publicly available and can be downloaded from their creators' websites.

Data on states' sentencing structures were the most difficult to locate and the most time-consuming to compile, because the states offer a complex patchwork of criminal justice policies that has not been rigorously or comprehensively documented by any one agency or professional organization. Organizations such as the American Probation and Parole Association or the Association of Paroling Authorities International provided some information, but finding complete and accurate data often involved researching the history of sentencing policies for each state and cross-checking the information against other published sources.

### **Specification and estimation**

Pooled time series cross-sectional design

To assess the influence of the factors described above on incarceration rates and parole revocation rates, I use a multiple time series or pooled time series cross-sectional (TSCS) design that combines data from all 50 states over 30 years (1978-2007). TSCS designs offer several advantages over time series or cross-sectional approaches. For one, the limited number of spatial units or of available data over time sometimes means that time series and cross sectional designs suffer from an imbalance between too many

explanatory variables and too few cases, in which case the number of explanatory variables exceeds the degree of freedom required to model the relationship between dependent and independent variables—a violation of a basic assumption of standard statistical analysis. TSCS analysis increases the ratio of cases to variables by pooling the data (each state-year is a case), thereby increasing the power of statistical analyses and allowing for more fully specified models (Schmidt 1997). Second, pooled models permit the investigation of the effects of variables whose variability is negligible or non-existent across time or space (Hicks 1994; Podesta 2002). Third, pooled models capture not only temporal or spatial variation, but variation across these two dimensions simultaneously, allowing us to examine trends over time within individual states, as well as the impact of nation-wide phenomena on all states. Finally, by using each state as a control for the other states, the pooled TSCS model controls for missing variables that may cause differences between states.

#### Fixed- vs. random-effect models

Pooled data are typically analyzed using fixed-effects or random-effects models (Hsiao 1986; Mundlak 1978; Pindyck and Rubinfeld 1991), either of which can be applied to test the theoretically based hypotheses that state incarceration and state parole revocation numbers are driven by crime rates, symbolic threats, state political conditions, practical constraints, and criminal justice policies. The key differences between the two models are based on the assumptions made by each about the form of the covariance matrix, and the treatment of omitted variables.

The fixed-effects estimator, sometimes called "within" estimator because it uses

variation *within* a state and disregards variation *between* states, examines differences in intercepts, assuming the same slopes and constant variance across states. It does so by including a dummy for each state, which allows each state to have a different intercept and guards against omitted variable bias. In addition, this model is robust to selection bias issues because any selection characteristics incorporated into the intercepts are controlled for. This approach however has three major drawbacks: the first is that we lose degrees of freedom when we include state dummy variables, which means that the model produces less efficient estimates of the common slope. Second, the estimation process<sup>19</sup> wipes out time-invariant explanatory variables. Finally if measurement error is present, it will create more bias with fixed-effects estimators because within state variation will be heavily contaminated (Kennedy 2003).

In contrast, the random-effects model views the different intercepts as random and treats them as part of the error term. This model therefore estimates an overall intercept, a set of coefficients for variables of interest, and a composite error term (which includes the "random intercept" term measuring the extent to which an individual intercept differs from the overall intercept). The random-effects estimator is more efficient than the fixed-effects estimator for two reasons. The first is that it is a matrix-weighted average of the between and within estimators. The second is that it saves on degrees of freedom, thereby producing more efficient estimations of the slope coefficients. This model also permits evaluation of the effects of time-invariant variables such as race, gender, or region, and because it averages variable observations (and averages out the measurement

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<sup>19</sup> This estimation process consists of subtracting from each observation the average of the observations for that state. If the values of a variable are all the same (region, for instance), when we subtract the average, the value becomes zero therefore we cannot estimate a slope coefficient for that variable (Kennedy 2003).

errors), it reduces measurement error bias. It would be tempting to conclude that the random-effects approach is therefore superior to the fixed-effects approach. However the random-effects model must satisfy one important assumption: for the estimates to be unbiased, the unobserved state effects (that give rise to the different intercepts) should be uncorrelated with the other independent variables. If the collective influence of the omitted variables is correlated with the explanatory variables included in the model, omitting them creates bias because the between estimator is biased<sup>20</sup> (Kennedy 2003).

The Hausman (1978) test can detect the presence of this bias. It is based on assessing whether the random-effects estimate is insignificantly different from the unbiased fixed-effects estimate. In other words, it is used to test the null hypothesis that random and fixed-effects coefficients are the same, and to assess problems of misspecification in the models. If the Hausman test fails to reject the null, the random-effects estimators are unbiased and should be used since they are more efficient than the fixed-effects estimators. An examination of the full models presented in Chapters 5 and 6 yielded non-significant chi-squared statistics, which indicates that the estimates produced by the random-effects models are unbiased, and therefore more robust and efficient than the estimates obtained with the fixed-effects models. Accordingly, the narrative in the empirical chapters focuses on the results of the random-effects models, but the results from the fixed-effects estimates are also included to show that the results are robust to the two different model specifications.

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<sup>20</sup> "The between estimator is biased because a higher x value gives rise to a higher y value both because x is higher and because the composite error is higher (because the intercept is higher)—the estimating formula gives the change in x all the credit for the change in y." (Kennedy, 2003:307)

The general random-effects model is given below in Equation 1:

$$Y_{it} = \alpha + \beta_{yx}X_{it} + \beta_{yz}Z_i + \mu_i + \epsilon_{it} \quad (1)$$

where  $Y_{it}$  is the value of the dependent variable for the  $i^{\text{th}}$  case in the sample at the  $t^{\text{th}}$  time period;  $X_{it}$  is the vector of time-varying covariates for the  $i^{\text{th}}$  case at the  $t^{\text{th}}$  time period;  $\beta_{yx}$  is the row vector of coefficients that give the impact of  $X_{it}$  on  $Y_{it}$ ;  $Z_i$  is the vector of observed time-invariant covariates for the  $i^{\text{th}}$  case with  $\beta_{yz}$  its row vector of coefficients;  $\mu_i$  is a scalar of all other latent time-invariant variables that influence  $Y_{it}$ ; and  $\epsilon_{it}$  is the random disturbance for the  $i^{\text{th}}$  case at the  $t^{\text{th}}$  time period with  $\sigma_{\epsilon_t}^2 = \sigma_{\epsilon}^2$ . It also is assumed that  $\epsilon_{it}$  is uncorrelated with  $X_{it}$ ,  $Z_i$ , and  $\mu_i$ . Because time-specific factors can also affect state incarceration/parole revocation numbers, the full model includes a set of dummy variables for each year (Equation 2). These year fixed-effects ( $\delta_t$ ) effectively control for all omitted variables that are invariant across states, yet vary over time.

$$Y_{it} = \alpha + \beta_{yx}X_{it} + \beta_{yz}Z_i + \delta_t + \mu_i + \epsilon_{it} \quad (2)$$

## Estimation

The dependent variables, the number of people incarcerated (Chapter 5) and number of parole revocations (Chapter 6), are count variables. Analyzing count data using ordinary linear regression techniques is problematic because linear models are likely to produce nonsensical negative predicted values; and the validity of hypothesis tests in linear regression is based on assumptions about the variance of scores that are unlikely to be met in count data (Gardner et al. 1995). As a result OLS estimates can be inefficient, inconsistent, and biased (Long 1997). Nonlinear models such as the Poisson

and the negative binomial models offer an alternative approach that takes into account the fact that counts are nonnegative, and uses probability distributions for the dispersion of the dependent variable scores around the expected value that are appropriate for dependent variables that take on only nonnegative integer values.

Poisson regression is the simplest model for count data, but it is based on two restrictive assumptions. The first is that events occur independently over time—an assumption unlikely to be valid assumption in the case of penal sanctioning. The second is that the mean of the outcome is equal to the variance; however in reality the variance often exceeds the mean—a condition referred to as overdispersion (Long 1997; Xekalaki 1983). Using Poisson when overdispersion is present produces underestimated standard errors for the coefficients and overly optimistic significance tests (Cameron and Trivedi 1986). Therefore it should not be used to estimate the probability distributions of the counts for an individual case.

The negative binomial regression addresses concerns about overdispersion by relaxing the assumption of equality between the mean and the variance and including a random component reflecting the uncertainty about the true rates at which events occur for individual cases. In other words in negative binomial models, variation in the predicted mean is due to both variation in the independent variables across cases and unobserved heterogeneity introduced by an error term. Because more than one mean is possible for each set of observed independent variables, there is a distribution of predicted means rather than a single mean (Long 1997). In addition, the use of exposure, which makes use of the correct probability distributions, is superior to analyzing rates as response variables in many instances (UCLA Statistical Consulting Group).

In my analyses both the Poisson goodness-of-fit tests and the likelihood ratio tests indicate that overdispersion is present and that the Poisson distribution is not appropriate. Therefore I apply a random-effects negative binomial regression model for testing all hypotheses. Models are estimated using Stata's XTNBREG, RE command with the EXPOSURE option. The exposure is the state population for analyses of incarceration rates (Chapter 5), and the state parole population for analyses of parole revocation rates (Chapter 6). In the following chapters, the results of the analyses are reported as incidence rate ratios (IRR) rather than as logs of expected counts. Because they include both within-state and between-state effects, the coefficients represent the average effect of  $X$  over  $Y$  when  $X$  changes across time and between states by one unit.

#### Robustness checks

Because it is likely that it would take one or more years for changes in some structural conditions to influence the outcome variables, the models used in Chapters 5 and 6 specify all independent variables lagged by one year. I conducted additional robustness tests based on alternative model specifications. Specifically, I assessed sensitivity of the results to lags by re-estimating all of the models with two-year lags as well as no lags. Statistical inferences from this sensitivity analysis are almost identical to those presented in the empirical chapters. The results are quite robust to alternative model specifications.

It is also possible that some variables in the model create an endogeneity problem. One might argue for example that crime rates are endogenous to incarceration rates and parole revocation rates, and that the results may be sensitive to this endogeneity bias. To

assess this possibility, the tables in Chapters 5 and 6 include models with and without the potentially problematic variables. Thus Model 5 investigates the effects of symbolic threats, political culture, state governance, sentencing structure, and demographic control variables. Model 6 then adds crime. Results show that statistical inferences remain unchanged; results of Model 6 are not sensitive to the endogeneity of crime.

## **CHAPTER 5**

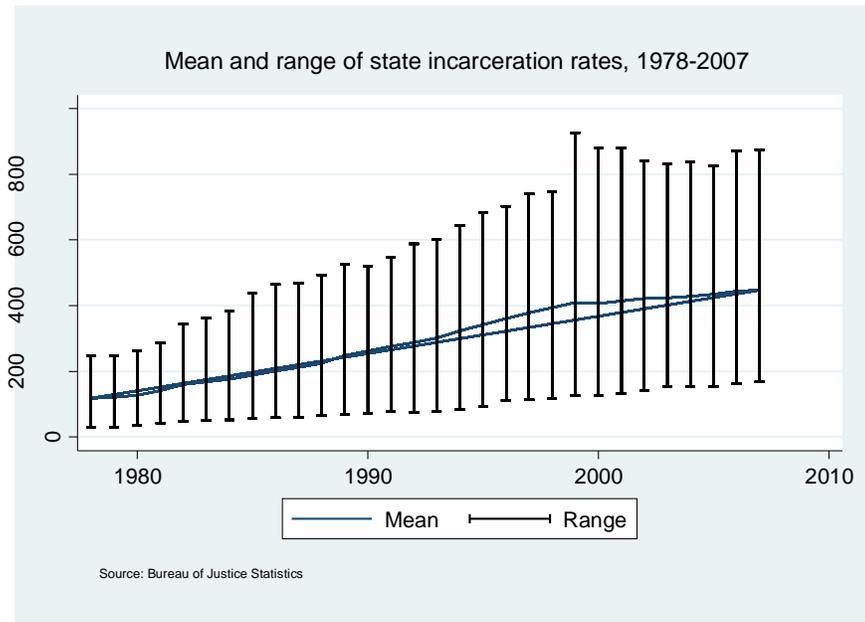
### **INCARCERATION RATES IN THE AMERICAN STATES: AN ANALYSIS OVER TIME**

#### **Introduction**

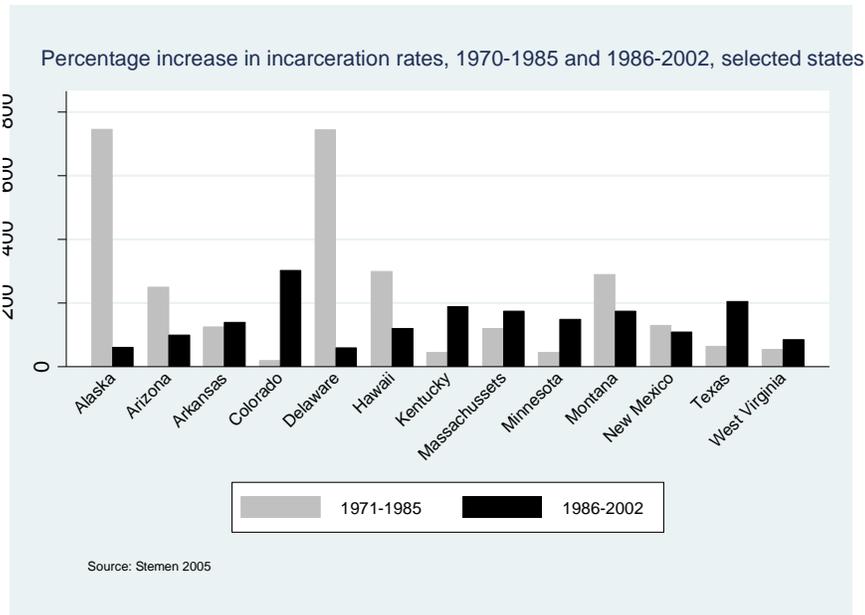
In the 1970s the US embarked on a path that resulted in an unprecedented expansion of its correctional system. According to the Bureau of Justice Statistics, state and federal prisons grew by a bewildering 600 percent between 1970 and 2007. In 2005, more than 1.5 million persons were incarcerated in US prisons on any given day, and an additional 750,000 were incarcerated in local jails (Harrison and Beck 2006). By the turn of the twenty-first century, nearly 3 percent of the U.S. population— more than 5.6 million Americans—had served time behind bars (Bonczar 2003), and the incarceration rate had reached 427 inmates per 100,000 residents, up from 87 per 100,000 in 1970.

Underneath these national trends, the numbers reveal a substantial amount of variation in the use of imprisonment among the fifty states. Figure 5.1 demonstrates the extent of this variation by overlapping the range of state incarceration rates for each year onto the national incarceration rate between 1978 and 2007. For example, in 1993 the top of the vertical line represents the state with the highest incarceration rate (about 600 prisoners per 100,000 residents), while the bottom of the line represents the state with the lowest incarceration rate (about 75 prisoners per 100,000 residents). As we can see from the growing range of incarceration rates, state differences in confinement have become

greater over time—a reflection of the increasing fragmentation in punishment practices in the states. In addition to variation between states, there is also considerable variation in the rate at which incarceration rates grew *within* states over the last thirty years. In Kentucky, for example, the incarceration rate grew 45 percent between 1971 and 1985, and 190 percent between 1986 and 2002. In contrast, Delaware’s increased 745 percent during the first period, but only 60 percent during the next fifteen years (Figure 5.2). Together these graphs suggest that, while all states have encountered similar policy problems (increases in crime rates, for instance), they have not pursued the same policy solutions; as a result, the quantitative and qualitative aspects of punishment vary significantly from state to state.



**Figure 5.1 Mean and range of state incarceration rates, 1978-2007**



**Figure 5.2 Percentage increase in incarceration rates, 1970-85 and 1986-2002, selected states**

What accounts for this patchwork of punishment practices? Empirical research has uncovered several patterns that point to the role of social, political, ideological, economic, policy, and demographic dynamics in shaping state incarceration rates; these studies and their findings are discussed in detail in Chapter 2. However scholars still struggle to understand the factors behind this state variation and growth, and to come to a consensus about the precise mechanisms through which they come into play. Prior studies suffer from three important limitations: with the exception of some of the more recent longitudinal studies (Spelman 2009; Stemen 2005), they have been limited to short time frames; they tend to focus on a limited number of explanatory variables; and they do not investigate whether the impact of these variables is historically contingent.

## **Study goals and hypotheses**

This study adds to, and extends previous work on the determinants of the size of state prison populations in two ways. First, it updates the data to consider variation over a longer time frame, extending the analysis to a 30-year period that includes the recent decarceration trend, which studies have yet to examine. By extending the study to 2007, I hoped that the study may also be able to capture the effects of the economic crisis on incarceration rates, as well as potential course-correction decisions made by the states to keep the size of their prison populations in check after the country's imprisonment binge of the 1980s and 1990s. Second, this study expands the theoretical scope of explanations to include recent theories about the role of state governance in shaping punitive practices (Barker 2006).

The study uses pooled time-series cross-sectional (TSCS) data to analyze variations in annual, state-level incarceration rates from 1978 to 2007—years for which complete and comparable data are available. Building on the work of earlier researchers, I assess various explanations for state differences in incarceration rates that echo long-standing conversations about the determinants of criminal justice outcomes more generally. Furthermore, I examine whether the drivers of incarceration rates have changed over time. The data and methods I use are described in detail in Chapter 4, and the modeling strategy is explained in the next section.

The findings from the studies reviewed in Chapter 2 suggest that the determinants of criminal justice outcomes are complex. Accordingly, I conduct tests of the following set of hypotheses.

*Symbolic threats:* one of the more widely accepted theories in studies of the rise of mass incarceration is that formal social control in the form of criminalization and incarceration is used as a means to manage populations who present a potential threat to social order. Increases in the size of economically marginalized populations should therefore be associated with increases in incarceration rates (hypothesis 1a). In addition, minority threat theory suggests that the size of minority populations should have an impact on incarceration rates such that: there should be a non-linear (inverted U-shaped curve) relationship between percentage Black and incarceration rates (2a); percentage Hispanic should have a positive effect on incarceration rates (2b); and the effect of percentage Hispanic should be smaller than the effect of percentage Black (hypothesis 2c).

*Political culture.* Based on the number of studies that have uncovered a link between conservative political ideology and harsher stances on punishment, I expect incarceration rates to increase under Republican governors (3a), as well as in states with a more conservative citizenry (3b).

*Sentencing structure.* The hydraulic displacement of discretion theory proposes that sentencing reforms have transferred sentencing discretion from the judiciary to the legislative branch of government, which has resulted in harsher punishment and higher incarceration rates. Consequently, more limited judicial discretion (as measured by a state's sentencing structure and its parole board authority) should be associated with higher incarceration rates (4).

*State governance.* Recent scholarship (Barker 2006, 2009) demonstrates that political institutional arrangements and collective agency provide valuable insights into

the different types of penal policies and practices that the states have embraced. Barker suggests, for example, that political structures that create greater centralization of political authority in the state tend to produce a “thin democracy” in which decision-makers are insulated from public demands, resulting in more coercive penal regimes. If that is the case, then the index of gubernatorial power, which is a measure of the centralization of political authority in the state, should be positively associated with incarceration rates (5a). Additionally, civic engagement—the degree to which ordinary citizens get involved in state politics—is likely to influence the nature of the policies created by state political institutions, as well as the extent to which states rely on confinement, by keeping a check on the repressive powers of the state (Barker 2006). Hence states with higher levels of civic engagement should have less coercive penal regimes, and by extension lower incarceration rates (hypothesis 5b).

*Crime.* Tests of the impact of crime on incarceration rates have been met with mixed results, suggesting that the extent to which states rely on confinement is not entirely determined by a functional response to crime rates. Nonetheless, one cannot ignore the obvious contribution that crime makes to incarceration rates. Therefore, we would expect to find a positive relationship between crime rates and incarceration rates (6).

To further refine this analysis, I also investigate whether the influence of these factors is historically contingent. In particular, I expect to find that the effects of economic threats (7a), and percentage Hispanic (7b) on incarceration rates become greater over time, while conservative political ideology (8) and crime (9) lose some of their influence.

## Analyses

### Descriptive statistics

The descriptive statistics are reported in Chapter 4 (Table 4.2-4.5), and the intra-class coefficients (ICCs) for all the continuous variables in the analyses are presented here in Table 5.1. The ICC (rho) represents the proportion of the total variance in each variable that is between states. Between-state variance reflects stable differences across states, as opposed to within-state variance, which reflects the degree to which values of a given variable change over time.

**Table 5.1 Intraclass correlations for all variables in the models**

Variables	ICC (rho)
Incarceration rate	0.4465
Crime (standardized index)	0.7425
Economic threat (standardized index)	0.6698
% Black	0.9949
% Hispanic	0.9196
Citizen ideology	0.7801
Civic engagement (standardized index)	0.9153
Gubernatorial power	0.6422
Marriage rate	0.8904
Metropolitan population	0.9206
% 18-24 yr-olds	0.1111

Most of the variables in Table 1.1 have very high ICCs, which means that the relative ranking of states on these variables did not change very much over time. For example, 99.5 percent of the variance on percent black is between states, meaning any change that occurred over time in this variable did not disrupt the differences between states that were essentially the same at all time periods. Since fixed effects models rely

on within-state change over time to estimate the effects of covariates, these results cast doubt on this modeling strategy because there is not sufficient within-state variance on most variables. Interestingly, the dependent variable, incarceration rate, had one of the lower ICCs (.45), which indicates that there was more substantial change over time that could have reshuffled the relative ranking of states on the incarceration rate.

I investigated the presence of multicollinearity, which is often an issue with macrostructural variables, by performing a correlation analysis. The results, presented in Table 5.2, show that most associations are modest for data aggregated at this level. The strongest bivariate correlation occurred between percentage Black and civic engagement (-0.66).

**Table 5.2 Pearson's R correlations among covariates, incarceration rates models**

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Incarceration rate (1)	1.00										
Crime (2)	0.21	1.00									
Economic threat (3)	-0.20	0.15	1.00								
% Black (4)	0.46	0.33	0.29	1.00							
% Hispanic (5)	0.24	0.38	-0.05	-0.13	1.00						
Citizen ideology (6)	-0.12	-0.11	-0.31	-0.19	0.00	1.00					
Civic engagement (7)	-0.34	-0.38	-0.41	-0.66	-0.19	0.23	1.00				
Gubernatorial power (8)	-0.32	-0.00	-0.09	-0.20	-0.11	0.24	0.22	1.00			
Marriage rate (9)	0.06	0.22	-0.03	-0.04	0.07	-0.13	-0.26	-0.14	1.00		
Metropolitan population (10)	0.25	0.49	-0.32	0.24	0.36	0.31	-0.32	0.12	0.05	1.00	
% 18-24 yr-olds (11)	-0.48	0.07	0.43	0.02	-0.17	-0.25	-0.04	0.19	0.03	-0.21	1.00

## Basic regression results

Table 5.3 presents the results from the first multivariate analyses. The coefficients are reported as incidence rate ratios (IRR) rather than as logs of expected counts. Because they include both within-state and between-state effects, the coefficients represent the average effect of  $X$  on  $Y$  when  $X$  changes across time and between states by one unit. For ease of interpretation, the expression  $100*(IRR-1)$  tells us the percentage change in the incidence of incarceration ( $Y$ ) for each unit increase in the independent variable ( $X$ ). Thus a coefficient of 1.04 for civic engagement in Model 6 means that, controlling for other factors, a one-standard deviation increase in civic engagement is associated with a 6 percent increase in incarceration rates.

As discussed in Chapter 2, pooled time series cross sectional data are typically analyzed using either fixed effects or random effects models (Hsiao 1986; Mundlak 1978; Pindyck and Rubinfeld 1991). Each procedure has advantages: for example, estimating with random effects allows for the testing of time-invariant explanatory variables and tends to yield more robust and more efficient results, while fixed effects models ensure that unmeasured effects are not biasing the results. A Hausman test of model specification failed to reject the null hypothesis of "no difference" between the coefficients of the full random- and fixed-effects models ( $Chi^2=26.45$ ,  $p=.15$ ), which suggests that random effects estimators should be preferred over fixed effects estimators. In addition, the relative size of the standard errors in fixed effects models presents more potential for type I error. Therefore the narrative will focus on the results of the random

effects models (Table 5.3 and Table 5.5). This should not be taken to mean that the fixed effects coefficients are incorrect. As a matter of fact, I include the results from the fixed effects models (presented in Table 5.4) to show that they yielded remarkably similar results to the random effects models, thus demonstrating that the results are robust to the different model specifications. Since the models use maximum likelihood estimation, the usual goodness-of-fit parameters are not available. Instead, I report the Wald chi-squared and the likelihood-ratio chi-squared statistics, which ideally should both decrease as the models get specified further.

Model 1 in Table 5.3 presents the results from the baseline model. This model includes the demographic control variables (marriage, metropolitan population, and percentage 18-24 year-olds), as well as the measures of symbolic threats. The results from model 1 show that economic and racial threat variables each have a non-linear effect on incarceration rates. Specifically, we see from the economic threat coefficients, which are both negative in model 1, that the relationship between economic threat and incarceration is negative (which does not support the research hypothesis) with an accelerating decline as economic threat increases. As predicted, racial and ethnic threats both have a positive impact on incarceration: states with larger Hispanic populations, for example, also have larger prison populations. Model 2 adds the political explanatory factors (political culture and state governance) to the baseline model. Although they are not significant, the results indicate that the effects (both positive) of Republican governor and gubernatorial power are in the expected direction. Contrary to what was

hypothesized, citizen ideology<sup>21</sup> and civic engagement are positively associated with incarceration rates (although citizen ideology is not significant). Model 3 tests the effects of sentencing structure. Voluntary guidelines is the only variable that has a statistical significant effect on the size of prison populations: states that have implemented voluntary guidelines have prison populations 9 percent higher than states that have no sentencing guidelines. Model 4 combines the baseline model with the political and sentencing variables. The overall pattern of significance remains unchanged from previous models, except for sentencing variables, where the full parole board authority dummy becomes statistically significant. Model 5 adds a non-linear effect for time. Controlling for time changes the direction of the effect of a few variables, suggesting that some of the effects estimated in previous models were confounded with general temporal trends across states in incarceration rates. The coefficient for percentage Hispanic, while remaining significant, becomes negatively associated with incarceration rates, as does gubernatorial power. Presumptive guidelines becomes statistically significant, and its effect on prison populations becomes negative.

Finally crime is added in Model 6 to produce the full model. Adding this variable last allows us to see whether it confounds the effects of other variables in the model. A comparison of the results from Models 5 and 6 shows that the estimates are virtually identical, which indicates that crime measures effects not already captured by other variables. As anticipated, the results show a positive, significant ( $p < 0.001$ ) relationship between crime and incarceration rates. However the direction of the rest of the

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<sup>21</sup> Citizen ideology is a scale of 0-100, “0” being the most conservative, and “100” being the most liberal.

relationships runs contrary to what was expected. The results do not provide much support for symbolic threat arguments. They indicate that, initially, increases in economic threat lead to higher rates of incarceration, but that after they hit a threshold, further increases are associated with declines in incarceration rates. The economic threat hypothesis is supported, but only after controlling for time. Similarly, the coefficients for percentage Black and percentage Hispanic are negative for both and significant only for percentage Hispanic ( $p < 0.05$ ). Controlling for the other variables in the model, a one percent increase in the Hispanic population is associated with a one percent decrease in incarceration rates. The political affiliation of the governor is not significantly related to incarceration rates (though states with Republican governors do seem to have modestly higher incarceration rates, and greater gubernatorial power seems to have a moderating effect on imprisonment). The effect of civic engagement continues to be strongly significant—states where ordinary citizens show greater involvement in state politics have higher incarceration rates—and citizen ideology (also positively associated with imprisonment) becomes significant, however these effects run contrary to what was hypothesized. Finally, the results indicate that the more structure is imposed on sentencing both at the front-end and at the back-end, the lower the incarceration rates: states with parole boards that enjoy full authority over release and revocation decisions have higher incarceration rates, compared to states where the authority of the parole board was severely curtailed. Presumptive guidelines, which remove judicial discretion, appear to be associated with lower incarceration rates. This suggests that concerns about the negative effects of sentencing reforms on prison population sizes may be unfounded.

**Table 5.3 MLE negative binomial regression coefficients (t values) from a series of random effects models of incarceration rates, 1978-2007<sup>a</sup>**

Variables <sup>b</sup>	(1) Baseline model	(2) Politics	(3) Sentencing	(4) All	(5) All + time	(6) Full model
<i>Symbolic threats</i>						
Economic threat	0.84 <sup>***</sup> (-12.70)	0.84 <sup>***</sup> (-12.67)	0.84 <sup>***</sup> (-12.63)	0.84 <sup>***</sup> (-12.71)	1.03 <sup>*</sup> (2.12)	1.02 (1.72)
Economic threat <sup>2</sup>	<b>0.98<sup>**</sup></b> (-2.87)	<b>0.98<sup>**</sup></b> (-2.60)	<b>0.98<sup>***</sup></b> (-3.53)	<b>0.98<sup>**</sup></b> (-3.29)	<b>0.99<sup>**</sup></b> (-2.83)	<b>0.99<sup>*</sup></b> (-2.09)
(ref=0-2% Black)	.	.	.	.	.	.
2-15% Black	<b>1.09<sup>*</sup></b> (1.97)	<b>1.10<sup>*</sup></b> (2.28)	<b>1.09<sup>*</sup></b> (2.02)	<b>1.11<sup>*</sup></b> (2.39)	1.00 (-0.05)	0.99 (-0.21)
Over 15% Black	1.06 (1.15)	1.07 (1.35)	1.09 (1.68)	1.10 (1.94)	0.93 (-1.82)	0.94 (-1.57)
% Hispanic	<b>1.03<sup>***</sup></b> (13.58)	<b>1.03<sup>***</sup></b> (13.26)	<b>1.03<sup>***</sup></b> (14.53)	<b>1.03<sup>***</sup></b> (14.38)	<b>0.99<sup>**</sup></b> (-3.04)	<b>0.99<sup>*</sup></b> (-2.00)
<i>Demographic variables</i>						
Marriage rate	<b>1.01<sup>***</sup></b> (4.23)	<b>1.01<sup>***</sup></b> (4.68)	<b>1.01<sup>***</sup></b> (4.30)	<b>1.01<sup>***</sup></b> (4.79)	<b>1.01<sup>***</sup></b> (7.15)	<b>1.01<sup>***</sup></b> (7.16)
Metropolitan pop	<b>0.99<sup>***</sup></b> (-5.06)	<b>0.99<sup>***</sup></b> (-5.08)	<b>0.99<sup>***</sup></b> (-4.97)	<b>0.99<sup>***</sup></b> (-4.96)	<b>0.99<sup>***</sup></b> (-6.62)	<b>0.99<sup>***</sup></b> (-7.27)
% 18-24 yr-olds	<b>0.82<sup>***</sup></b> (-38.47)	<b>0.82<sup>***</sup></b> (-33.84)	<b>0.82<sup>***</sup></b> (-37.45)	<b>0.83<sup>***</sup></b> (-31.89)	<b>1.04<sup>***</sup></b> (4.26)	<b>1.03<sup>***</sup></b> (4.07)
<i>Politics</i>						
Citizen ideology		1.00 (-0.43)		1.00 (-0.82)	<b>1.00<sup>***</sup></b> (-4.23)	<b>1.00<sup>***</sup></b> (-4.00)
(ref=Democratic governor)		.		.	.	.
Republican governor		1.01 (1.38)		1.02 (1.92)	1.01 (1.31)	1.01 (1.53)
Other governor		0.98 (-0.37)		0.98 (-0.38)	0.96 (-1.17)	0.96 (-1.18)
Civic engagement		<b>1.04<sup>*</sup></b> (1.97)		<b>1.05<sup>*</sup></b> (2.53)	<b>1.05<sup>**</sup></b> (3.09)	<b>1.04<sup>**</sup></b> (2.92)
Gubernatorial power		1.01 (0.80)		1.01 (0.62)	0.99 (-1.02)	0.99 (-1.05)
<i>Sentencing structure</i>						
(ref=No PB <sup>c</sup> authority)			.	.	.	.
Limited PB authority			0.96 (-1.24)	0.96 (-1.11)	0.97 (-1.25)	0.98 (-0.77)

Variables <sup>b</sup>	(1) Baseline model	(2) Politics	(3) Sentencing	(4) All	(5) All + time	(6) Full model
Full PB authority			1.05 (1.72)	<b>1.06*</b> (2.19)	<b>1.11***</b> (5.46)	<b>1.11***</b> (5.74)
(ref=No guidelines)						
Voluntary guidelines			<b>1.09***</b> (3.75)	<b>1.11***</b> (4.36)	1.03 (1.87)	1.03 (1.44)
Presumptive guidelines			1.00 (-0.03)	1.02 (0.72)	<b>0.94**</b> (-2.98)	<b>0.93**</b> (-3.16)
Time					<b>1.07***</b> (38.21)	<b>1.07***</b> (38.37)
Time^2					<b>1.00***</b> (-20.56)	<b>1.00***</b> (-18.70)
Crime						<b>1.03***</b> (4.03)
N	1448	1448	1448	1448	1448	1448
r	4.25	3.91	4.41	3.95	4.06	4.45
s	1672.03	1507.40	1709.04	1493.55	714.55	786.06
Wald chi2	5790.17***	5876.15***	6019.60***	6168.74***	10840.87***	11027.68***
Degrees of freedom	8.00	13.00	12.00	17.00	19.00	20.00
Likelihood ratio chi2	1812.05***	1489.71***	1707.91***	1370.25***	1701.82***	1565.91***

<sup>a</sup> Coefficients are reported as incidence rate ratios.

<sup>b</sup> All variables are lagged by one year.

<sup>c</sup> PB: parole board

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

**Table 5.4 MLE negative binomial regression coefficients (t values) from a series of fixed effects models of incarceration rates, 1978-2007<sup>a</sup>**

Variables <sup>b</sup>	(1) Baseline model	(2) Politics	(3) Sentencing	(4) All	(5) All + time	(6) Full model
<i>Symbolic threats</i>						
Economic threat	0.84*** (-12.82)	0.84*** (-12.83)	0.84*** (-12.68)	0.84*** (-12.77)	1.02 (1.66)	1.02 (1.35)
Economic threat^2	<b>0.98**</b> (-2.72)	<b>0.98*</b> (-2.37)	<b>0.98***</b> (-3.37)	<b>0.98**</b> (-3.08)	<b>0.99*</b> (-2.55)	0.99 (-1.94)
(ref=0-2% Black)	.	.	.	.	.	.
2-15% Black	1.06 (1.25)	1.08 (1.72)	1.06 (1.31)	1.08 (1.86)	0.97 (-0.92)	0.96 (-1.09)
Over 15% Black	1.01 (0.19)	1.03 (0.55)	1.04 (0.72)	1.06 (1.17)	<b>0.89**</b> (-2.82)	<b>0.90**</b> (-2.65)
% Hispanic	<b>1.03***</b> (13.34)	<b>1.03***</b> (13.46)	<b>1.03***</b> (14.29)	<b>1.03***</b> (14.70)	<b>0.99***</b> (-3.63)	<b>0.99**</b> (-2.67)
<i>Demographic variables</i>						
Marriage rate	<b>1.01***</b> (4.57)	<b>1.01***</b> (5.21)	<b>1.01***</b> (4.74)	<b>1.01***</b> (5.41)	<b>1.01***</b> (6.68)	<b>1.01***</b> (6.72)
Metropolitan pop	<b>0.99***</b> (-5.09)	<b>0.99***</b> (-5.18)	<b>0.99***</b> (-4.89)	<b>0.99***</b> (-4.99)	<b>0.99***</b> (-7.45)	<b>0.99***</b> (-7.98)
% 18-24 yr-olds	<b>0.82***</b> (-38.13)	<b>0.83***</b> (-33.15)	<b>0.82***</b> (-37.13)	<b>0.83***</b> (-31.26)	<b>1.04***</b> (4.61)	<b>1.04***</b> (4.46)
<i>Politics</i>						
Citizen ideology		1.00 (-0.11)		1.00 (-0.55)	<b>1.00***</b> (-3.82)	<b>1.00***</b> (-3.64)
(ref=Democratic governor)		.		.	.	.
Republican governor		1.01 (1.52)		<b>1.02*</b> (2.11)	1.01 (1.35)	1.01 (1.56)
Other governor		0.99 (-0.30)		0.99 (-0.30)	0.96 (-1.18)	0.96 (-1.18)
Civic engagement		<b>1.06**</b> (3.06)		<b>1.08***</b> (3.62)	<b>1.06***</b> (3.66)	<b>1.05***</b> (3.55)
Gubernatorial power		1.01 (0.76)		1.01 (0.61)	0.99 (-1.18)	0.99 (-1.18)
<i>Sentencing structure</i>						
(ref=No PB <sup>c</sup> authority)			.	.	.	.
Limited PB authority			0.96 (-1.20)	0.97 (-0.97)	0.97 (-1.26)	0.98 (-0.85)
Full PB authority			1.05 (1.74)	<b>1.06*</b> (2.32)	<b>1.11***</b> (5.26)	<b>1.11***</b> (5.51)

Variables <sup>b</sup>	(1) Baseline model	(2) Politics	(3) Sentencing	(4) All	(5) All + time	(6) Full model
(ref=No guidelines)						
Voluntary guidelines			<b>1.09<sup>***</sup></b> (3.56)	<b>1.12<sup>***</sup></b> (4.41)	1.02 (1.30)	1.02 (0.97)
Presumptive guidelines			1.00 (0.04)	1.03 (0.95)	<b>0.93<sup>**</sup></b> (-3.23)	<b>0.93<sup>***</sup></b> (-3.35)
Time					<b>1.07<sup>***</sup></b> (38.46)	<b>1.07<sup>***</sup></b> (38.53)
Time^2					<b>1.00<sup>***</sup></b> (-20.46)	<b>1.00<sup>***</sup></b> (-18.81)
Crime						<b>1.03<sup>***</sup></b> (3.40)
N	1448	1448	1448	1448	1448	1448
Wald chi2	5781.95 <sup>***</sup>	5881.38 <sup>***</sup>	6027.89 <sup>***</sup>	6205.37 <sup>***</sup>	10728.95 <sup>***</sup>	10887.72 <sup>***</sup>
Degrees of freedom	8.00	13.00	12.00	17.00	19.00	20.00

<sup>a</sup> Coefficients are reported as incidence rate ratios.

<sup>b</sup> All variables are lagged by one year.

<sup>c</sup> PB: parole board

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

## Estimating period-specific relationships

The results from the first set of models show that several covariates have a strong impact on parole revocations. However, by estimating a single coefficient for the entire 1978 to 2007 period, these analyses assume that the strength of these relationships is constant and stable over time, which is not the case: while all states have experienced significant growth in incarceration rates over the last thirty years, this growth has not been uniform over time (Figure 2.1). In addition, as several studies have pointed out (Blumstein and Beck 1999, 2005; Pfaff 2009; Stemen 2005), the factors that gave rise to the prison boom in the 1970s and 1980s are not the same as the factors that sustained its growth in the 1990s, which are themselves most certainly different from those that explain the recent decarceration trend. In particular, I expect to find that important differences set the 2000s apart, because as the economy has slowed, most states have seen their revenues falling. Many have been forced to make tough budgetary decisions and to eliminate or scale back services—which should have resulted in prison population reductions. To explore whether the determinants of incarceration rates are indeed historically contingent, I divided the study into three time periods (1978-1988; 1989-1998; 1999-2007) corresponding to three phases in the growth of incarceration rates, and I re-estimated Models 2-4 for each time period. The results of the periodized models, which appear in Table 5.5, provide strong evidence that the factors responsible for the early build-up in incarceration rates are different from those that have sustained the growth of state prison populations.

Economic and ethnic threats, for example, have an important impact on incarceration rates during the 1980s; the coefficients for these variables are strongly

statistically significant ( $p < 0.001$ ). However, they appear to affect imprisonment differently. As the first model shows, a one-unit/standard deviation increase in the threat presented by economically marginalized populations is associated with an 11 percent decrease in incarceration rates. This effect is even greater in the 1990s. In contrast, states with larger Hispanic populations have higher incarceration rates. Percentage Hispanic becomes negatively associated with imprisonment during the 1990s, but the coefficient fails to achieve statistical significance. The relationship becomes positive and significant again during the 2000s. The positive relationship between racial threats and incarceration rates carries through all three periods, but it becomes significant only in the last decade, when states where over 15 percent of the population is Black have 10 percent higher incarceration rates compared to states with very small (0 to 2 percent) Black populations ( $p < 0.05$ ).

The models show that, through most of the 30 years, states with a more liberal citizenry have higher incarceration rates. Although this effect is very small, it is statistically significant and it is at odds with the influence of Republican governor: this coefficient shows that, compared to states with Democratic governors, states with Republican governors have higher incarceration rates in the 1980s (which we would expect), but lower incarceration rates in the 1990s. The relationship becomes non-significant and virtually indistinguishable from zero during the 2000s, which suggests that political differences may have disappeared when it comes to backing strong crime control legislation and that partisanship is no longer a good predictor of harsh stances on punishment. The influence of civic engagement does not become significant ( $p < 0.001$ ) until the last decade. Greater gubernatorial power is associated with lower incarceration

rates initially, but the relationship changes sign in the 1990s, when a one-unit increase in this covariate is related to an 11 percent increase in incarceration rates.

The models indicate that states achieve lower incarceration rates differently in the different periods. During the 1980s, states that exerted more control over releases (through determinate sentencing) had significantly lower incarceration rates. Controlling admissions (through the use of presumptive guidelines) had the opposite effect, but this coefficient is not statistically significant. However, it is the combination of determinate sentencing and presumptive guidelines that has the largest effect on incarceration rates. During the 1990s, it appears that the opposite happened: incarceration rates are affected negatively by presumptive guidelines, and positively by determinate sentencing. The relationship between the combination of determinate sentencing and presumptive guidelines, and incarceration rates is positive, but this coefficient is not statistically significant. The influence of sentencing factors all but disappears during the first decade of the twenty-first century, when only determinate sentencing has a significant (negative) impact on incarceration rates.

The effect of crime is unexpected. Indeed, the models show that, contrary to what other studies have found, there is a negative relationship between crime and incarceration rates in the 1980s and 1990s. The coefficients, strongly significant, indicate that an increase in crime is associated with a 13 percent decrease in incarceration rates in the 1980s, and a 6 percent decrease in the 1990s. Only in the last period does the relationship become positive.

In summary, the results show that, although they did not all have the anticipated effects, crime, symbolic threats, political culture, and sentencing reforms were all

important determinants of incarceration rates in the 1980s. During this period, incarceration rates were driven up by ethnic threats, political factors, and sentencing factors, and down by crime and economic threats. In the 1990s incarceration rates continue to be driven by crime, economic threats, political culture, and sentencing factors. Racial and ethnic threats do not appear to have an influence on the size of state prison populations. In addition, with the exception of gubernatorial power, most of the covariates are negatively associated with imprisonment during this period. These relationships shift again in the third period, when citizen ideology, and racial and ethnic threats are associated with increases in incarceration rates. Civic engagement emerges as an important factor also.

## **Discussion and wider implications**

### Summary of main findings

The goal of this paper was to examine the factors that drive incarceration rates and to explore whether these relationships are historically contingent. I relied on major findings from the criminological literature to construct and test a series of hypotheses using thirty years of aggregate data on all fifty American states.

At first glance most of the results appear consistent with patterns uncovered in previous studies of the determinants of incarceration rates. For instance, it comes as no surprise that incarceration rates increase with crime, symbolic threats, or in response to sentencing reforms or practical constraints. The relationship between crime and incarceration is, after all, partly a mechanical one:

**Table 5.5 MLE negative binomial regression coefficients (t values) from a series of models of incarceration rates stratified by time period, 1978-2007<sup>a</sup>**

Variables <sup>b</sup>	(1) 1978-1988	(2) 1989-1998	(3) 1999-2007
<i>Symbolic threats</i>			
Economic threat	<b>0.89</b> <sup>***</sup> (-5.51)	<b>0.88</b> <sup>***</sup> (-6.29)	1.02 (1.28)
(ref=0-2% Black)	.	.	.
2-15% Black	0.92 (-1.21)	1.09 (1.00)	1.05 (1.43)
Over 15% Black	1.13 (1.54)	1.05 (0.57)	<b>1.10</b> <sup>*</sup> (2.35)
% Hispanic	<b>1.04</b> <sup>***</sup> (7.58)	0.99 (-1.09)	<b>1.01</b> <sup>*</sup> (2.51)
<i>Demographic variables</i>			
Marriage rate	<b>1.01</b> <sup>***</sup> (4.21)	1.00 (0.14)	1.00 (1.08)
Metropolitan pop	1.00 (0.06)	1.00 (0.84)	<b>1.00</b> <sup>*</sup> (2.53)
% 18-24 yr-olds	<b>0.85</b> <sup>***</sup> (-12.61)	<b>0.82</b> <sup>***</sup> (-14.52)	1.01 (1.41)
<i>Politics</i>			
Citizen ideology	1.00 (1.53)	<b>1.00</b> <sup>***</sup> (-3.32)	<b>1.00</b> <sup>**</sup> (2.83)
(ref=Democratic gov.)	.	.	.
Republican governor	<b>1.09</b> <sup>***</sup> (6.44)	<b>0.97</b> <sup>*</sup> (-2.00)	1.00 (0.53)
Other governor	0.81 (-0.63)	0.97 (-0.71)	<b>0.85</b> <sup>***</sup> (-4.58)
Civic engagement	1.03 (1.12)	0.98 (-0.94)	<b>1.06</b> <sup>***</sup> (3.68)
Gubernatorial power	<b>0.91</b> <sup>***</sup> (-3.71)	<b>1.11</b> <sup>**</sup> (3.01)	1.00 (0.05)
<i>Sentencing structure</i>			
(ref=No PB <sup>c</sup> authority)	.	.	.
Limited PB authority	<b>1.43</b> <sup>**</sup> (2.65)	0.89 (-1.90)	<b>0.89</b> <sup>**</sup> (-2.76)
Full PB authority	<b>1.37</b> <sup>***</sup> (6.66)	<b>0.85</b> <sup>***</sup> (-3.89)	0.95 (-1.25)
(ref=No guidelines)	.	.	.
Voluntary guidelines	1.07 (1.79)	<b>0.89</b> <sup>**</sup> (-2.76)	1.00 (-0.08)
Presumptive guid.	<b>1.25</b> <sup>***</sup> (4.78)	<b>0.89</b> <sup>*</sup> (-2.43)	0.97 (-0.96)
Crime	<b>0.87</b> <sup>***</sup> (-6.40)	<b>0.94</b> <sup>***</sup> (-3.48)	1.00 (0.14)
N	498	500	450
r	3.50	3.42	6.10
s	312.06	584.49	330.12
Wald chi2	1362.58 <sup>***</sup>	773.35 <sup>***</sup>	117.62 <sup>***</sup>
Degrees of freedom	17.00	17.00	17.00
Likelihood ratio chi2	426.73 <sup>***</sup>	537.29 <sup>***</sup>	960.73 <sup>***</sup>

<sup>a</sup> Coefficients are reported as incidence rate ratios.

<sup>b</sup> All variables are lagged by one year.

<sup>c</sup> PB: parole board

<sup>\*</sup>  $p < 0.05$ , <sup>\*\*</sup>  $p < 0.01$ , <sup>\*\*\*</sup>  $p < 0.001$

“Imprisonment is a criminal sanction: its use will therefore fluctuate in direct proportion to changes in the level of the behavior to which it is designed to respond” (Zimring and Hawkins 1991: 121). But the results from the periodized analyses suggest a more complex relationship. According to these models, crime is associated with *lower* incarceration rates in the 1980s and 1990s, and higher incarceration rates in the 2000s. It may be, as some authors have argued (Tonry 1999), that the relationship between crime and incarceration rates is not as much about changes in crime rates as it is about persistently high crime rates shaping public attitudes about punishment (in turn affecting prison populations)— in which case the impact of crime may have a lag effect. Perhaps that would explain why crime rates are positively associated with confinement in the 2000s even after they peaked in the mid-1990s (Figure 2.5). The economic difficulties associated with the recent collapse of financial markets are reminiscent of the recessions of the 1970s (unemployment, increasing precariousness of the labor market, threat of inflation) and may also explain why both crime and economic threat become positively associated with incarceration rates in the third period.

Critics of sentencing reforms have argued that the adoption of limiting enactments, sentencing guidelines, and mandatory sentencing laws may have contributed to increases in incarceration rates by mandating that harsher penalties be imposed on defendants, and by limiting the system’s ability to respond to overcrowding because it is now locked into inflexible policies (at the front end and at the back end). Unable to use sentencing as an informal means of controlling the size of prison populations, the argument goes, many states have been placed under court orders to relieve overcrowding, as Michigan was after the 1981 Overcrowding Emergency Powers Act was passed. The

findings of this study provide little evidence in support of this argument. Generally speaking, incarceration rates *are* responsive to changes in sentencing policies, but not in the way that I anticipated. Indeed, the results show that it is states that exercise *greater* control over admissions and over releases that have lower incarceration rates—a result similar to what Stemen and his colleagues found (2005). Far from contributing to the growth of prison populations, then, curtailing judicial discretion seems to have had a moderating effect on incarceration rates increases. But the results from the periodized analyses suggest that this is not entirely true. The findings are consistent with previous research showing that sentencing practices, rather than changes in criminal behavior, were responsible for the early build-up of the prison boom: sentencing variables have particularly strong effects in the 1980s. However, they paint a complex picture. During this period, states that exercised *greater control* over prison admissions through the implementation of sentencing guidelines had as much as 25 percent *higher* incarceration rates compared to states that did not. Initially then, sentencing guidelines did contribute to the prison boom. Meanwhile, *lesser control* over releases (i.e. more parole board discretion) was associated with (about 40 percent) *higher* incarceration rates, an indication perhaps that parole boards responded to the sustained attacks on parole and the toughening of stances on criminals in the political culture by becoming more conservative in their willingness to grant early release. This all changed in the 1990s, when structured sentencing and greater parole board authority are both associated with lower incarceration rates. The models provide no easy answer for this turnabout. It is possible that, upon seeing the effects of sentencing reforms on prison population sizes and correctional budgets during the previous decade, states started reframing guidelines

from tough-on-crime measures to population reduction measures (Kramer 1992; Marvell 1995; Nicholson-Crotty 2004). The finding that discretion appears to work in opposite directions at the front end and at the back end of the system, also merits further exploration.

Surprisingly, the results provide little support for the symbolic threats arguments that incarceration is used as a means of controlling marginal classes and preserving social order (Wacquant 2005). Indeed, generally speaking, prisons were *smaller* in states where economically marginalized populations and racial and ethnic groups were larger. Neither is there any evidence that there exists a non-linear, inverted U-shaped effect of racial populations on criminal justice outcomes, as some have claimed (Keen and Jacobs 2009). An inverted U-shaped relationship would indicate that criminal sanctioning increases with the size of Black populations, until this population reaches a certain threshold, at which point, sanctioning becomes less severe. Scholars have speculated that the extent to which Black populations are perceived as “threatening” is tied to their voting power: once this demographic becomes a large enough voting segment of the population, the argument goes, it is able to influence lawmakers and weaken the policies that produce racial disparities in the criminal justice system. The same (albeit with different thresholds) may be true of Hispanics, whose vote both sides of the political spectrum increasingly need in order to get elected. The findings of this study do show that the impact of percentage Black is not linear, but it does not take the form of an inverted U, and the direction of the effect is highly contingent on the period.

The findings also refute the argument that race affects criminal justice outcomes, but ethnicity does not. As a matter of fact, in the full model (Table 5.3), as well as in two

of the periods (Table 5.5), the coefficient for percentage Hispanic is significant but that of percentage Black is not. The effect of percentage Hispanic tends to be weaker however, which is consistent with the argument that the two groups enjoy a different status in the US racial and ethnic hierarchy, where “Blacks have long been perceived as so physically and culturally different from Whites to warrant a separate ‘racial’ category both in the public mind and the legal sphere” (Dixon 2006, 2184; see also Muhammad 2010) but Hispanics are perceived as culturally assimilated, and therefore less threatening than Blacks. The perception that this group constitutes a lesser “threat” could be compounded by the fact that, until recently, Hispanics represented a small minority of the US population, and the recent sharp growth of the Hispanic population should lead to a stronger coefficient in the last decade of the periodized models. Surprisingly, this is not the case: percentage Hispanic is statistically significant and positively associated with incarceration rates in the 2000s, but its effect is more modest than it was during the 1980s, when a one percentage point increase in the size of Hispanic populations was associated with a 4 percent increase in incarceration rates. Further studies may need to explore the possibility that regional subcultures and political economies mediate the impact of this variable.

Another interesting finding concerns the “dog that did not bark,” to borrow a phrase from Arthur Conan Doyle. Many studies have shown that the Republican party and conservative political values produce increases, as well as faster growth, in the prison population (Jacobs and Carmichael 2001; Jacobs and Helms 1999). However the results of the general models show that the political party of governor fails to make a significant contribution to incarceration rates, which would support Greenberg and West’s (2001)

contention that “the political incentives for an expansive prison policy transcend party affiliations” (638). The periodized models indicate that this is a bit of an oversimplification however. The influence of Republican governors over incarceration rates became weaker over the period: it exerted a strong influence over incarceration rates in the 1980s when the Republican party led the calls for law and order, but actually became negatively associated with imprisonment in the 1990s, and insignificant in the 2000s. As for citizen ideology, it seems to have a very small, but significant and positive, impact on incarceration rates. In other words, states with a more liberal citizenry have larger prison populations, which is unexpected. Equally as surprising is the effect of civic engagement. Barker’s (2006) assertion is that differences in the democratic process—i.e. to structures of state governance and practices of civic engagement—explain why American states use punishment and confinement differently. Her comparative study of the states of California, New York, and Washington, found that widespread civic engagement tends to moderate states’ use of harsh punishments, and that the centralization of political authority works to insulate the state from public demands and to lead to a differentiated use of punishment. My results provide mixed support for her arguments. They show that states with greater centralization of political authority (as measured by the index of gubernatorial power) have lower incarceration rates, but only in the 1980s. The effect of civic engagement, on the other hand, is also less than straightforward. This factor has a significant, positive impact on incarceration rates in the general model and in the 2000s, but Barker’s assertion about the moderating role of civic engagement on state’s punitive practices is only true during the 1990s. It is possible that citizen ideology mediates the effects of civic engagement but it is difficult to

gauge from these models the precise mechanisms through which civic engagement affects punishment practices. Nevertheless, the results suggest that Barker is correct in drawing our attention to the importance of exploring differences in state democratic processes and articulating better models of the influence of state governance on criminal justice outcomes. Such work is empirically beyond the scope of the current study but is likely necessary to fully understand states' differentiated use of penal sanctioning.

Taken together, the period-specific results provide some insights into the dynamics of mass imprisonment over the last 30 years. They show that ethnic threats, the strength of the Republican party, as well as sentencing practices, were largely responsible for the early build-up in incarceration rates in the 1980s, but actually moderated their growth in the 1990s—a decade during which the drivers of prison populations shifted toward citizen ideology and state modes of governance. This trend continued into the 2000s, when symbolic threats also became an important determinant of incarceration rates.

#### Wider implications

The findings demonstrate the complex nature of penal policymaking. From a theoretical perspective, they support the continuing utility of considering those factors identified in the literature as significant drivers of criminal punishment practices in late modern American society. But they also indicate that the importance of some of these factors may have been overstated. In particular, the results of this study lend surprisingly little support for the influence of conservative ideology on incarceration rates, and suggest that differences in the scope of penal sanctioning may be better understood

through the lens of varying political institutional contexts and practices of civic engagement instead. This is a promising avenue of investigation, but better models are needed that conceptualize and operationalize these variables more carefully. Finally, the results show that these various relationships need to be examined within their historical context if we are to understand how we have arrived at such a patchwork of punishment practices in the states.

From a policy perspective, the findings help to alleviate concerns over the negative impact of sentencing reforms, which have been said to dehumanize the sentencing process and increase commitment and incarceration rates. Indeed the results show that, while the intent behind limiting enactments may have been to produce harsh punishments by curbing judicial discretion, in practice they have not necessarily resulted in higher incarceration rates. As a matter of fact, it is states that exercise tight control over both admissions and releases (in other words, they curb discretion at the front end and at the back end) that have lower incarceration rates. This suggests that we need to revisit the criticisms leveled against grid-based sentencing schemes because they may present a valuable opportunity to achieve meaningful long-term changes in punishment patterns.

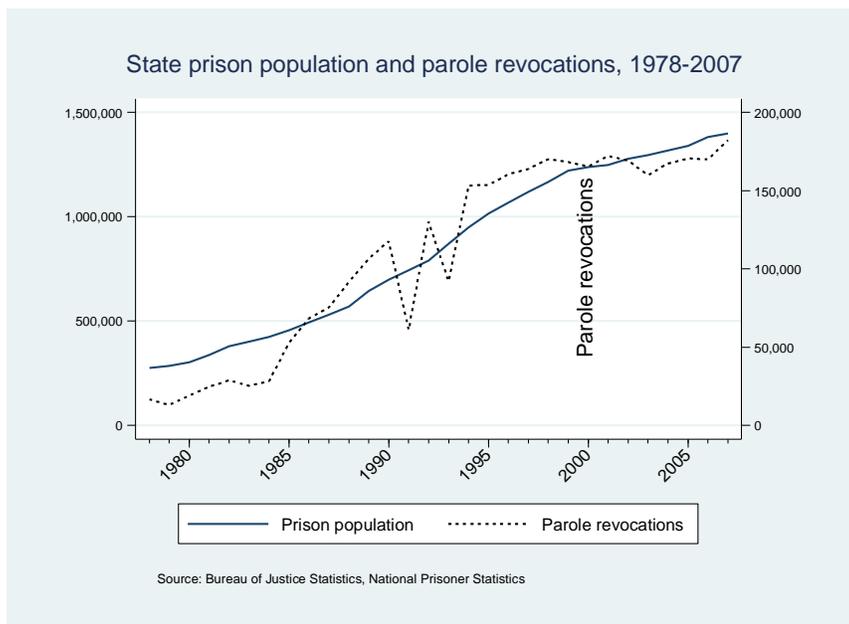
**CHAPTER 6**  
**PAROLE REVOCATION IN THE AMERICAN STATES, 1978-2007:**  
**AN ANALYSIS OVER TIME**

**Introduction**

The landscape of criminal punishment has changed dramatically in the United States over the last forty years, and nowhere in the criminal justice system have these changes been felt more acutely than in corrections. Incarceration rates have soared, propelled initially (in the 1970s and 80s) by crime trends, increased prosecutorial effectiveness and tougher judicial sanctioning, and subsequently by changes in sentencing policies and practices (such as three-strikes and truth-in-sentencing laws) that lengthened time served at the front end and increased parole revocations at the back end (Blumstein and Beck 2005; Langan 1991; Sabol et al. 2002).

This increase in parole revocations is significant. While the overall prison population increased fourfold between 1980 and 2000, the number of parolees revoked and recommitted grew *sevenfold* — from 27,000 in 1980 (or 17 percent of prison admissions nationally), to 133,900 in 1990, and 232,000 in 2005 (or 36 percent of all admissions) — outstripping the overall growth in incarceration (Blumstein and Beck 2005; Glaze and Palla 2005; McBride 2009; Travis 2005) (Figure 6.1). Scholars now estimate that back-end sentencing (the decision to revoke parole and recommit) has been *the* dominant factor in the incarceration rate increases we have seen in the last 20 years, accounting for as much as 60 percent of the growth in the nation's prison population

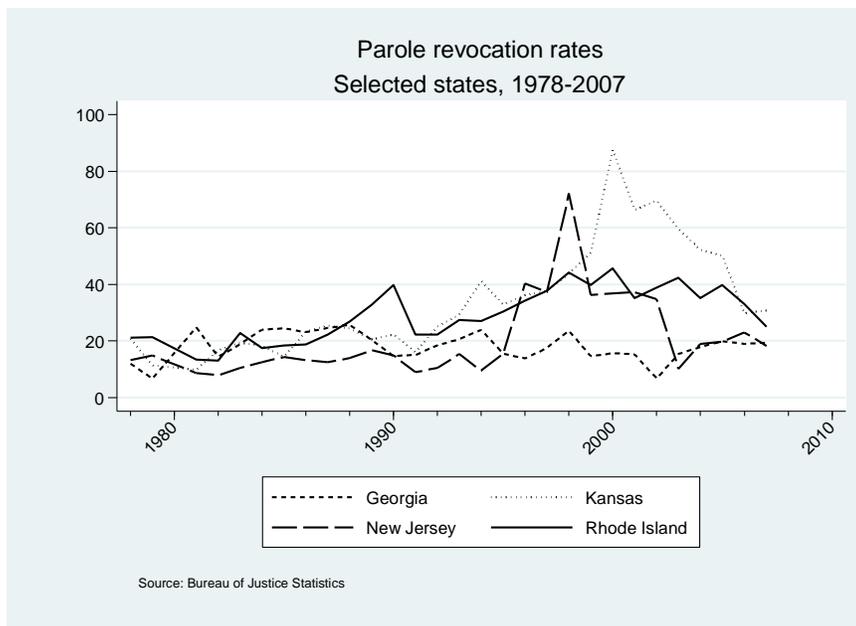
between 1990 and 2001 (Blumstein and Beck 2005). Parole violators thus make up a substantial percentage of prison inmates in all states, and revocations contribute to the phenomenon of "churning," in which offenders circulate in and out of custody repeatedly — a problematic trend that stresses state resources and is being criticized as largely counterproductive because it destabilizes families, weakens communities, and generally speaking makes no sense in terms of deterrence, incapacitation, treatment or cost (Clear 2007; Manza and Uggen 2006; Western 2006).



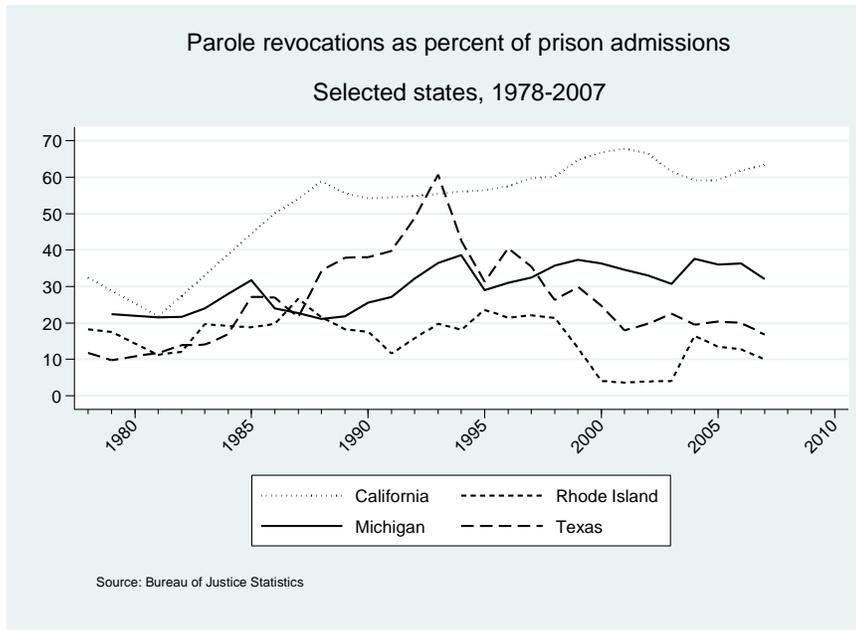
**Figure 6.1 State prison population and parole revocations, 1978-2007**

These statistics paint a worrisome picture and reveal important trends but also hide considerable state-level variation: to mention just one example, a National Institute of Corrections study of parole violations and prison admissions in Georgia, Kansas, New Jersey and Rhode Island found that revocation rates in these four states varied from 20 to 60 percent (Burke 2004). Figure 6.2 illustrates the trends in parole revocation rates in

these states. It shows that while they all had similar parole revocation rates in the late 1970s, by the year 2000 parolees in Kansas were getting revoked at four times the rate of parolees in Georgia. This suggests that while parole revocations contribute to incarceration rates in all states, the extent of this contribution is much greater in some states than in others. As Figure 6.3 shows, parole revocations now account for over 60 percent of prison admissions in California, but only 10 percent in Rhode Island. This begs the question, why? If parolees tend to violate the conditions of their parole at similar rates in all states, why do states have widely different rates of parole revocations? What factors explain these discrepancies, and what do they tell us about the meaning of parole revocation as a sanction, and about the role of parole in the development of the American carceral state?



**Figure 6.2 Parole revocation rates, selected states, 1978-2007**



**Figure 6.3 Parole revocations as percentage of prison admissions, selected states, 1978-2007**

Scholars have noted the significant contribution of parole violations to the unprecedented growth of the US prison system over the last four decades, yet little is known about its determinants. The complex factors that shape parole revocation policies and practices at the state level — as well as their consequences for prisoners’ reentry success, prison populations, costs, and public safety — have received little scrutiny in the sociological literature (a surprising fact given the social, political, and economic impact of bulging prisons). In particular, criminologists have yet to explore whether the factors driving incarceration rates also apply to the specific mechanisms of parole revocation and to provide a rigorous treatment of criminal justice system responses to violations. Parole occupies a unique position within the criminal justice system: on the one hand, back-end sentencing (despite often being overlooked by modern sentencing jurisprudence and punishment theory) is an integral dimension of the criminal justice system that shares

conceptual and operational characteristics with front-end sentencing. As such, one would expect it to be subject to the same macro-level processes that impact the system as a whole. On the other hand, back-end sentencing stands apart from the rest of the system—it involves a different set of actors, who operate according to different rules, with limited exposure to public and judicial scrutiny—which suggests that it may not be influenced by the same factors, or perhaps not in the same manner, as other aspects of the criminal justice system.

### **Study goals and hypotheses**

The goal of this study is to fill this gap in the criminological literature by using pooled time-series cross-sectional (TSCS) data to analyze variations in annual, state-level revocation rates from 1978 to 2007—years for which complete and comparable data are available<sup>22</sup>. By extending the study to 2007 (the most recent year for which we might reasonably expect to find complete data), it was hoped that the study may also be able to capture the effects of the economic crisis on parole revocation decisions, as well as potential course-correction decisions made by the states to keep the size of their prison populations in check after the country's imprisonment binge of the 1980s and 1990s.

Specifically, I assess various explanations for state differences in parole revocation rates that echo long-standing conversations about the determinants of criminal justice outcomes more generally. Furthermore, I examine whether the drivers of parole

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<sup>22</sup> 1978 was chosen as the cut-off year because, while 1975 ushered in many significant changes in state-level sentencing and corrections policies, the Bureau of Justice Statistics (BJS) did not start compiling systematic, detailed data on revocation until the mid-80s (National Corrections Reporting Program). Therefore it is difficult to find reliable revocation data sources pre-1978.

revocations have changed over time. The data and methods I use are described in detail in Chapter 4, and the modeling strategy is explained in the next section.

The empirical patterns uncovered by the studies reviewed in Chapter 2 and Chapter 3 suggest that the determinants of criminal justice outcomes are complex. Accordingly, I conduct tests of the following set of hypotheses.

*Symbolic threats*: one of the more widely accepted theories in studies of the rise of mass incarceration is that formal social control in the form of criminalization and incarceration is used as a means to manage populations who present a potential threat to social order. “Social deregulation, the rise of precarious wage work ... and the return of an old-style punitive state go hand in hand,” Wacquant argues, “the invisible ‘hand’ of the casualised labour market finds its counterpart in the ‘iron fist’ of the state which is being redeployed as to check the disorders generated by the diffusion of social insecurity” (2001: 401). Increases in the size of economically marginalized populations should therefore be associated with increases in parole revocation rates (hypothesis 1a). In addition, minority threat theory suggests that the size of minority populations should have an impact on parole revocation rates such that: there should be a non-linear (inverted U-shaped curve) relationship between percentage Black and parole revocation rates (2a); percentage Hispanic should have a positive effect on parole revocation rates (2b); and the effect of percentage Hispanic should be smaller than the effect of percentage Black (hypothesis 2c).

*Political culture*. Based on the number of studies that have uncovered a link between conservative political ideology and harsher stances on punishment, I expect

parole revocation rates to increase under Republican governors (3a), as well as in states with a more conservative citizenry (3b).

*Sentencing structure.* The hydraulic displacement of discretion theory proposes that sentencing reforms have transferred sentencing discretion from the judiciary to the legislative branch of government, which has resulted in harsher punishment and higher incarceration rates. More limited judicial discretion (as measured by a state's sentencing structure and its parole board authority) should also be associated with higher parole revocation rates (4).

*State governance.* Recent scholarship (Barker 2006, 2009) demonstrates that political institutional arrangements and collective agency provide valuable insights into the different types of penal policies and practices that the states have embraced. Barker suggests, for example, that political structures that create greater centralization of political authority in the state tend to produce a “thin democracy” in which decision-makers are insulated from public demands, resulting in more coercive penal regimes. If that is the case, then the index of gubernatorial power, which is a measure of the centralization of political authority in the state, should be positively associated with parole revocation rates (5a). Additionally, civic engagement—the degree to which ordinary citizens get involved in state politics—is likely to influence the nature of the policies created by state political institutions, as well as the extent to which states rely on confinement, by keeping a check on the repressive powers of the state (Barker 2006). Hence states with higher levels of civic engagement should have less coercive penal regimes, and by extension lower parole revocation rates (hypothesis 5b).

*Crime.* Although tests of the impact of crime on incarceration rates have been met with mixed results, one cannot ignore the obvious contribution that crime makes to incarceration rates. Similarly, one would expect that states attempt to address concerns over rising crime rates by cracking down on parole violations and increasing the number of parole revocations (6).

*Practical constraints.* We might also expect a state's ability to implement punitive policies to be tied to its economic health and the availability of human and logistical resources. The smaller the share of corrections in the state budget, the fewer resources can be devoted to the detection and sanctioning of parole violations (hypothesis 7).

To further refine this analysis, I also investigate whether the relationships between these various factors and parole revocation rates are historically contingent. In particular, I expect to find that the effects of economic threats (8a), and percentage Hispanic (8b) on parole revocations become greater over time, while conservative political ideology (9) and crime (10) lose some of their influence.

## **Analyses**

### Descriptive statistics

The descriptive statistics are reported in Chapter 4 (**Error! Reference source not found.**-4.5). Table 6.1 shows the intra-class coefficients (ICCs) for all the continuous variables in the models. The ICC ( $\rho$ ) represents the proportion of the total variance in each variable that is between states. Between-state variance reflects stable differences across states, as opposed to within-state variance, which reflects the degree to which

values of a given variable change over time. Most of the variables in Table 1.1 have very high ICCs, which means that the relative ranking of states on these variables did not change very much over time. For example, 99.5 percent of the variance on percentage black is between states, meaning any change that occurred over time in this variable did not disrupt the differences between states that were essentially the same at all time periods. Since fixed effects models rely on within-state change over time to estimate the effects of covariates, these results cast doubt on this modeling strategy because there is not sufficient within-state variance on most variables.

**Table 6.1 Intraclass correlations (ICCs) for all variables in the models of parole revocations**

Variables	ICC (rho)
Parole revocations	0.8002
Crime (standardized index)	0.7425
Economic threat (standardized index)	0.6698
% Black	0.9949
% Hispanic	0.9196
Citizen ideology	0.7801
Corrections (standardized index)	0.4935
Civic engagement (standardized index)	0.9153
Gubernatorial power	0.6422
Marriage rate	0.8904
Metropolitan population	0.9206
% 18-24 yr-olds	0.1111

Because multicollinearity among predictor variables is often an issue with macrostructural variables, I performed a correlation analysis. The results of this analysis, presented in Table 6.2, show that at -0.66, the strongest bivariate correlation occurred between percentage Black and civic engagement.

## Basic regression results

The first multivariate analyses are reported in Table 6.3. Note that the coefficients are reported as incidence rate ratios (IRR) rather than as logs of expected counts. Because they include both within-state and between-state effects, the coefficients represent the average effect of  $X$  on  $Y$  when  $X$  changes across time and between states by one unit. For ease of interpretation, the expression  $100*(IRR-1)$  tells us the percentage change in the incidence of parole revocation ( $Y$ ) for each unit increase in the independent variable ( $X$ ): for example, the coefficient for civic engagement is 1.30 in Table 6.3, Model 4. It indicates that a one standard deviation increase in civic engagement is associated with a 30 percent increase in parole revocations.

As discussed in Chapter 4, pooled time-series cross-sectional data are typically analyzed using either fixed effects or random effects models (Hsiao 1986; Mundlak 1978; Pindyck and Rubinfeld 1991). Each of the procedures has advantages: for example, estimating with random effects allows for the testing of time-invariant explanatory variables and tends to yield more robust and more efficient results, while fixed effects models ensure that unmeasured effects are not biasing the results. A Hausman test of model specification failed to reject the null hypothesis of “no difference” between the coefficients of the random- and fixed-effects models ( $\chi^2=30.97, p=.078$ ).

**Table 6.2 Pearson's R correlations among covariates, parole revocation models**

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Parole revocations (1)	1.00										
Crime (2)	0.13	1.00									
Economic threat (3)	-0.06	0.15	1.00								
% Black (4)	0.04	0.33	0.29	1.00							
% Hispanic (5)	0.48	0.38	-0.05	-0.13	1.00						
Citizen ideology (6)	0.07	-0.11	-0.31	-0.19	0.00	1.00					
Corrections (7)	0.21	0.34	0.29	0.44	0.32	-0.11	1.00				
Civic engagement (8)	-0.10	-0.38	0.41	-0.66	-0.19	0.23	-0.36	1.00			
Gubernatorial power (9)	-0.06	-0.00	0.09	-0.20	-0.11	0.24	-0.28	0.22	1.00		
Marriage rate (10)	-0.07	0.22	0.03	-0.04	0.07	-0.13	0.08	-0.26	-0.14	1.00	
Metropolitan population (11)	0.28	0.49	0.32	0.24	0.36	0.31	0.40	-0.32	0.12	0.05	1.00

In addition, since the relative size of the standard errors in fixed effects models presents more potential for type I error, I chose to focus the narrative on the results of the random effects models (Table 6.3). This is not to say that the fixed effects coefficients are incorrect. As a matter of fact, the fixed effects models (presented in Table 6.4) and random effects models (presented in Table 6.3) yielded remarkably similar estimates, which demonstrates that the results are robust to the different model specifications.

Since the models use maximum likelihood estimation, the usual goodness-of-fit parameters are not available. Instead, I report the Wald chi-squared and the likelihood-ratio chi-squared statistics, which ideally should both decrease as the models get specified further.

Model 1 in Table 6.3 presents the results from the baseline model. This model includes the demographic control variables (marriage, metropolitan population, and percentage 18-24 year-olds), as well as the measures of symbolic threats. The results confirm that economic and racial threat variables have a non-linear effect on incarceration rates. Specifically, we see from the economic threat coefficients that the effect of economic threats follows a U-shape: the coefficient of the linear term is negative, indicating that parole revocations initially decrease as economic threats increase, but the positive coefficient for the quadratic shows that as levels of economic threat increase further, parole revocations increase as well. This does not support the research hypothesis. Neither is the influence of racial and ethnic threats as anticipated, since these coefficients are negative. States with larger Black populations have lower parole revocation rates. This effect diminishes somewhat when Black populations reach

15 percent, as the modestly smaller coefficient indicates. The results, therefore, confirm a non-linear effect, but show no evidence that it takes the form of an inverted U-shape. Model 2 adds the political explanatory factors (political culture and state governance) to the baseline model. Although it is not significant, the results indicate that the effect (positive) of Republican governor is in the expected direction. However the effects of citizen ideology, civic engagement and gubernatorial power are not. Contrary to what was hypothesized, parole revocations are negatively affected by gubernatorial power, and positively (and significantly, in the case of civic engagement) impacted by citizen ideology and civic engagement. Model 3 tests the effects of sentencing structure. The coefficients for parole board authority and sentencing guidelines are all strongly statistically significant, but they do not support the research hypothesis that greater discretion would be associated with lower parole revocation rates. In fact, the results show precisely the opposite: states whose parole boards have retained full authority have revocation rates 18 percent *higher* than states that have abolished their parole board, for example, while states that have implemented presumptive guidelines (which constrain discretion the most) have revocation rates 17 percent *lower* than states with no sentencing guidelines at all. Model 4 combines the baseline model with the political and sentencing variables. The overall patterns of significance remain unchanged from previous models. Model 5 adds a non-linear effect for time. With the exception of percentage Hispanic, which becomes negative and statistically significant, controlling for time does not alter the overall significance patterns of most variables in the model whose coefficients remain virtually unaffected in both size and direction. This suggests that the effects estimated in previous models were not confounded with general temporal trends across states in parole

revocation rates. Finally crime and corrections are added in Model 6 to produce the full model. Adding these variables last allows us to see whether they confound the effects of other variables in the model. A comparison of the results from Models 5 and 6 shows that the estimates are virtually identical, which indicates that crime and the corrections index measure effects not already captured by other variables.

Core findings from Model 6 show that the associations between crime, symbolic threats, and political factors on the one hand, and parole revocations on the other, are negative for the most part, which fails to support several of the research hypotheses. Thus, while the coefficient for crime fails to achieve statistical significance, it suggests that an increase in crime is associated with lower levels of parole revocations. Similarly, arguments about the effects of economic and racial threats appear unsupported, as the results indicate that greater levels of both types of threats are significantly related to fewer parole revocations. In the case of racial threats, the results show that parole revocations decrease at a slower pace as percentage Black increases over 15 percent. The size of Hispanic populations does not appear to have much of an effect at all. Considering the number of studies that have linked a conservative political ideology with harsher stances on punishment, it is surprising to see here that the effect of citizen ideology on parole revocations is virtually non-existent, and that not only is the effect of Republican governor not significant, but it is also negative. Greater civic engagement, on the other hand, has a strong, positive impact on parole revocations: a one standard deviation increase in this index is associated with a 33 percent increase in parole revocations ( $p < 0.001$ ). This suggests that the degree to which ordinary citizens get

involved in state politics does *not* work to keep a check on the repressive power of the state, contrary to what has been hypothesized here and elsewhere (Barker 2006).

**Table 6.3 MLE negative binomial regression coefficients (t values) from a series of random effects models of parole revocations, 1978-2007<sup>a</sup>**

Variables <sup>b</sup>	(1) Baseline model	(2) Politics	(3) Sentencing	(4) All	(5) All + time	(6) Full model
<i>Symbolic threats</i>						
Economic threat	0.86*** (-5.64)	0.88*** (-5.14)	0.86*** (-5.48)	0.88*** (-4.94)	0.98 (-1.04)	0.97 (-0.88)
Economic threat^2	<b>1.05***</b> (4.18)	<b>1.06***</b> (4.45)	<b>1.05***</b> (4.18)	<b>1.06***</b> (4.44)	<b>1.06***</b> (5.03)	<b>1.05***</b> (4.38)
(ref=0-2% Black)	.	.	.	.	.	.
2-15% Black	<b>0.54***</b> (-8.39)	<b>0.64***</b> (-6.00)	<b>0.50***</b> (-8.74)	<b>0.61***</b> (-6.30)	<b>0.59***</b> (-7.16)	<b>0.66***</b> (-5.54)
Over 15% Black	<b>0.62***</b> (-5.54)	<b>0.81*</b> (-2.36)	<b>0.57***</b> (-6.26)	<b>0.76**</b> (-2.96)	<b>0.70***</b> (-4.72)	<b>0.74**</b> (-3.26)
% Hispanic	0.99 (-1.73)	1.00 (0.27)	<b>0.99*</b> (-2.35)	1.00 (-0.16)	<b>0.99*</b> (-2.39)	1.00 (0.18)
<i>Demographic variables</i>						
Marriage rate	<b>1.01***</b> (6.79)	<b>1.01***</b> (7.94)	<b>1.01***</b> (6.75)	<b>1.02***</b> (7.95)	<b>1.02***</b> (8.42)	<b>1.02***</b> (9.66)
Metropolitan pop	<b>0.98***</b> (-13.32)	<b>0.98***</b> (-12.13)	<b>0.98***</b> (-12.97)	<b>0.98***</b> (-11.72)	<b>0.98***</b> (-12.18)	<b>0.98***</b> (-10.48)
% 18-24 yr-olds	<b>0.95***</b> (-4.11)	<b>0.97*</b> (-2.51)	<b>0.94**</b> (-5.06)	<b>0.96***</b> (-3.51)	<b>1.15**</b> (6.79)	<b>1.17***</b> (7.52)
<i>Politics</i>						
Citizen ideology		1.00 (1.25)		1.00 (1.72)	1.00 (0.87)	1.00 (-0.51)
(ref=Democratic gov)		.		.	.	.
Republican governor		1.00 (-0.06)		0.98 (-0.74)	0.99 (-0.62)	0.99 (-0.26)
Other governor		1.12 (0.99)		1.11 (0.93)	1.13 (1.06)	1.05 (0.49)
Civic engagement		<b>1.29***</b> (7.01)		<b>1.30***</b> (7.24)	<b>1.33***</b> (8.16)	<b>1.33***</b> (8.17)
Gubernatorial power		0.96 (-1.18)		0.97 (-0.93)	0.98 (-0.72)	1.03 (0.78)
<i>Sentencing structure</i>						
(ref=No PB <sup>c</sup> authority)						
Limited PB authority			<b>1.33***</b> (4.39)	<b>1.36***</b> (4.76)	<b>1.45***</b> (5.75)	<b>1.33***</b> (4.38)
Full PB authority			<b>1.18***</b> (3.29)	<b>1.20***</b> (3.61)	<b>1.23***</b> (4.14)	<b>1.22***</b> (4.03)
(ref=No guidelines)						
Voluntary guidelines			<b>1.24***</b> (4.10)	<b>1.24***</b> (4.10)	<b>1.18**</b> (2.60)	<b>1.20***</b> (3.59)

Variables <sup>b</sup>	(1) Baseline model	(2) Politics	(3) Sentencing	(4) All	(5) All + time	(6) Full model
Presumptive guidelines			<b>0.83</b> ** (-2.78)	<b>0.84</b> ** (-2.69)	<b>0.79</b> *** (-3.72)	<b>0.77</b> *** (-3.76)
Time					<b>1.05</b> *** (10.12)	<b>1.06</b> *** (11.62)
Time^2					<b>1.00</b> *** (-9.54)	<b>1.00</b> *** (-11.09)
Crime						0.98 (-1.08)
Corrections						<b>0.87</b> *** (-6.13)
N	1294	1294	1294	1294	1294	1294
r	1.72	1.71	1.72	1.73	1.73	1.62
s	196.65	188.65	189.04	183.71	163.66	148.55
Wald chi2	498.83***	566.77***	561.07***	641.07***	691.70***	780.92***
Degrees of freedom	8.00	13.00	12.00	17.00	19.00	21.00
Likelihood ratio chi2	2358.20***	2059.20***	1576.93***	1431.11***	1391.17***	1341.29***

<sup>a</sup> Coefficients are reported as incidence rate ratios.

<sup>b</sup> All variables are lagged by one year.

<sup>c</sup> PB: parole board

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

**Table 6.4 MLE negative binomial regression coefficients (t values) from a series of fixed effects models of parole revocations, 1978-2007<sup>a</sup>**

Variables <sup>b</sup>	(1) Baseline model	(2) Politics	(3) Sentencing	(4) All	(5) All + time	(6) Full model
<i>Symbolic threats</i>						
Economic threat	0.85*** (-5.91)	0.87*** (-5.51)	0.85*** (-5.80)	0.87*** (-5.39)	0.97 (-1.04)	0.97 (-0.99)
Economic threat^2	<b>1.05***</b> (4.15)	<b>1.06***</b> (4.40)	<b>1.05***</b> (4.20)	<b>1.06***</b> (4.45)	<b>1.06***</b> (5.13)	<b>1.05***</b> (4.34)
(ref=0-2% Black)	.	.	.	.	.	.
2-15% Black	<b>0.50***</b> (-9.19)	<b>0.61***</b> (-6.80)	<b>0.47***</b> (-9.57)	<b>0.57***</b> (-7.14)	<b>0.58***</b> (-7.16)	<b>0.61***</b> (-6.47)
Over 15% Black	<b>0.59***</b> (-6.14)	<b>0.76**</b> (-3.02)	<b>0.53***</b> (-6.89)	<b>0.71***</b> (-3.68)	<b>0.64***</b> (-4.72)	<b>0.68***</b> (-4.14)
% Hispanic	0.99 (-1.90)	1.00 (-0.01)	<b>0.99*</b> (-2.54)	1.00 (-0.44)	<b>0.99*</b> (-2.39)	1.00 (-0.29)
<i>Demographic variables</i>						
Marriage rate	<b>1.01***</b> (6.73)	<b>1.02***</b> (7.83)	<b>1.01***</b> (6.67)	<b>1.02***</b> (7.81)	<b>1.02***</b> (8.42)	<b>1.02***</b> (9.57)
Metropolitan pop	0.98*** (-14.38)	<b>0.98***</b> (-13.15)	<b>0.98***</b> (-13.79)	<b>0.98***</b> (-12.51)	<b>0.98***</b> (-12.18)	<b>0.98***</b> (-11.18)
% 18-24 yr-olds	<b>0.95***</b> (-4.08)	<b>0.97*</b> (-2.38)	<b>0.94***</b> (-5.07)	<b>0.96***</b> (-3.42)	<b>1.15***</b> (6.79)	<b>1.17***</b> (7.71)
<i>Politics</i>						
Citizen ideology		1.00 (1.39)		1.00 (1.81)	1.00 (0.87)	1.00 (-0.47)
(ref=Democratic gov)		.		.	.	.
Republican governor		1.00 (0.13)		0.99 (-0.63)	0.99 (-0.62)	1.00 (-0.18)
Other governor		1.14 (1.18)		1.13 (1.09)	1.12 (1.06)	1.07 (0.62)
Civic engagement		<b>1.30***</b> (7.01)		<b>1.31***</b> (7.22)	<b>1.34***</b> (8.16)	<b>1.34***</b> (8.12)
Gubernatorial power		0.96 (-1.33)		0.97 (-1.09)	0.98 (-0.72)	1.02 (0.70)
<i>Sentencing structure</i>						
(ref=No PB <sup>c</sup> authority)			.	.	.	.
Limited PB authority			<b>1.32***</b> (4.28)	<b>1.35***</b> (4.62)	<b>1.44***</b> (5.75)	<b>1.33***</b> (4.33)
Full PB authority			<b>1.18**</b> (3.18)	<b>1.19**</b> (3.47)	<b>1.23***</b> (4.14)	<b>1.23***</b> (4.04)
(ref=No guidelines)			.	.	.	.
Voluntary guidelines			<b>1.23***</b> (3.80)	<b>1.22***</b> (3.76)	<b>1.14**</b> (2.60)	<b>1.18**</b> (3.24)

Variables <sup>b</sup>	(1) Baseline model	(2) Politics	(3) Sentencing	(4) All	(5) All + time	(6) Full model
Presumptive guidelines			<b>0.82<sup>**</sup></b> (-3.03)	<b>0.82<sup>**</sup></b> (-2.93)	<b>0.77<sup>***</sup></b> (-3.72)	<b>0.75<sup>***</sup></b> (-4.10)
Time					<b>1.05<sup>***</sup></b> (10.12)	<b>1.06<sup>***</sup></b> (11.95)
Time^2					<b>1.00<sup>***</sup></b> (-9.54)	<b>1.00<sup>***</sup></b> (-11.09)
Crime						0.98 (-1.13)
Corrections						<b>0.87<sup>***</sup></b> (-6.07)
N	1294	1294	1294	1294	1294	1294
Wald chi2	584.03 <sup>***</sup>	665.14 <sup>***</sup>	650.61 <sup>***</sup>	743.15 <sup>***</sup>	839.79 <sup>***</sup>	893.54 <sup>***</sup>
Degrees of freedom	8.00	13.00	12.00	17.00	19.00	21.00

<sup>a</sup> Coefficients are reported as incidence rate ratios.

<sup>b</sup> All variables are lagged by one year.

<sup>c</sup> PB: parole board

<sup>\*</sup>  $p < 0.05$ , <sup>\*\*</sup>  $p < 0.01$ , <sup>\*\*\*</sup>  $p < 0.001$

The analysis of the sentencing covariates yields unexpected results as well. Indeed it was hypothesized that as discretion becomes more limited, parole revocations would increase. This does not appear to be the case since greater parole board authority (i.e. more discretion) is related to increases in parole revocations (coefficients significant at  $p < 0.001$ ). Compared to states with no sentencing guidelines, voluntary guidelines are associated with an increase in parole revocations also, while the effect of presumptive guidelines (which presumably provide the most constraints on judicial discretion) is negative. Finally, there does appear to be a negative relationship between the weight of a state's correctional system (measured by the corrections index) and parole revocations.

#### Estimating period-specific relationships

The previous analyses show that several variables have a strong impact on parole revocations. However, by estimating a single coefficient for the entire 1978 to 2007 period, these models assume that the strength of these relationships is constant and stable over time, which is unlikely to be the case; the factors that ignited the prison boom in the 1970s and 1980s are not the same as the factors that sustained its growth in the 1990s (Blumstein and Beck 1999, 2005; Pfaff 2009; Stemen 2005), which are themselves different from those that explain the recent decarceration trend. Similarly, while the states have experienced significant growth in parole revocation rates over the last 30 years, this growth has not been uniform over time, and it is doubtful that the determinants of parole revocations in the 1980s are the same as the determinants of parole revocations in the 2000s. In particular, I expect to find significant differences between the last decade and the first two decades of the period, which may be due to the impact of the

recent economic crisis. To explore this possibility, I divide the study into three time periods (1978-1988, 1989-1998, 1999-2007) corresponding to three phases in the growth of parole revocation rates, and I re-estimate the full model for each time period. The results of these models, which appear in Table 6.5, provide indicate that the factors responsible for the initial increase in parole revocation rates are not the same as those that have sustained this trend.

Specifically, the models present inconsistent support for symbolic threat arguments. Economic and racial threats, for example, have an important impact on revocation rates during the 1980s; the coefficients for these variables are statistically significant ( $p < 0.05$  and  $p < 0.01$ , respectively). However, they do not have the anticipated effect on parole revocation. As the first model shows, a one-unit/standard deviation increase in the threat presented by economically marginalized populations is associated with an 11 percent decrease in revocation rates. This effect diminishes in the 1990s, and the relationship reverses itself in the 2000s, when economic threat becomes positively related to parole revocations levels in the states. This coefficient is not statistically significant however. The negative relationship between racial threats and parole revocation rates carries through all three periods, but it is statistically significant only during the 1980s, when states where between 2 and 15 percent of the population is Black have 45 percent lower parole revocation rates compared to states with very small (0 to 2 percent) Black populations ( $p < 0.01$ ). In contrast, states with larger Hispanic populations have higher incarceration rates. Percentage Hispanic becomes negatively associated with imprisonment during the 1990s, but the coefficient fails to achieve statistical significance. The relationship becomes positive again and significant during the 2000s. Therefore the

research hypothesis concerning the effect of percentage Hispanic is supported only in the third period. Surprisingly, political culture factors do not appear to be significant drivers of parole revocations, regardless of the period. States with a more liberal citizenry have higher levels of parole revocations throughout the period, but the coefficient is very small and not statistically significant. The relationship between Republican governor and parole revocations, positive through the 1980-90s (but significant only in the 1980s), becomes negative in the 2000s, which supports the hypothesis that partisan differences in crime policy decrease or even disappear entirely over time as both parties compete to be seen as tough-on-crime in order to win elections. For the most part, the results concerning sentencing factors are not statistically significant. Presumptive guidelines have a strong influence on parole revocations in the 1980s and 90s, but become non-significant in the 2000s. Initially they are associated with lower parole revocations rates: in the 1980s, presumptive guidelines states have 54% ( $p < 0.001$ ) lower parole revocation rates than states with no sentencing guidelines. However in the 1990s they have 34% ( $p < 0.01$ ) higher levels of revocations. The effect becomes negative again during the last period, but this coefficient is not statistically significant. Just as they were in the general model discussed earlier, voluntary guidelines states are consistently associated with more parole revocations compared to states that have no guidelines in the period-specific models as well, but these coefficients fail to reach statistical significance. Greater parole board authority is associated with a decrease in parole revocations only in the 1980s; thereafter the relationship becomes positive. These coefficients are not statistically significant either however. Contrary to what was predicted the effect of civic engagement is positive throughout the period, and this factor becomes a strong predictor

of parole revocations beginning in the 1990s. The relationship between crime and parole revocations is negative in all periods, but it is strongest and significant only during the 1980s, when a one standard deviation increase in the crime index was associated with a 15 percent decrease in parole revocations.

To put it another way, the results show that, in the 1980s, parole revocations were driven by economic and racial threats, partisan politics, sentencing factors, and crime. However, with the exception of Republican governor, none of the coefficients' signs for these variables are in the expected direction. Instead the results show that economic threats, percentage Black, crime, and structured sentencing had a moderating effect on parole revocations during this period. The picture changes in the 1990s; results for this period are all non-significant, with the exception of presumptive guidelines and civic engagement, both positively associated with parole revocation levels. The last model indicates that the major determinants of parole revocations over the last few years have been ethnic threats and civic engagement.

## **Discussion and wider implications**

### Summary of main findings

The goal of this paper was to examine whether several factors that have been shown to drive incarceration rates exert an influence on state parole revocations. In the absence of a theoretical framework from which to understand variations in parole revocation rates, major findings from the criminological literature on the prison boom were used to develop and test a series of hypotheses using thirty years of aggregate data on all fifty American states.

**Table 6.5 MLE negative binomial regression coefficients (t values) from a series of random effects models of parole revocations stratified by time period, 1978-2007**

Variables	(1) 1978-1988	(2) 1989-1998	(3) 1999-2007
<i>Symbolic threats</i>			
Economic threat	<b>0.89</b> <sup>*</sup> (-2.27)	0.94 (-1.31)	1.05 (1.02)
(ref=0-2% Black)	.	.	.
2-15% Black	<b>0.55</b> <sup>**</sup> (-3.25)	0.90 (-0.66)	0.83 (-1.83)
Over 15% Black	0.71 (-1.68)	1.00 (-0.02)	0.86 (-1.03)
% Hispanic	1.02 (1.87)	0.99 (-0.73)	<b>1.01</b> <sup>*</sup> (1.97)
<i>Demographic variables</i>			
Marriage rate	<b>1.01</b> <sup>***</sup> (4.11)	<b>1.01</b> <sup>**</sup> (3.18)	<b>1.02</b> <sup>***</sup> (3.98)
Metropolitan pop	<b>0.99</b> <sup>**</sup> (-2.85)	<b>0.96</b> <sup>***</sup> (-8.94)	<b>0.99</b> <sup>***</sup> (-3.99)
% 18-24 yr-olds	<b>0.85</b> <sup>***</sup> (-5.05)	0.96 (-1.35)	<b>1.14</b> <sup>***</sup> (3.82)
<i>Politics</i>			
Citizen ideology	1.00 (-0.13)	1.00 (0.58)	1.00 (-0.93)
(ref=Democratic gov.)	.	.	.
Republican governor	<b>1.13</b> <sup>**</sup> (3.27)	1.03 (0.76)	1.00 (-0.03)
Other governor	0.97 (-0.04)	0.88 (-0.93)	1.05 (0.22)
Civic engagement	1.09 (1.34)	<b>1.27</b> <sup>***</sup> (3.99)	<b>1.26</b> <sup>***</sup> (4.86)
Gubernatorial power	1.09 (1.21)	0.99 (-0.15)	0.92 (-1.14)
<i>Sentencing structure</i>			
(ref=No PB authority)	.	.	.
Limited PB authority	1.14 (0.41)	1.27 (1.85)	1.23 (1.63)
Full PB authority	0.97 (-0.21)	1.03 (0.36)	1.22 (1.86)
(ref=No guidelines)	.	.	.
Voluntary guidelines	1.16 (1.57)	1.09 (0.92)	1.03 (0.23)
Presumptive guid.	<b>0.46</b> <sup>***</sup> (-5.77)	<b>1.34</b> <sup>**</sup> (2.66)	0.81 (-1.39)
Crime	<b>0.85</b> <sup>***</sup> (-3.32)	0.98 (-0.55)	0.97 (-0.47)
Corrections	1.14 (1.89)	1.04 (1.01)	0.99 (-0.19)
N	417	483	394
r	2.25	1.11	2.55
s	88.10	80.26	165.14
Wald chi2	268.45 <sup>***</sup>	267.38 <sup>***</sup>	112.81 <sup>***</sup>
Degrees of freedom	18.00	18.00	18.00
Likelihood ratio chi2	347.98 <sup>***</sup>	407.80 <sup>***</sup>	513.18 <sup>***</sup>

<sup>a</sup> Coefficients are reported as incidence rate ratios.

<sup>b</sup> All variables are lagged by one year.

<sup>c</sup> PB: parole board

\*  $p < 0.05$ , \*\*  $p < 0.01$ , \*\*\*  $p < 0.001$

The main findings can be summarized as follows. Several factors that have been shown in previous research to have an influence on incarceration rates or other dimensions of criminal justice in the US, also have an impact on parole revocation rates. The results of the full model (Model 6, Table 6.3) show that economic and racial threats, citizen engagement, sentencing structure, and corrections spending are all significantly associated with variations in parole revocations. Moreover, these variables seem to influence parole revocation rates in much the same way that they do incarceration rates, though the results from the time-stratified models complicate the story. These models provide only a very rough framework to understand how the social, political, cultural and structural underpinnings of the contemporary use of punishment have changed over the last 30-40 years, but they strongly suggest that parole revocations are driven by historically contingent dynamics.

Let us consider crime rates. The negative relationship between crime rates and parole revocations casts doubt on the argument that states use parole revocation as a means of increasing social control and addressing concerns over rising crime rates. Another finding of this study—that the number of parole revocations decreases as the weight of a state’s correctional system (as measured by its incarceration rate and the proportion of state resources devoted to corrections) increases—provides a possible explanation for this unexpected relationship. Indeed, although corrections spending increased dramatically in the 1980s and 1990s and became an ever bigger piece of state budget pies (Stucky et al. 2007), incarceration rates increased at a faster pace still, taxing law enforcement and correctional resources and leaving states struggling to figure out how to handle overflowing facilities. Faced with the choice to devote limited resources

to either reining in crime rates or cracking down on parole violations, it is possible that states opted to focus law enforcement resources on addressing new crimes rather than parole violations and to use whatever scarce correctional resources are available to house “more dangerous” offenders as opposed to parole violators who failed to abide by the conditions of their release but did not commit new crimes.

Also puzzling are the findings for threat effects. According to the results, neither economic threat, nor percentage Hispanic (although it is positive, the coefficient for ethnic threat is not significant and virtually indistinguishable from zero), are significant factors in variation in parole revocation rates. However, there is strong evidence that racial threats are associated with lower levels of parole revocations. As discussed in Chapter 2, it is not unusual for studies to find that race affects criminal justice outcomes but ethnicity does not. The two groups enjoy a different status in the US racial and ethnic hierarchy, where “Blacks have long been perceived as so physically and culturally different from Whites to warrant a separate ‘racial’ category both in the public mind and the legal sphere” (Dixon 2006, 2184; see also Muhammad 2010) but Hispanics are perceived as culturally assimilated, and therefore less threatening than Blacks. The perception that this group constitutes a lesser “threat” could be compounded by the fact that, until recently, Hispanics represented a small minority of the US population. This is changing rapidly as this demographic is increasing quickly. Perhaps the significant, positive relationship between percentage Hispanic and parole revocation rates in the first decade of the twenty-first century is evidence that Hispanics are being perceived as a greater threat than they used to be.

But while the results of this study provide some support for the contention that the size of minority populations matters, the fact that percentage Black has a *negative* impact on parole revocations seems to contradict the theoretical basis for the threat argument that criminal justice policies are used to contain social groups (in this case, minorities) perceived as threatening to established structures of power and that, therefore, punitive reactions are likely to increase with the size of minority populations. This clearly is not the case here. Neither do the results provide evidence of the inverted U-shaped relationship between minority populations and harsh punishments that some studies have found (Kane 2003; Keen and Jacobs 2009; Yates and Fording 2005). Authors typically explain this non-linear relationship by suggesting that racial threat is tied to voting power, so that once the African-American demographic becomes a large enough voting segment it is able to influence lawmakers and weaken the policies that produce racial disparities in the criminal justice system. Here however, the negative effect of percentage Black on parole revocations *decreases* as percentage Black increases over 15 percent. If the political weight of this demographic group is indeed a factor, the results suggest that increasing the proportion of the state population that is Black over a certain threshold yields diminishing marginal returns in parole revocation rates.

For all the speculation in the criminological literature about the influence of a state's political culture on criminal justice policies and state punitive reactions, political factors do not appear to be important drivers of parole revocations. The results show that neither citizen ideology, nor Republican governor, has much impact on parole revocations. There is a negative relationship between Republican governor and parole revocation levels, but this variable's coefficient is not statistically significant. This, in

itself, is not all that surprising; multiple studies have failed to find a relationship between party of governor and several aspects of criminal justice, most likely because differences between Republican and Democratic governors have narrowed over the last forty years as both parties have been compelled to respond to public pressures to be “tough on crime” by backing strong crime control measures. The time-stratified models indicate that this might be the case, as Republican governors are associated with increases in parole revocation rates during the 1980s and 1990s, and a decrease in the 2000s. However, only in the 1980s does this coefficient reach statistical significance.

The findings regarding the influence of state governance are more interesting. Barker (2006) was the first to draw researchers’ attention to the importance of this factor. She contends that in order to understand why American states use punishment and confinement differently, one must look to differences in the democratic process—i.e. to structures of state governance and practices of civic engagement. The findings of her comparative study of the states of California, New York, and Washington, indicate that widespread civic engagement tends to moderate states’ use of harsh punishments, and that the centralization of political authority works to insulate the state from public demands and to lead to a differentiated use of punishment. My results do not support her arguments. They show that an increase in the centralization of political authority (as measured by the index of gubernatorial power) is associated with an increase in parole revocations. However this relationship is not statistically significant. Civic engagement, on the other hand, is a significant factor with a strong, positive impact on parole revocations: a one standard deviation increase in civic engagement is associated with a 33 percent increase in parole revocation rates—one of the largest coefficients in the model.

The sign of this coefficient contradicts Barker's assertion about the moderating role of civic engagement on state's punitive practices but it is difficult to know what to make of these findings. It is possible that Barker's sample of three cases is too small to draw accurate conclusions about the role of civic engagement, or that the effects of civic engagement are mediated by other factors, such as citizen political ideology.

Nevertheless, in spite of these differences, the results suggest that Barker is correct in drawing our attention to the importance of exploring differences in state democratic processes and coming up with better models of the influence of state governance on criminal justice outcomes. Such work is empirically beyond the scope of the current study but is likely necessary to fully understand states' differentiated use of penal sanctioning.

But one of the most significant findings from the initial models concerns the influence of a state's sentencing structure on parole revocations. Not only are the coefficients for these variables strongly significant, but they also indicate that these factors have a large impact (relative to other covariates in the model) on the dependent variable. Perhaps because attacks on the indeterminate system were accompanied by calls to impose harsher penalties, many have been concerned that sentencing reforms (such as sentencing guidelines, mandatory sentences, truth-in-sentencing laws, or the abolition of parole boards) have contributed to the "prison boom" by curtailing the authority of judges and parole boards to decide how long offenders should spend behind bars. By placing discretion in the hands of the legislature instead, critics argue, sentencing decisions are more likely to be dictated by public demands for harsh punishments, including stricter enforcement of parole conditions. But generally

speaking, this study found the opposite to be true: less structure/more discretion (as measured by the degree of authority of the parole board and the type of sentencing guidelines implemented in a state) is actually associated with higher levels of parole revocations. Although this study cannot provide a good explanation for this, one could speculate that where they do have the authority, parole board members (whose primary responsibility it is to weigh offender dangerousness against the safety of the community) tend to adopt conservative revocation strategies to minimize the risk to the community and to avoid making headlines for failing to revoke a parolee who goes on to commit a heinous crime. This argument is consistent with studies that found that discretionary parole is associated with longer time served, even when controlling for offense seriousness, prior record, age, gender and crime type (Hughes, Wilson and Beck 2001; Stivers 2001). The time-stratified models also indicate that parole boards may have become more risk-averse over time, perhaps a reaction to being faulted for being overly lenient, or in response to the general move toward harsher punishment practices: in the 1980s greater parole board authority is associated with lower parole revocation rates, but the relationship changes direction in subsequent decades. Overall, these results suggest that limiting enactments, in the form of sentencing guidelines or limits to parole boards' authority, may be a moderating force in states' use of confinement.

### Wider implications

As the first attempt to build a theoretical framework for understanding the use of parole revocation as a sanction in the states, this project raises more questions than it answers. From a theoretical perspective, the findings are both consistent with, and

divergent from, the general prison boom literature. On the one hand, results demonstrate the complex, historically contingent, nature of penal policymaking and support the continuing utility of considering those factors identified in the literature as significant drivers of criminal punishment practices in late modern American society. On the other hand (and more importantly perhaps), this study suggests that the framework used to explain incarceration may not be adequate to identify the factors most salient to parole revocation. The analyses thus help us to identify three broad lines of inquiry that require further empirical investigation.

While it can safely be assumed that parole policies and practices are subjected to the same macro-level social, political, and economic pressures that have shaped and transformed the system as a whole, what the findings of this study point to, is that it will also be important to explore more carefully the mechanisms linking macro-level determinants to parole revocations, including any dynamic and interactive effects associated with the broader patterns identified in this study. The impact of state governance, for instance, may be shaped by the interactive effects of state structures with social organizations, political parties and political institutions. Its effects, therefore, may be different in the presence of different actors. Also, better models of punishment are needed that effectively integrate regional differences because there is evidence that variations in penal policies and practices can only be understood in the context of regional social, political, economic and cultural conditions. Finally, future research on parole outcomes could benefit from improvements to research design and data quality. As the first step toward building a framework for understanding the use of parole revocation as a punitive sanction, this study used very general social-demographic

variables; but data more specific to parole—such as administrative characteristics of states’ parole organizations, or parole policies—as well as other types of data—such as interviews with parolees and other actors (parole agents, parole board members) involved—would generate more insight and allow for a richer analysis by highlighting issues of discretion and sanctioning that are difficult to capture through socio-demographic measures or quantitative analyses of official statistics alone. Studies of parole in general, and parole revocation in particular, could benefit from improvements to data quality as well. Scholars have neglected to pay sufficient attention to back-end sentencing—the profound changes in the way that the parole system was managed, how it responded to the same get-tough impulses affecting every other aspect of criminal justice policy, and the relationship between parole revocations and the growth of the prison system—and this neglect is apparent in the limited range and poor quality of the data that are available, even from such official sources as the Bureau of Justice Statistics.

This study also suggests a policy implication that flows from the findings regarding the effects of the sentencing structure variables. As explained in an earlier section of this paper, the popular “hydraulic displacement of discretion” argument that reducing the exercise of discretion at any point in criminal case processing will translate into more discretion exercised at other decision points in the justice system has generated both cynicism towards the potential effectiveness of policies designed to reduce disparities in the treatment of suspects/offenders by legal agents, and concerns about the adverse effects of these policies, which have been said to dehumanize the sentencing process and increase commitment and incarceration rates. This study cannot speak to the former, but does provide some evidence that concerns about the latter may be unfounded.

Indeed the analyses reveal that any displacement of discretion (through the implementation of structured sentencing and the limitation of parole boards' authority) from the judiciary to the legislature, did not result in higher parole revocation rates. As a matter of fact, curbing judicial discretion seems to be associated with *lower* parole revocation rates. This suggests that we need to revisit the criticisms leveled against grid-based sentencing schemes because they may present a valuable opportunity to achieve meaningful long-term changes in punishment patterns.

## **CHAPTER 7 CONCLUSION**

Forty years after the country embarked on a massive overhaul of its penal philosophy and practices, American penal sanctioning is now “fragmented, multidimensional, and often contradictory” (Barker 2009: 6) and scholars still struggle to understand the factors behind the substantial amount of variation in the use of imprisonment among the fifty states. Therefore the goal of this dissertation was to investigate differences in the scope of penal sanctioning in the American states, with a particular focus on examining variation in state incarceration rates and state parole revocation rates over a thirty-year period (1978-2007). In so doing, this project (which belongs in the tradition of macro-sociological research that uses shifts in penology, political economy, demography and policy to analyze the country’s imprisonment binge) offers a window into the changing historical understanding of the philosophy, the form, and the function of punishment in the United States. In addition, the research presented here makes three distinct contributions to the literature. First it expands the analytical time frame and broadens the scope of theoretical explanations. Second, it examines how the determinants of sentencing practices have changed over time. Finally, it develops a framework for analyzing variations in state parole revocation rates—the only study to date to attempt to shed some light on this crucial, yet overlooked, criminal justice steering mechanism.

Results confirm that penal sanctioning, both at the front end and at the back end of the correctional system, is “overdetermined” (Garland 1990, 2001): state variation in incarceration rates and parole revocation rates is explained by a variety of factors ranging from differences in crime and social, political, economic and cultural conditions, to criminal justice policies—forces that “built upon one another to produce the flow of prisoners into custody” (Garland 1990: 6) and create the patchwork of punishment practices that we see today. States have responded to similar policy problems with idiosyncratic policy solutions shaped by local social, political, economic and cultural conditions. The result is the broad variation in the use of imprisonment that we see today among the states. As I anticipated, the findings also demonstrate that the influence of these factors on penal sanctioning is not constant over time, and that the determinants of incarceration rates and parole revocation rates are historically contingent. These relationships must be examined within their historical context if we are to understand paths and patterns of carceral state development across the country.

But perhaps the most surprising finding to emerge from this project is that, while both front-end sentencing (court sentences) and back-end sentencing (parole revocations) are affected by the same forces, the ways in which these factors influence back end sentencing appear to be unique to back end sentencing. It is beyond the scope of this study to explain why this is the case but this finding demonstrates that, unless we devote more research attention to this crucial but overlooked component of the criminal justice system, our knowledge of penal sanctioning in the US will remain incomplete and our models, flawed and misleading.

An important limitation of macro-sociological research is that it privileges macrosociological patterns over microsociological experiences, and structural changes over the everyday practices of situated actors, and therefore assumes that social phenomena such as mass incarceration are the result of a “top down” process. While such an approach provides valuable insights into the size and growth of prison populations, it understates the significance of other, micro-level factors (organizational constraints, for example, or the actions of local decision-makers—court actors, parole agents, . . .—and interest groups) that shape punishment practices from the “bottom up.” This study’s finding that civic engagement is one of the factors most consistently associated with changes in incarceration rates and parole revocation rates testifies to the importance of this factor, but the results are difficult to explain because democratic theory is theoretically and empirically underdeveloped in the criminal justice literature. Building better models of civic engagement and participatory democracy that distinguish between constructive citizen involvement that takes responsibility for public problems, and mass politics mobilized superficially around hot-button issues would not only help explain variations in the contemporary use of penal sanctioning in the states, but also suggest possible ways to harness citizen participation to address the country’s penal overindulgence from the ground up.

## APPENDIX

### List of variables and their sources

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<b>Dependent variables</b>	<b>Source</b>
rev_rt	Parole revocation rate—number of parolees returned to incarceration per 100 parolees under community supervision (Bureau of Justice Statistics: Correctional Populations series, Prisoners series, Probation and Parole in the US series, and Uniform Parole Reports, as well as unpublished data from the Annual Parole Survey series)
 <b>Independent variables</b>	
<i>Crime, imprisonment, and releases</i>	
violcr_rt	Reported violent crimes per 100,000 resident population (FBI, Uniform Crime Reports [UCR], prepared by the National Archive of Criminal Justice Data)
propcr_rt	Reported property crimes per 100,000 resident population (FBI, Uniform Crime Reports [UCR], prepared by the National Archive of Criminal Justice Data)
incarc	Incarceration rate, per 100,000 residents (BJS, National Prisoner Statistics series)
 <i>Symbolic threats</i>	
pct_black	Percentage population African-American (U.S. Census Bureau, Population Division; Centers for Disease Control and Prevention (CDC), National Center for Health Statistics (NCHS), Bridged-Race Population Estimates)
pct_hisp	Percentage population Hispanic (all races) (U.S. Census Bureau, Population Division; Centers for Disease Control and Prevention (CDC), National Center for Health Statistics (NCHS), Bridged-Race Population Estimates)
pct_empl	Percentage employed (Bureau of Labor Statistics, Employment status of the civilian non-institutional population, 1976 to 2009 annual averages, <a href="http://www.bls.gov/lau/rdscnp16.htm">http://www.bls.gov/lau/rdscnp16.htm</a> )
pct_pov	Percentage of the population living below the poverty level (US Census Bureau, Current Population Survey, Annual Social and Economic Supplements)
 <i>Public opinion and partisan politics</i>	
cit_ideal	Citizen ideology index (0 = conservative, 100 = liberal) (Berry, Ringquist, Fording and Hanson, 1998; Fording, 2007, Most Recently Updated Citizen and Government Ideology Data, 1960-2008, <a href="http://www.uky.edu/~rford/stateideology.html">http://www.uky.edu/~rford/stateideology.html</a> )
gov_party	Party of Governor (0 = Democrat, 1 = Republican, 2 = other) (Carl Klarner,

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*Centralization*

gub\_pwr Index of Governors' Institutional Powers (5-point scale, 5 indicating greater power) (Beyle 2004, <http://www.unc.edu/~beyle/gubnewpwr.html>)

*Civic engagement*

soc\_cap State social capital score (Putnam 2000)

voter\_turn Voter turnout rates, 1980-2006 (McDonald, United States Elections Project, [http://elections.gmu.edu/voter\\_turnout.htm](http://elections.gmu.edu/voter_turnout.htm) )

*Geography*

region Census regions, 4 categories: 1 = Northeast, 2 = Midwest, 3 = South, 4 = West

*Sentencing structure*

par\_abo Parole board abolition (0 = no parole board, 1= parole board) (Stemen 2005)

pb\_auth Parole board authority (0 = none, 1 = very limited, 2 = limited, 3 = full) (Association of Paroling Authorities International, Annual Paroling Authorities Surveys)

pres\_sent Presumptive sentencing (0 = no, 1 = yes) (Stemen 2005)

sent\_guid Sentencing guidelines (0 = none, 1 = voluntary, 2 = presumptive) (Stemen 2005)

*Economy*

All data adjusted to 2007 constant dollars using the Consumer-Production Index (U.S. Census Bureau, Annual Survey of State Government Finances and Census of Governments)

corr\_sp Corrections expenditures per capita

educ\_sp Education expenditures per capita

welf\_sp Welfare expenditures per capita

tot\_sp Total expenditures per capita

st\_rev State revenues per capita

pers\_inc Personal income per capita

*Prison crowding*

crowd Overcrowding (0 = no, 1 = yes) (BJS, various reports)

*Demographic control variables*

st\_pop State population (US Census Bureau, Population Division)

pct\_metro Percentage of the state's population living in metropolitan areas (Statistical

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	Abstracts and Census Bureau, Population Division)
mar_rt	Number of marriages per 1,000 persons (Statistical Abstracts and U.S. National Center for Health Statistics, National Vital Statistics Reports)
youth	Percentage of the state population between the ages of 18 and 24 (US Census Bureau, Population Division)

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