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Testing Orthodox Utilitarian and Extrajudical Determinants of Incarceration in the U.S. at the State-Level, 1980-2005

Pavel V. Vasiliev
University of Nevada, Las Vegas, chamberlen77@yahoo.com

TESTING ORTHODOX UTILITARIAN AND EXTRAJUDICIAL DETERMINANTS

OF INCARCERATION IN THE U.S. AT THE STATE-LEVEL, 1980 - 2005

By

Pavel V. Vasiliev

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Pavel V. Vasiliev

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Doctor of Philosophy - Sociology
Department of Sociology

Shannon Monnat, Ph.D., Committee Chair

David Dickens, Ph.D., Committee Member

Andrew Spivak, Ph.D., Committee Member

Bo Bernhard, Ph.D., Committee Member

Randall Shelden, Ph.D., Graduate College Representative

Kathryn Hausbeck Korgan, Ph.D., Interim Dean of the Graduate College

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ABSTRACT

This project is a theory-driven secondary data analysis of state-level incarceration trends in the U.S. between 1980 and 2005. I replicate and advance Smith's (2004) study of the relationship between the socioeconomic, demographic, political, electoral, and criminal justice factors and incarceration rates at the state level. The purpose of this project is to determine the empirical validity of the major explanations of the incarceration trends in the U.S. I advance Smith's (2004) study using important novel elements. First, I extend the scrutinized historic period by a decade by compiling time-series data for 1980-2005. Second, I employ a more sophisticated analytic technique by utilizing multilevel linear models designed to control for repeated measures of state-level data. Third, I include the measures of partisan state government control and district electoral vulnerability, utilizing the Ranney index (1965; 1976) and Holbrook Van Dunk (1993) measure. The major finding of this project is the lingering association between the percent of state residents that are African American and incarceration rates net of violent crime and socioeconomic disadvantage. Results of hypothesis testing suggest that both utilitarian and extrajudicial factors are associated with incarceration in the U.S. hence both consensus and conflict views of incarceration are supported.

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CHAPTER 1 INTRODUCTION AND BACKGROUND

The purpose of this chapter is to introduce the project and to situate incarceration growth, the phenomena which I explore, within the theoretical, historical, and disciplinary context. First, I will provide a brief historic background of imprisonment as a form of punishment emphasizing its trajectory in the United States. Second, I will discuss the recent empirical trends in incarceration. Third, I will describe the major dimensions of the current project, including the major goal of testing the validity of six competing accounts of the incarceration growth in the U.S., significance of the current study, as well as specify six hypothesis which I intend to test to determine which factors affected state-level incarceration rates in the U.S. between 1980 and 2005. Fourth, I will close this chapter with an outline of the study and provide a brief discussion of the content of each chapter of my dissertation.

History of Incarceration

Although precise data are scarce, corporal punishment seems to be prevalent in medieval Europe, and Spierenburg (1998a) talks of five degrees of public punishment, such as whipping, branding with iron, mutilation including blinding and cutting off ears, prolonged executions such as burning at stake or quartering, and capital punishments per se. Yet the practice of punishment was not uniform or monolithic, as some scholars suggest. Punishment in medieval Europe was characterized by both retributive cruelty and progressive reform towards more measured and proportionate responses to crime, so that England seemed to rely more on punishment targeting the offenders' body while Italy seemed to rely more on punitive imprisonment, as it could be reversed while execution could not, and more so from fifteenth century onward (Peters, 1998).

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In the early modern Europe, fines and banishments, not imprisonment, were more frequent punishments, yet various forms of penal bondage were developing, including public works, imprisonment or forced labour at the workhouse, galleys, and transportation to colonies such as America or Australia. Literature suggests that penal bondage was aimed at poor, marginal populations rather than crime per se (Spierenburg, 1998a). In the 1550s, Bridewell, previously used as a royal palace in London, was transformed into an institution housing the poor, "sturdy beggars and disordered persons" who were "compelled to work for their sustenance" (Langbein, 1998, p. 12). The first precursor of contemporary correctional facilities, the workhouse or Rasphaus, was established in Amsterdam in 1596, and its main goal was to eliminate idleness, which Protestants linked with sinfulness, and to combine isolation with hard labour to reforge and resocialize displaced agricultural toilers, vagrants, and paupers into productive workers (Shelden, 2001). Yet, based on documents from England, few criminal laws required prolonged imprisonment for common crimes prior to 1750 (Hirsch, 1992).

Two accounts of the decline of public punishments exist, with Foucault (1979) emphasizing new strategies of power and increased capacity for population control associated with creation of brick and mortar disciplinary institutions, and Spierenburg (1998a) emphasizing that both elite and commoners' attitudes towards execution spectacles changed around seventeenth century, as crowds ridiculed the law, convicts pronounced rebellious speeches, and elite showed signs of distaste. Foucault (1979) sees the disappearance of public executions as a result of changes in the legal and political realm mostly and reformers as driven by utilitarian goals of increased control rather than humanitarian concerns. Spierenburg (1998b) points to the primacy of change in

sensibilities, expressions of anxiety or repugnance which led to subsequent political and legal change, exemplified by the decision to move gallows away from the road since travelers were horrified. I think both points have merit and elite sensibilities could have been changed by royal executions in England, rise of republics, and fear of the mob after the French revolution, the latter being significant in Georgian England (Hughes, 1987).

In the United States of the eighteenth century the emergence of imprisonment is tied to abolition of the death sentence for most crimes, and with ideas that adopting less severe but certain punishments together with a less rigid class system and openness of economic opportunity would reduce crime (Rothman, 1998). The new republic needed different prisons, so two distinctly American systems emerged: the New York's congregate system and the Pennsylvania's separate system, the former emphasizing inmates' joint work, in silence, and allowing inmates to eat outside of their cells, while the latter emphasized continuous confinement, lack of communication, and only short periods of exercise time in the prison yard (Shelden, 2001). Both the New York and Pennsylvania systems were structured around confinement of one inmate per single cell, and emphasized spiritual, religious rehabilitation rather than deterrence or retributive cruelty, and used a high degree of isolation so that distinction between the two systems is of a degree rather than quality (Rothman, 1998; Shelden, 2001).

The decline of the American prisons around 1850s was contingent on factors described above, due to the growth of the prison population and influx of Irish immigrants who were strongly resented in New England, moral rebirth ceased to be achievable or desirable at the mass-scale, and there was cynicism about reform and a move towards warehousing inmates rather than facilitating epiphanic spiritual

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reformation (Rothman, 1998). In the post-Civil War period, prison design was driven by budgetary concerns, keeping costs low and maximizing profit from prison labour, which was also frequently leased to private entrepreneurs, so most prisons operated on the New York congregate system designed around joint work during the day and warehousing individual inmates at night in numerous small cells within multi-tiered blocks (Rothman, 1998). Overall, the state prisons in New England, the Midwest, and the West, were not profitable, and actually incurred substantial expenses totaling respectively $1,204,029, $1,850,452, and $1,572,316 in 1890 (Du Bois, 2013, p. 401).

Striking racial disparities in incarceration can be seen in the post-Civil War South so that African Americans comprised 33 percent of inmates at the Nashville, Tennessee state prison in 1855 but 58 percent in 1867, and the number hovered in the mid-sixtieth percentile until 1900 (Shelden, 2001, p. 171). Absolute growth of prison populations in post-Civil War South was staggering as North Carolina had a tenfold increase, from 121 to 1,302 inmates between 1870 and 1890, Georgia had a tenfold increase between 1868 and 1908 as well, and Florida and Mississippi experienced substantial growth also, perhaps tied to the post-Civil War realignment in economic and racial relations, as well as to the convict-lease system (Ibid). Southern state prisons returned profit via renting inmates to businesses so that in 1890 prison earnings exceeded spending by $47,974, and, in conjunction with crop-lien system of mortgages controlling the labour, dwelling arrangements, and other economic aspects of freed Blacks' daily lives, convict lease system could be conceptualized as an adjusted form of bondage replacing the slavery prohibited by the Thirteenth Amendment (Du Bois, 2013, p. 401)

Attempts at reform were seen between the 1890s and 1920s as a part of the Progressive Era, so development in science led to psychotherapeutic reinterpretation of crime and deviance as problems amenable to medical treatment rather than to corporal punishment or spiritual reformation, and inmate classification by security levels arose, as well as attempts to encourage a sense of responsibility through various forms of inmate democratic self-government (Rotman, 1998). New ideas mitigated depersonalization of the Auburn system, allowed more privileges to inmates, and introduced indeterminate sentencing, yet inadequate training and high-turnover of personnel stifled the progress. The Big House became a new paradigm of incarceration for the period between 1900 and 1950, exemplified by Leavenworth (1897) and Alcatraz (1934) prisons, and in many ways it was a continuation of the Progressive Era ideas, a more rationalized environment managed by professionals (rather than politically appointed wardens) who controlled large inmate populations with a highly routinized regime of leisure and work rather than relying on corporal punishment (Rotman, 1998; Shelden, 2001).

Contemporary Trends in Incarceration

Figure 1. U.S. Rate of Sentenced State and Federal Inmates Per 100,000, 1970 to 2005.
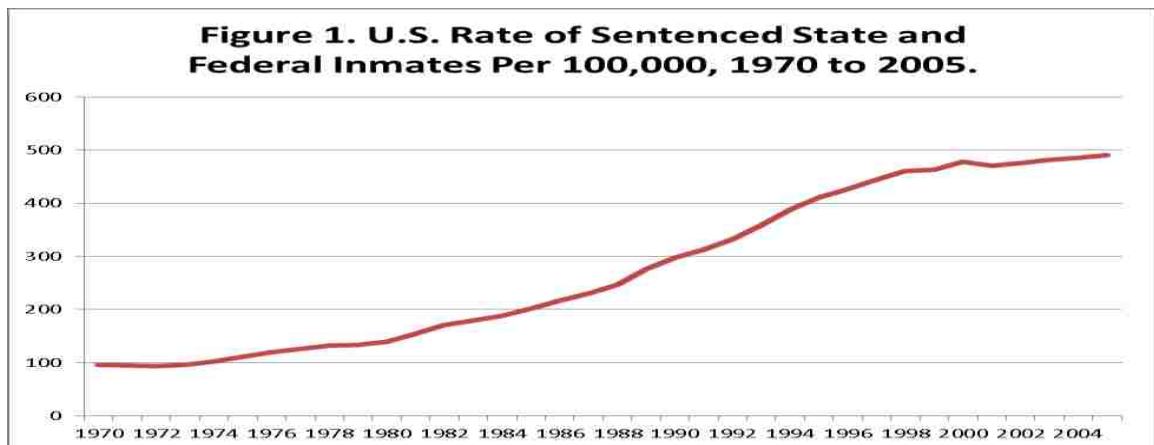
Source: U.S. Bureau of Justice Statistics, 2011

For half a century, since the mid-1920s until the early 1970s (see Figure 1 above), there was little or no change in prison population or incarceration rates in the U.S. In 1930, the total number of sentenced prisoners under the jurisdiction of state and federal correctional authorities was 129,453 which translates into an incarceration rate of 104 inmates per 100,000, 200 male and 8 female inmates per 100,000, and twenty years later the rates were roughly the same as there were 109 inmates, 211 male inmates, and 8 female inmates per 100,000 resident population in each group, and in 1970 the numbers were slightly lower as there were 96 inmates, 191 male inmates, and 5 female inmates per 100,000 resident population in each group (U.S. Bureau of Justice Statistics, 2011). Figure 1 above shows that for the country as a whole, incarceration rates growth began in 1974.

Figure 2. Male Incarceration Rates per 100,000 by Ethnoracial Category, U.S. 2005.
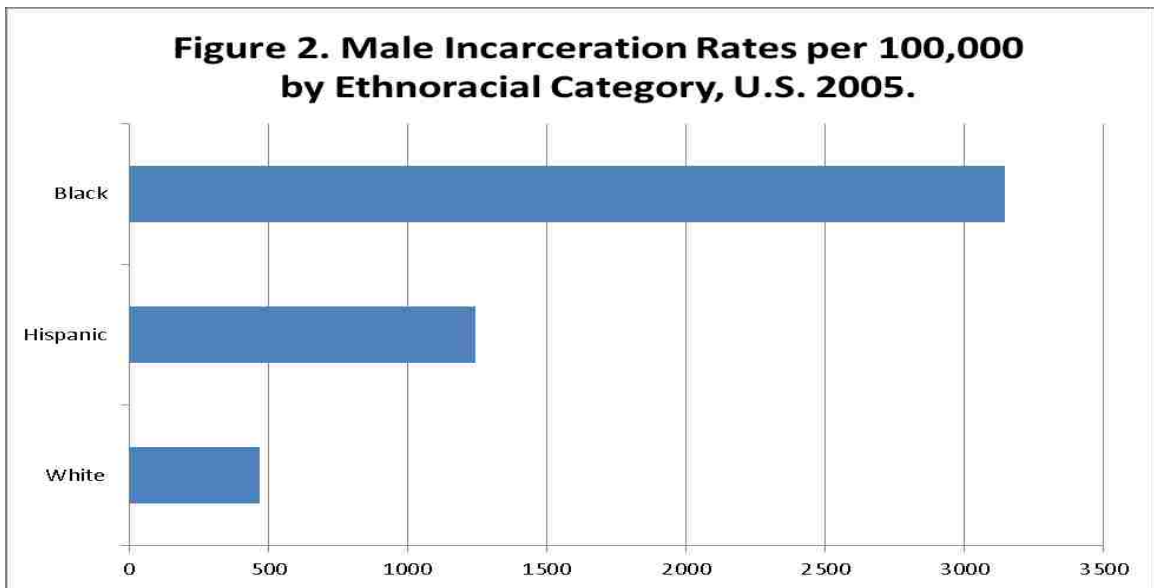
Source: U.S. Bureau of Justice Statistics, 2011

Figure 2 above provides additional information by disaggregating incarceration rates by gender and ethnoracial category. Black men have the highest incarceration rates which exceed by almost seven times the incarceration rates for their White counterparts and by two and a half times the incarceration rates for Hispanic men (U.S. Bureau of Justice Statistics, 2011). Comparable disparities exist in some European countries, so in England incarceration rates for Black men are six times higher than for White men (Christie, 2000, p. 98). In regard to immigrants, the foreign-born account for 6 percent of the population and 30 percent of all those sentenced to imprisonment in France (Pager, 2008, p. 378), and Denmark, Norway, and Finland have 18, 17, and 8 percent of inmates that are foreign-born, which is actually more than in U.S. as foreign-born account for only 6 percent of all American inmates (Lacey, 2008, p. 60).

Figure 3. Female Incarceration Rates per 100,000 by Ethnoracial Category, U.S. 2005
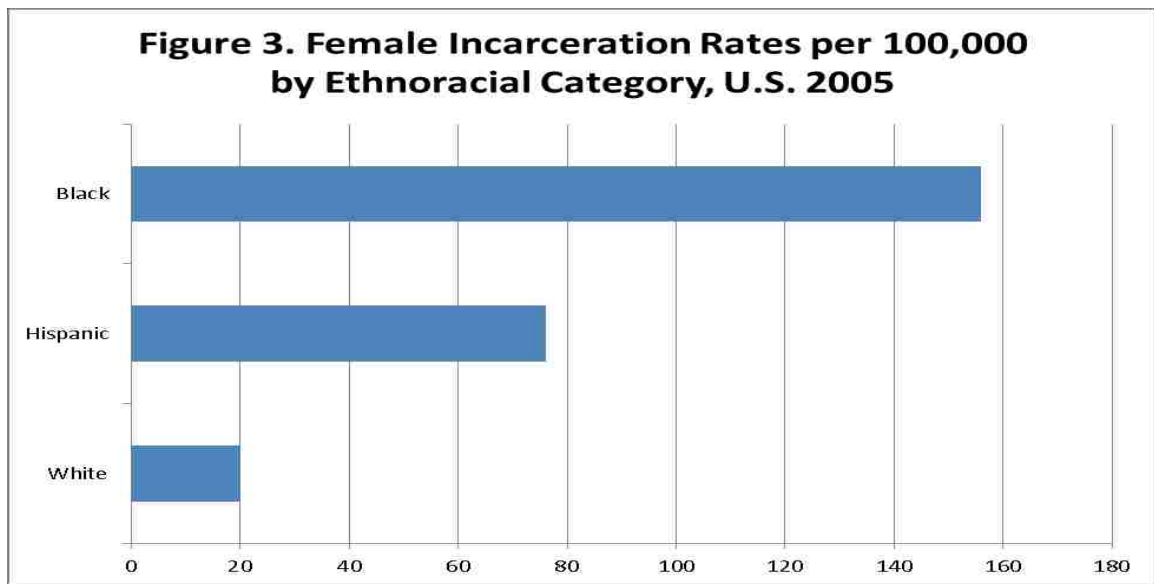
Source: U.S. Bureau of Justice Statistics, 2011

Figure 3 above provides specificity in regard to breakdown of incarceration rate by gender and ethnoracial category. Women, who account for roughly seven percent of total U.S. prison population in 2005, are incarcerated at lower levels than men, so that White women are ten times less likely to be incarcerated than White men, Hispanic women are sixteen times less likely to be incarcerated than Hispanic men, and Black women are twenty times less likely to be incarcerated than Black men (U.S. Bureau of Justice Statistics, 2011). For both men and women, Hispanics are incarcerated at a rate higher than Whites but lower than Blacks.

Figure 4. Number of Adults on Probation, in Jail, Prison, and on Parole, U.S. 1980 to 2005.

Source: U.S. Bureau of Justice Statistics, 2011

Figure 5. State Governments Total Corrections Expenditure in Thousands, U.S. 1980 to 2005.
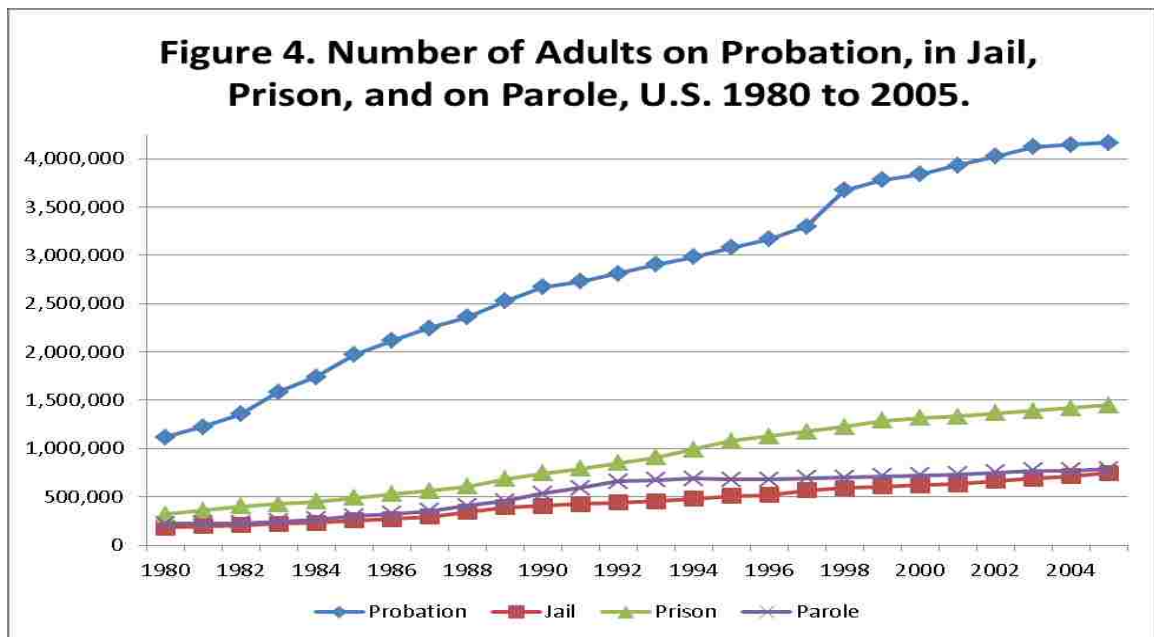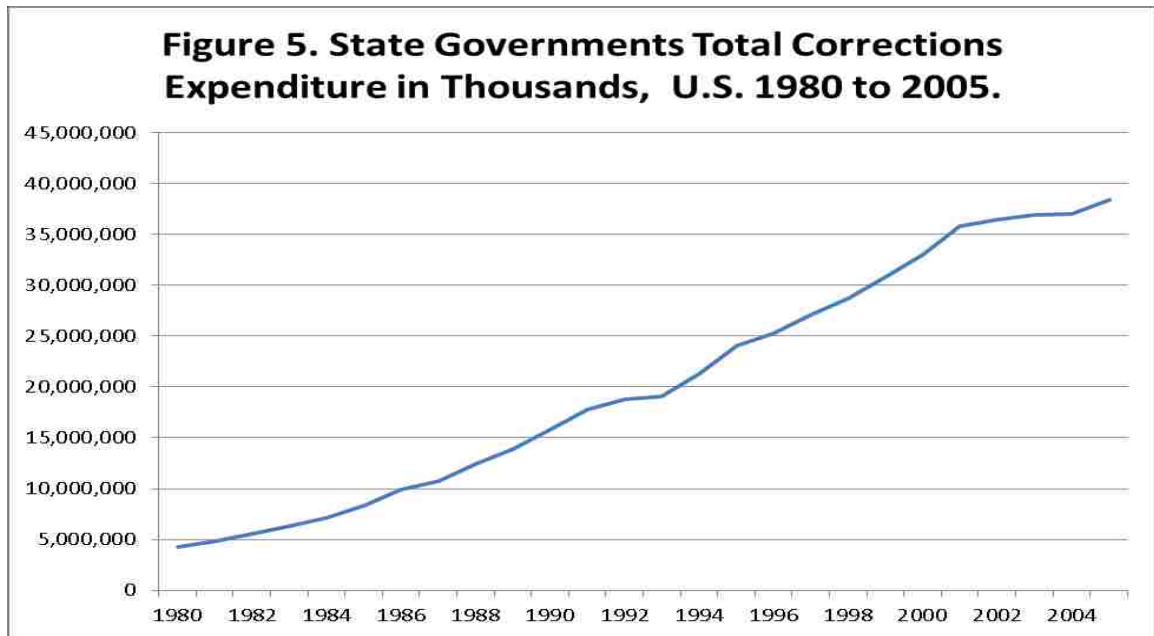
Source: U.S. Bureau of Justice Statistics, 2011

To provide context for the whole project, Figure 4 above portrays the contemporary expansion of various branches of criminal justice system between 1980 and 2005 in absolute numbers, and Figure 5 above shows the rise in state governments' spending on corrections. Every branch of the criminal justice system has experienced profound growth, with the population on probation and the population on parole almost quadrupling, and the population in jail and the population in prison more than quadrupling, and the total adult population under correctional supervision exceeding seven million by 2005 (U.S. Bureau of Justice Statistics, 2011). Prisons have both collateral costs (Mauer and Chesney-Lind, 2002; Pager and Quillian, 2005), such as diminished labour market success for whole segments of the population and prisonization of offenders' families and communities, and direct economic costs which increased ninefold between 1980 and 2005 as Figure 5 shows (U.S. Bureau of Justice Statistics,

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2011). It is the goal of the current project to explore the factors which affected the growth of the criminal justice system, spurring unprecedented expansion which began in the mid-1970s after half a century of stability, testing six major theoretical accounts of the role of incarceration in society utilizing state-level time-series data.

Description of the Study

I replicate and advance Smith's (2004) study of the relationship between the socioeconomic, demographic, political, electoral, and criminal justice factors and incarceration rates at the state level. Smith (2004) tested the explanatory power of the major theoretical determinants of incarceration at the state level using time-series data for the period of 1980-1995 and employing ordinary least squares regression (OLS) analytic technique. I advance Smith's (2004) study using important novel elements. First, I extend the scrutinized historic period by a decade by compiling time-series data for 1980-2005. Second, I employ a more sophisticated analytic technique by utilizing multilevel linear models designed to control for repeated measures of state-level data. Third, I include the measures of partisan state government control and electoral vulnerability, utilizing the Ranney index (1965; 1976) and Holbrook Van Dunk (1993) measure[1] both of which are widely accepted as valid and used in the political science literature.

My dissertation is a theory-driven secondary data analysis of state-level time-series trends in incarceration. The question of what factors explain the use of punishment and formal social control is central to criminological and sociological literature, and multiple theoretical accounts exist. I test the empirical validity of major theoretical accounts of the rates of incarceration, including the orthodox utilitarian argument, the

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[1] For additional details on the inter-party competition measures please see Chapter 3.

conflict or underclass perspective, the democracy in action hypothesis, the partisan use of incarceration argument, the electoral cycle hypotheses, and the policy artifact view. This eclectic approach allows me to test the merits of competing explanations and therefore to ascertain empirical salience of legal and extralegal determinants of incarceration.

From the onset of criminology as a discipline the issues pertaining to the use of sanctions were central to theoretical debates. Although not frequently recognized, what we know today as the classical school of criminology, exemplified by the writings of Cesare Beccaria ([1764] 1995) and Jeremy Bentham ([1789] 1988), contained a strong criticism of the inefficient and overly cruel punishments meted out by the courts operating in a fashion reminiscent of the medieval period. Beccaria ([1764] 1995) advanced the principle of proportionality of punishment and claimed that it should fit the crime, claiming that it is not on the despotic authority but on the need to protect the social contract and functioning of the society that the punishment should be based. Jeremy Bentham ([1789] 1988) refined and advanced Beccaria's ([1764] 1995) thoughts, incorporated a Hobbesian view of human nature and social order, and developed a utilitarian philosophy of crime and punishment based on the principle of hedonistic calculus. Essentially, Bentham ([1789] 1988) claimed that in order to prevent self-interested social agents from engaging in crime, the intensity and duration of punishment have to be no less than is sufficient to tip the balance of costs and benefits by employing physical, political, moral, and religious sanctions. Therefore, both classics shared the view of punishment as an instrumental response to crime, that is the utilitarian orthodox view suggesting that incarceration and crime rates are related.

However, many contemporary scholars claim that social control and the choice of particular forms thereof does not exist in a vacuum and is driven not exclusively by utilitarian and juridical factors (Tonry, 2009; Stemen and Rengifo, 2011; Wacquant, 2001; Yates and Fording, 2005). Cultural, political, electoral, institutional, and socioeconomic dynamics have been hypothesized to be associated with the rates of incarceration, police force size, and processing of individual cases in the criminal justice system (Greenberg and West, 2001; Jacobs and Helms, 2001; Stucky, Heimer, and Lang, 2005; Beckett and Western, 2001; Lessan, 1991; Kent and Jacobs, 2004; Wooldredge and Thistlethwaite, 2004). I intend to test the empirical validity of non-utilitarian explanations of incarceration, the ones which do not share the unproblematic view of punishment, or question the view of the law and incarceration as neutral conflict resolution mechanisms, or highlight extrajudicial determinants of incarceration rates.

The underclass hypothesis derives mostly from historical and comparative studies of punishment and stipulates that incarceration might be contingent upon socioeconomic factors such as inequality and unemployment, as well as upon population heterogeneity i.e. presence of ethnoracial minorities (Rusche and Kirchheimer, [1939] 1968; Lessan , 1991; Jackson, 2009; Keen and Jacobs, 2009; Wacquant, 2010). In ancient Greece, for example, corporal punishment was applied only to slaves while monetary penalties were reserved for free citizens, and in colonial America the criminal justice system was one of many institutions enforcing the colour line (Peters, 1998; Williams and Murphy, 1999). Sociological perspectives deriving from writings of Marx and Weber emphasize that prison as an institution is embedded in the nexus of institutions of the class society (Christie, 2000). Several claims can be made based on that insight, including the strong

claim that criminal justice is one of many tools for management of class contradictions,

or a moderate claim that economic factors might impact judicial decision making,

perceptions of dangerousness, prospects of rehabilitation, and ability to make life-course

transitions away from a life of crime. I am not making any conspiratorial or deliberate

economy-incarceration coordination claims. I merely test the insights derived from works

of Rusche and Kirchheimer ([1939] 1968), DuBois ([1903]1961), and Key (1949) to

assess whether there are empirical links between unemployment, poverty, inequality,

minority presence and incarceration rates, as suggested by previous research (Lessan,

1991; Arvanites, 1992; Arvanites and Asher, 1998; Greenberg and West, 2001; Jacobs

and Helms, 2001; Marvell and Moody, 1997; Michalowski and Pearson, 1990; Sorensen

and Stemen, 2002; Taggart and Winn, 1993; Yates and Fording, 2005).

The democracy in action hypothesis presumes that public opinion and public

ideology is what drives incarceration rather than a purely utilitarian need to control crime,

or political-economic rationales such as the availability of a vast pool of unemployed

workers, or threatening presence of minorities and corresponding racial anxieties, or

indifference to the plight of the underprivileged group. America is a federal republic and

as such crime control is at least partially a matter of state-level jurisdictions, hence it is

reasonable to assume that cultural and political values of voters might shape the

functioning of state penitentiaries. Conservative values and ideology emphasize

individual choice and responsibility while downplaying the structural correlates of crime

(Finckenauer, 1978). Thus it is logical to suppose that conservative values of the citizenry

might favour punishment of individual transgressors and as such be associated with

incarceration rates as an expression of collective punitiveness within a given state, and

some supporting evidence of this claim exists in the literature (Taggart and Winn, 1993; Jacobs and Carmichael, 2001; Sorensen and Stemen, 2002; Costelloe et al., 2009).

The partisan hypothesis suggests that Republican Party control of the executive branch or strong presence in the state legislature might be associated with use of incarceration (Jacobs and Helms, 1996; Beckett and Western, 2001; Smith, 2004; Yates and Fording, 2005; Brown, 2012). Conservative ideology, as was mentioned above, emphasizes individual choice and responsibility rather than complex socioeconomic trajectories into crime. Therefore, I expect to find a link between partisan control of state executive and legislative branches and punitiveness. The hypothesized relationship between partisan control of the executive and legislative branches and incarceration is also contingent upon claims in the literature that incarceration can be used as a resource in an attempt to broaden Republican Party appeal to voters who do not directly benefit from its economic policies (Beckett, 1997; Jacobs and Carmichael, 2001; Chiricos, Welch, and Gertz, 2004). It is a conflict theory insight that coercion is a resource, symbolic and otherwise, since even federal student loan eligibility is tied to criminal convictions. Hence, some voters might find it advantageous for themselves to support the Republican Party in order to gain protection from criminals or gain an edge in the social competition by allocating punishment, which is a negative reward, to their rivals.

The electoral cycle hypothesis casts doubt on the claim that it is the Republican Party which is solely associated with an uncompromising stance on crime and suggests bipartisan use of anticrime rhetoric and incarceration to attract voters, especially so during election campaigns (Jacobs and Helms, 1996; Jacobs and Helms, 2001; Smith, 2004; Stucky et at., 2005; Yates and Fording, 2005; Marion et al., 2009; Oliver, 2011).

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After all, it was a Democratic president who signed the Violent Crime Control and Law Enforcement Act in 1994 (Simon, 2007) which became the largest-scale criminal justice bill in the nation's history allocating over $9 billion in prison funding and stipulating the need to add 100,000 police officers to the force. Hence, I hypothesize that gubernatorial candidates from both parties might engage in "tough-on-crime" rhetoric during an election year, and suggest a focus on the impact of the electoral competition between candidates from both parties on subsequent incarceration rates.

The policy hypothesis is built on the insight that institutional internal processes explain incarceration rates. Perhaps criminal justice policies and initiatives can account for the dynamics or path dependence of incarceration, as some research suggests, rather than citizen ideology, presence of underclass, or political factors (Marvel and Moody, 1996; Nicholson-Crotty, 2004; Schneider, 2006; Spelman, 2009). Sentencing policies are of utmost importance in explaining the recent incarceration increase, as there is evidence that up to 37 percent of prison population growth is attributed to increase in time served and 51 percent is attributable to increased commitment per arrest and both are clearly contingent upon sentencing policies (Blumstein and Beck, 1999). Therefore, I study the impact of determinate sentencing laws, three-strike laws, and marijuana decriminalization laws on incarceration rates. In addition, it is important to remember that incarceration is not the only sanction available and that some states have low incarceration while substantial probation rates (Phelps, 2011). Thus I include a measure of magnitude of the population on probation supervision across states.

Due to substantial variability of socioeconomic, political, cultural, and criminogenic factors across states, the introduction of some measure of standardization

and unification is important to make comparisons meaningful. Following the replicated study (Smith, 2004) I use four control variables: the violent crime rate, property crime rate, state education spending, and divorce rate. Controlling for crime rates, state education spending, and divorce rate will allow testing the orthodox utilitarian argument that incarceration rates vary concordantly with crime rates, as an attempt to maintain social order, protect social contract, and punish the transgressors. Strength of socialization agents such as school and family is recognized as essential by several theoretical perspectives in criminology, and it is presumed that normative and substantive education and strong marriage allow for behavioural repertoire consistent with a stake in conformity and upward mobility which justifies inclusion of these control variables (Larzerele and Patterson, 1990; Sampson and Laub, 1993; Sampson and Laub, 2003; Simons et al., 2005; Sampson, Laub, Wimer, 2006).

Significance of the Study

I argue that the current project is significant in five ways. First, it addresses fundamental theoretic debates in sociology and criminology. Second, it analyzes the salient expansion of the use of incarceration at the subnational level of analysis. Third, it tests the validity of the orthodox utilitarian view of incarceration. Fourth, it offers a more refined understanding of the political determinants of imprisonment by including measures of partisan state government control and electoral vulnerability. Fifth, it employs data and analytic technique that are superior to those that have been previously used in research on this topic.

Theoretical relevance of the study is predicated on the centrality of incarceration as a type of formal social control for the sociological and criminological discourses

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ranging from Hobbes ([1679]1999) to Bauman (2000) and Wacquant (2001; 2010). The question of social order and its reproduction, maintenance, and negotiation is fundamental to sociology, whose origins as a discipline are tied to the attempts to investigate how humans coordinate and organize their social worlds within the shifting boundaries of the larger social context, hence the relevance of the discussion of incarceration and social control in general.

Practical relevance of the study is contingent upon empirically observable drastic shifts in the use of imprisonment in the U.S. over last three decades. For five decades levels of incarceration were fairly invariant and low across states since the average U.S. incarceration rate for the period between 1930 and 1970 equaled 110.2 inmates per 100,000 population with a standard deviation of 8.9 inmates (Zimring, 2010). The U.S. incarceration rate in 1972 stood at 95.5 per 100,000 population yet it increased to a rate of 502 inmates per 100,000 in 2007 (Zimring, 2010). The magnitude of the expansion in the overall use of incarceration since the early 1980s justifies the inquiry into the factors associated with the phenomena which so spectacularly refuted the stability of punishment hypothesis (Blumstein and Moitra, 1979).

The important contribution of this study is its commitment to state-level analysis of various specific processes influencing incarceration rates. Unlike England or France where the penal field is consolidated and might be better described by meta-narratives (Garland, 2001;Wacquant, 2001), the field of crime control in the U.S. is not monolithic, it is decentralized and federal inmates are the numeric minority making only 10 percent of total incarcerated individuals (Phelps, 2011). A significant variance in the incarceration rates across different states exists, illustrated by the fact that in 2004 Maine

incarcerated 148 inmates per 100,000 population and Texas incarcerated 694 inmates

respectively, and any attempt to understand the incarceration trends must be sensitive to

said differences to avoid potential false homogenization (U.S. Bureau of Criminal Justice

Statistics, 2009).

A specific contribution of this study consists of testing the major theoretical

explanations of the use of imprisonment as a form of social sanction. Imprisonment is

usually understood within the orthodox utilitarian framework in which punishment

protects the social order and as such is contingent upon the frequency of the criminal acts

attempting to undermine the social contract (Bentham [1789] 1988). But a number of

plausible hypotheses exist, including the underclass, democracy in action, partisan,

electoral cycle, and endogenous criminal justice policies explanations (Garland, 2001;

Jacobs and Helms, 2001; Wacquant, 2001; Nicholson-Crotty, 2004; Tonry, 2009) and I

test them going beyond the simplistic model of political determinants of incarceration

employed by Smith (2004) by adding context and specificity employing the measures of

partisan state government control and electoral vulnerability. The use of the Ranney

index and Holbrook Van Dunk measure produces a more refined understanding of the

political forces at play which Smith's (2004) mechanical conceptualization of political

and partisan processes might have overlooked.

The significance of this study is also lodged in important methodological

upgrades compared to the replicated study. I extend the temporal boundaries of the

project by a decade so that it spans from 1980 to 2005 to produce a larger number of

observations in the dataset but also to focus on the years of the incarceration boom and to

go beyond that to include a decade that followed it. In addition, ordinary least squares

regression (OLS) used by Smith (2004) is not the optimal one for the task because it is based on the assumption that the term for any observation is not impacted by or related to that of other observations (i.e. absence of autocorrelation). However, the repeated measures of variables at the state-level violate this assumption of independence and even though OLS coefficients produced in such analysis are likely to be accurate, the standard errors are biased downward resulting in inaccurate deductions about statistical significance (Luke, 2004; Field and Miles, 2010). To avoid these problems, I strengthen the study methodologically and employ hierarchical linear modeling which controls for the repeated measure design.

Thus, this project is significant because it engages the fundamental theoretical question of social order, investigates the shifting patterns of incarceration while being attuned to state-level differences, contributes to the research literature by testing the competing utilitarian and extrajudicial hypotheses of incarceration while refining our understanding of political dynamics by adding measures of inter-party competition, and relying on a larger number of observations and an advanced statistical analytic strategy. I argue that these attributes of the current study make it worthwhile and innovative despite the somewhat formulaic replicative nature.

Specific Hypotheses

Consensus and conflict are central to social life, and from the beginning of sociology as a discipline, theoretical explanations of the functioning of society privileging the former (Durkheim, 1972), the latter (Marx, 1994), or allowing for a historically, culturally, and contextually contingent mixture of both (Weber, [1946]1958) coexisted. This study is testing the empirical validity of competing consensus and conflict

views on the function of imprisonment. Generally stated, the research question focuses on

the determinants of incarceration at the state level; I am exploring whether the

incarceration rates are driven exclusively by crime rates or if factors such as presence of

the underclass, citizen conservative ideology, partisan control of the state government,

electoral cycle, and sentencing policies impact state incarceration rates. I test six specific

hypotheses summarized in Table 1 below.

Table 1. Summary of Hypotheses				
Hypotheses				
H 1: Utilitarian Hypothesis				
Violent crime is positively associated with incarceration				
Property crime is positively associated with incarceration				
H 2: Underclass Hypothesis				
Unemployment is positively associated with incarceration				
Income inequality is positively associated with incarceration				
Poverty is positively associated with incarceration				
Percent of Black state residents is positively associated with incarceration				
Percent of Hispanic state residents is positively associated with incarceration				
H 3: Citizen Ideology Hypothesis				
Population conservatism is positively associated with incarceration				
H 4: Partisan Use of Incarceration Hypothesis				
Democratic control of state legislature is negatively associated with incarceration				
Democratic control of state governor's office is negatively associated with incarceration				
H 5: Gubernatorial Election Cycle Hypothesis				
Gubernatorial election year is positively associated with incarceration				
H 6: Criminal Justice Policies Hypothesis				
Probation rate is positively associated with incarceration				
Habitual offender law is positively associated with incarceration				
Determinate sentencing law is negatively associated with incarceration				
Marijuana decriminalization law is negatively associated with incarceration				

Hypothesis 1: Punishment is an instrumental response to crime. States with higher crime will have higher incarceration rates.

Classical and neo-classical criminological theory suggests that punishment is a social reaction to the hedonistic and self-interested acts of the individuals rationally trying to maximize their material or symbolic gains and harming the society (Beccaria [1764] 1995, Bentham [1789] 1988). If crime is on the rise, then society responds with higher use of punishment to preserve the social contract (McGarrell, 1993; Listokin, 2003; Spelman, 2009). Hence, I expect that states with higher violent and property crime rates will also have higher incarceration rates.

> *Hypothesis 2: Punishment is a tool for managing economic and ethnoracial tensions. States with higher inequality, unemployment, and proportion of Black and Hispanic residents will have higher incarceration rates.*

Conflict criminological perspective suggests that punishment is not a purely instrumental neutral response to violent and property crime but also functions to manage economic and ethnoracial tensions in the society (Rusche and Kirchheimer [1939] 1968; Wacquant, 2001). If inequality and unemployment are rising, then potential for class conflict is increasing, and if the minority group presence is getting stronger, then potential for racial threat is increasing (Jackson, 2009; Johnson, Stewart, Pickett, and Gertz, 2011). Inequality is measured by the state Gini income inequality index, unemployment is operationalized as a percent of civilian noninstitutionalized population sixteen years of age or older, minority presence is operationalized as a proportion of state population that is Black or Hispanic. I expect states with higher levels of inequality and unemployment and higher proportion of Black or Hispanic residents to have higher incarceration rates.

> *Hypothesis 3: Punishment is a social policy sensitive to public opinion. States with more conservative population will have higher incarceration rates.*

The social constructivist approach operates on the W.I. Thomas (1928) maxim stating

that if people "define situations as real, they are real in their consequences." Perhaps

punishment is neither an instrumental response to rising or declining crime rates nor a

tool managing class and ethnic conflict but rather a fairly expressive social policy attuned

to the fluctuation of public opinion, cultural and religious sensibilities about crime, and

ideological explanations of crime as either an individual moral weakness or a structural

issue (Taggart and Winn, 1993; Jacobs and Carmichael, 2001; Tonry, 2009). Finding a

reliable and temporally uninterrupted measurement of public opinion about crime is

problematic so I employ the closest available proxy – citizens' ideology measure (Berry

et al., 1998). Citizen ideology measure is reliable, available, and appropriate as it is has

been suggested in the literature that conservative ideology is associated with punitiveness

(Greenberg and West, 2001; Costelloe et al., 2009). Hence, I expect that states with more

conservative population will have higher incarceration rates.

> *Hypothesis 4: Punishment is a social policy consistent with the Republican Party*
> *agenda. States with strong Republican Party presence in the legislature and*
> *Republican governors will have higher incarceration rates.*

Sociological literature suggests that since the 1960s the Republican Party have

consistently employed "law-and-order" rhetoric (Tonry, 2009). Some scholars see this as

purely symbolic political device, some scholars conceptualize this as a backlash against

extension of formal civil and political rights to women, ethnoracial and sexual minorities,

and some scholars suggest that it is a pragmatic solution to the limited pool of voters

benefiting from economic policies of the party and an attempt to reach out to voters

supporting the tough anti-crime policies (Beckett, 1997; Yates and Fording, 2005;

Beckett and Godoy, 2008; Keen and Jacobs, 2009). I measure Republican partisan

strength as Republican control of the state executive branch (i.e. governor's office) and

Republican control of the state legislative branch. I expect states with Republican

governors and a high percentage of Republican legislators to have higher incarceration

rates.

> *Hypothesis 5: Punishment is a social policy which is appealing to voters. Both parties use punishment as a device to widen their appeal during gubernatorial and election cycles. Gubernatorial election year is positively associated with incarceration.*

Recent sociological scholarship on the politics of crime control suggests that rather than

being a purely Republican partisan issue, punishment might be used by both parties

during the election cycles to broaden the appeal to voters (Jacobs and Helms, 2001;

Smith, 2004; Stucky et al., 2005; Simon, 2007; Marion et al., 2009, Oliver, 2011).

Perhaps the Democratic candidates to executive branch offices seize the "tough-on-

crime" agenda and use it just as much as Republicans during the electoral cycle. As a

measure of electoral cycle, I use a dummy variable coded 1 for gubernatorial election

year within a given state between 1980 and 2005. I expect election years to be associated

with increase in incarceration rates.

> *Hypothesis 6: Punishment is an outcome of criminal justice policies. States with determinate sentencing laws and marijuana decriminalization will have lower incarceration rates. States with three-strikes laws and high probation rates will have higher incarceration rates.*

Criminological research suggests that the prison population is influenced by a myriad of

criminal justice factors, including the certainty of arrest and conviction, and discretion of

decentralized decision makers, including the presence of flexibility in sentencing (Marvel

and Moody, 1996; Blumstein and Beck, 1999; Nicholson-Crotty, 2004). It may be that

punishment is an outcome of criminal justice policies and available institutional

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alternatives rather than a positivist billiard-ball response to the reality of crime or crime as a constructed political issue. Therefore, I explore the impact of determinate sentencing laws, marijuana decriminalization laws, three-strikes laws, and probation rates on the state-level incarceration rates. I expect that determinate sentencing constrains judicial punitiveness (Reitz, 2006) and that marijuana decriminalization eliminates the very crime qualifying one for a prison term. I expect that three-strikes laws and probation rates are positively associated with incarceration, due to increased sentence length for the former and evidence of high rates of violations and reincarceration of probationers (Jacobson, 2005).

Outline of the Study

Chapter 1 provides a historical sketch on the emergence of imprisonment in medieval Europe and its evolution in the U.S., demonstrates contemporary empirical trends in the American criminal justice system, includes incarceration rates for different ethnoracial groups, describes the major features and significance of the current study, provides an outline of sociological theorizing about incarceration, articulates the general research question and explicitly states the specific hypotheses. Chapter 2 delivers an exhaustive review of existing state-level studies of incarceration, giving additional theoretical and empirical context for each of the six hypotheses of the incarceration change, and establishing links between crime rates, socioeconomic and demographic factors, citizen ideology, partisan strength, elections, sentencing policies, and prison population rates. Chapter 3 outlines the methodology of the study, describes the data and major variables, and explains the basic logic of the statistical multilevel analytic technique which I utilize.

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Chapter 4 is devoted to hypotheses testing, and I open it by presenting the descriptive statistics for the whole sample, then I display time-trends for state incarceration rates, discuss the basic multilevel model and proportion of variance between states and within states across time explained by the model, and proceed by testing one hypothesis at a time in a step-up manner, first including only the independent variables, then adding control variables, then adding measures of political competition. Chapter 5 translates findings of the quantitative analysis into a coherent sociological narrative, as I discuss the key results of hypothesis testing, link findings of this project to the existing literature, moving from the specific to the general, make conclusions about the validity of major theoretical accounts of incarceration, and identify directions for future research.

CHAPTER 2 LITERATURE REVIEW

The purpose of this chapter is to situate each specific hypothesis within the

disciplinary context by reviewing the major theoretical and empirical works. Given the

scope of this project I find it necessary to focus on the literature directly relevant for the

concepts utilized in each hypothesis privileging recent state-level research on

incarceration in the U.S. First, I provide a brief review of the literature conceptualizing

imprisonment as a utilitarian, instrumental response to crime. Second, I discuss the

literature seeing incarceration as not purely neutral or instrumental but as contingent on

extrajudicial socioeconomic and demographic factors. Third, I describe research

signifying the salience of public ideology for the criminal justice outcomes. Fourth, I

review the literature on the role of partisan politics and politicization of the crime as a

social issue. Fifth, I review research linking electoral cycle and criminal justice

outcomes. I close the chapter with discussion of the links between the criminal justice

policies, such as determinate sentencing and three-strikes laws, and incarceration.

Literature on Orthodox Utilitarian Argument

From the onset of criminology as a discipline the issues pertaining to the use of

sanctions were central to theoretical debates. Cesare Beccaria ([1764] 1995) advanced the

principle of proportionality of punishment and asserted that it should fit the crime,

claiming that it is not on the despotic authority but on the need to protect the social

contract and functioning of the society that the punishment should be based. Jeremy

Bentham ([1789] 1988) refined and advanced Beccaria's ([1764] 1995) thoughts,

incorporated a Hobbesian view of human nature and social order, and developed a

utilitarian philosophy of crime and punishment based on the principle of hedonistic

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calculus. Essentially, Bentham ([1789] 1988) claimed that in order to prevent self-interested social agents from engaging in crime, the intensity and duration of punishment have to be no less than is sufficient to tip the balance of costs and benefits by employing physical, political, moral, and religious sanctions. Therefore, both classics shared the view of punishment as an instrumental response to crime, that is the utilitarian orthodox view suggesting that incarceration and crime rates are related.

In the contemporary criminological literature, the utilitarian view of the relationship between the crime and punishment is endemic since, under the rule of law, commission of crime and subsequent conviction is a necessary prerequisite of incarceration, which is conceptualized as a forced reaction to a violation of the legal norm and an attempt to reestablish social order. Hence it is not illogical to assume that incarceration rates and prison admissions are a function of crime rates in a given jurisdiction. Much research supports the validity of the utilitarian hypothesis (Michalowski and Pearson, 1990; Taggard and Winn, 1993; McGarrell, 1993; Jacobs and Helms, 1996; Arvanites and Asher, 1998; Raphael, 2000; Greenberg and West, 2001; Sorensen and Stemen, 2002; Listokin, 2003; Yates and Fording, 2005; Spelman, 2009; Stemen and Rengifo, 2011). However, other researchers claim that the relationship between crime rates and incarceration rates is either weak or nonexistent (Blumstein and Cohen, 1973; Blumstein and Moitra, 1979; Lessan, 1991; Zimring and Hawkins, 1991; Blumstein and Beck, 1999; Smith, 2004; Zimring, 2010).

The following is the concise summary of early studies supporting the utilitarian hypothesis, many of which tend to be cross-sectional and use data from the eighties onward. Michalowski and Pearson (1990) found that, controlling for effects of South,

violent crime is by far the strongest predictor of state imprisonment rates in 1970 and 1980. McGarrell (1993) asserts that violent crime is a strong consistent predictor of state incarceration rates in 1971, 1980, and 1988 and points out the historical contingency of this relationship as it increased in strength over time, suggesting potential qualitative shifts as well, as the criminal justice system might have become more responsive during the economic and political crisis of the 1980s. Taggart and Winn (1993) used measures of both property and violent crime in their cross-sectional study yet only violent crime was associated with state incarceration rates in 1984 in the regression results. Arvanites (1992) used a measure of total index crime rate as well as violent crime (murder, rape, assault and robbery) and found both significantly related to incarceration rates in 1980 and 1988, while Arvanites and Asher (1995) found similar results for 1990, and Arvanites and Asher (1998) found crime to be the strongest predictor of state imprisonment rates for 1993 but non-significant in regards to county jail incarceration rates, perhaps due to multicollinearity with the measure of nonwhite population.

Several studies with more sophisticated methodology also find that crime and punishment are associated. In a time-series analysis spanning from 1950 to 1990, Jacobs and Helms (1996) confirm that combined federal and state prison admission rates lagged by one year are influenced by crime rates, however, the authors squared the crime rates, claiming that prior research suggests that people tend to ignore the crime risks until a certain threshold level is reached when fear of crime actually sets in and the public requests an increase in the punitive response, and concurrently in their study the unaltered crime rates were insignificant, yet the squared ones did increase the admissions. Greenberg and West (2001) analyze census panel data from 1970, 1980, and 1990 and

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find that both violent crime rates and narcotic arrests influenced state imprisonment rate while no significant effect exists for property crime rate. It is fitting to note that I do not know of any direct measurements of drug crime independent of the criminal justice system, and narcotic arrests are in a sense a measure of the drug law enforcement rather than the drug crime per se. A study of both state prison admission rate and incarceration rate found that FBI Uniform Crime Report (UCR) Part 1 index crimes are associated with both measures of punitiveness, being the strongest predictor of admissions and third strongest predictor of the incarceration rate i.e., the relative size of prison population (Sorensen and Stemen, 2002).

The simultaneous relationship between crime rates and incarceration rates has been largely neglected. However, it is not improbable that not only do increasing crime rates fuel the growth of the prison population via new admissions but the increasing incarceration suppresses crime, perhaps via deterrent or incapacitating effect. Listokin (2003) takes into account that simultaneous relationship by using 1970 abortion rates as an instrumental variable highly correlated with 1990 crime rates but, apart from that, not correlated with 1990 incarceration or admission rates. Listokin (2003) also employs sophisticated measures of independent variable, as crime is operationalized as a moving two-year average of FBI UCR Part 1 index crimes where violent crime is given a weight of 0.65 and property crime is weighted as 0.35, claiming that admission rate is a better dependent variable since the current incarceration rate is partially driven by past crime rates due to the salient proportion of inmates with long sentences. Listokin (2003) finds that, controlling for simultaneous nature of the relationship, a 1 percent increase in crime results in 1 percent rise in prison admissions, which also should boost the incarceration

rate. Interestingly, prison releases are not affected by the temporally concurrent crime rate (Listokin, 2003). However, Listokin (2003) recognizes that although the utilitarian hypothesis is supported, there may be other factors at play, since his results would predict an 80 percent growth in incarceration between 1970 and 1990 when in reality it was closer to 500 percent.

Ouimet and Tremblay (1996) made an interesting attempt to go beyond cross sectional analysis towards identification and tentative theorization of the trends over time. First, they found that at three points in time, i.e., in 1972, 1982, and 1992, the states with higher crime rates also had higher imprisonment rates. But then they observe that the "cross-sectional crime-incarceration link dissolves in time-series studies" (Ouimet and Tremblay, 1996, p. 120) and claim that incarceration growth trends are not billiard-ball deterministic but seem to have a normative dimension (or, perhaps, depend on fiscal constraint, existing prison capacity and tendency to fight overcrowding with early convict releases, etc.). Ouimet and Tremblay (1996) suggest that 14 out of 16 states that increased their incarceration rate by a 100 percent by 1992 were underpunitive in 1982, while states which were overpunitive in 1982 did not show such significant growth. They suggest that cross-sectional correlation between crime and incarceration reflects better the basic proportionality between these two variables, yet the time series trends better reflect not just the mechanistic crime-incarceration link but also cultural sensibilities about the desirable level of total punitiveness and traditions of the jurisdiction about the acceptable scope of imprisoned population, citing Minnesota where sentencing rules explicitly tie its incarceration rate not to the crime rate but to availability of cells in prisons. So, as the state becomes overpunitive its actors realize that proportionality and fairness are violated,

and suppress the growth, while the reverse is true for underpunitive states (Ouimet and Tremblay, 1996).

Supporting evidence for the utilitarian hypothesis and specific enabling mechanisms are also reported in a study (Spelman, 2009) which explores the impact of crime on rate of prison population under state jurisdiction, including private, federal, and local jails, analyzing a panel of states over a time period spanning 1977 to 2005. Spelman (2009) claims that crime explains 32 to 42 percent of the variance in the state incarceration rate, with violent crime having an especially strong positive effect in the long term due to longer sentences, property crime having a statistically significant negative immediate effect and a nonsignificant long term effect, and drug crime having significant immediate and long term effect which is much weaker than that of violent crime. The study also hints at the probable specific mechanism or contextual variable linking crime and incarceration, namely spending, which is contingent upon the increase in crime and several ideological, political, electoral, and budgetary variables (Spelman, 2009). However, no significant relationship between crime rates, prison admissions and correctional spending is reported by Stucky, Heimer, and Lang (2007) which questions the validity of the specific mechanism of incarceration growth identified by Spelman (2009).

Anomalies and critiques of the instrumental argument's empirical status can also be found in the literature. The absence of the crime-incarceration link was a part of American criminological orthodoxy in the 1970s when Blumstein and Cohen (1973) developed the stability of punishment hypothesis, drawing from the Durkheimian analysis of relativity of deviance, claiming that increasing crime will not result in higher

incarceration because the society will simply increase the seriousness threshold, responding only to the most serious crimes relative to the totality of offenses. The national aggregate data exhibited a stability of imprisonment rates for the period between 1930 and 1970, with a statistical average of 110.2 inmates per 100,000 population and a standard deviation of 8.9 inmates respectively (Blumstein and Cohen, 1973, p. 201). The validity of stability of punishment argument was empirically reinforced by subsequent research (Blumstein and Moitra, 1979).

Zimring and Hawkins (1991) claimed that the crime-incarceration link is weak or nonexistent in their analysis of U.S. data spanning from 1949 to 1988 primarily due to the fact that roughly 100 felonies result in only 1 conviction, partly because of the "funnel of criminal justice" phenomena where each stage progressively filters out significant number of cases. Blumstein and Beck (1999) found that 88 percent of the incarceration growth between 1980 and 1996 is attributable to the increasing likelihood of conviction to real prison time and the increasing length of the sentences, while only 12 percent of the growth is explained by crime rate increase. Partitioning the crime rates shows that drug offenses are the single most salient category, accounting for 29 percent of the growth (proportion thereof attributable to the crime rates), while neither sexual assault, murder, or non-sexual assault individually account for more than 11 percent of the growth and only when all violent offenses are added together they account for 43 percent of the growth (Blumstein and Beck, 1999, p. 24). A time-series study covering the same temporal span between 1980 and 1995 concurs with Blumstein and Beck's findings (1999) showing that neither property nor violent crime had a significant impact on state incarceration rates (Smith, 2004).

Zimring (2010) suggests that the studies supporting the crime-incarceration have

two limitations, first is the temporality issue – many of these studies were carried out not

at midcentury when there was no imprisonment growth but in the 1980s when

incarceration rates skyrocketed, second is the qualitative shift in the scope of the

punishment between 1974 and 1987 – toward higher rates of commitment for marginally

serious high-frequency felonies such as vehicle theft, assault, burglary. Therefore studies

looking at the index crime rates from that period might overrate their impact on

incarceration. Zimring (2010) claims that abovementioned studies focused on "the role of

differential crime growth in explaining state-to-state differences in growth of

imprisonment" (p.1240) and have no bearing on the issue once it is examined at the

national level. Between 1964 and 2007, homicide rates and robbery rates at the national

level show out-of-sync fluctuations, lags, and differences in the shape of patterns with

incarceration, and while there is a homicide-incarceration relationship it is a negative one

that Zimring (2010) interprets as indicative of a suppressing effect of imprisonment on

crime but not-supportive of the argument that crime drives incarceration at the national

level.

Literature on the Underclass Hypothesis

The conflict criminological perspective suggests that punishment is not a purely

instrumental neutral response to violent and property crime but also functions to manage

economic and ethnoracial tensions in society in general, and is specifically responsive to

groups perceived as either economically non-productive or encroaching on the existing

ethnoracial order (Rusche and Kirchheimer [1939] 1968; Blalock, 1967; Wacquant,

2001). There are at least two interpretation of the underclass hypothesis, one is purely

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economic while the other recognizes the salience of race and ethnicity. The first derives

from work of Rusche and Kirchheimer ([1939] 1968) and is conventionally tied to the

supply and demand for labour force, unemployment, and the labour market in general,

though the authors' main goal was to explore punishment outside the utilitarian or legal

or consequentialist framework, seeing it within a broader context of the social structure.

The second interpretation takes into account more complex intergroup relations, history

of immigration and slavery, and is linked to the threats associated with increase in

relative size of the minority group perceived by the dominant group and its attempts to

maintain symbolic and material privileges (Blalock, 1967).

The origins of the term "underclass" can be traced to the term "lumpenproletariat"

which Marx introduced in the "Communist Manifesto" to describe the lower rungs of the

proletariat lacking class-consciousness, the chronically unemployed, as well as

marginalized déclassé elements not unfamiliar with the illicit activities or paid

participation in reactionary political movements ([1848]1994; p.167). The term took root

in social science literature, on American soil, largely tied to the local history of

immigration, intergroup relations, and political economy, where it acquired ethnic and

racial connotations. In the "Dangerous Classes of New York" ([1872] 1967) Charles

Loring Brace focused on the predominantly American-born offspring of Irish and

German immigrants raised in a context of poverty, lack of education and the availability

of vices, who do not hesitate to use firearms and are "as ignorant as London flash-men or

costermongers…far more brutal than the peasantry from whom they descend and they are

much banded together" (p. 26-27).

The first large-scale urban ethnography undertaken in the U.S. by W.E.B. Du Bois (1899) produced an empirical account of black residents of Philadelphia as an excluded caste, a strata which "does not form an integral part of the larger social group" (p.5) and suggested that although other groups, i.e., Jews or Italians, are not entirely included either, the social exclusion of blacks is more intense and intertwined with a historic legacy of slavery and contemporary social wretchedness. Du Bois (1899) did not seek to pathologize black residents, on the contrary, his theoretical argument was analogous to the Durkheimian notions of integration and group solidarity as antithesis of anomie and social pathologies, and Du Bois (1899) pointed out that that it is a mistake to focus on the problems of crime, prostitutes, and deteriorating housing per se because the slum "is not a simple fact, it is a symptom" (p.6) and that exploration of the race problem should include social dynamics operating outside of the Philadelphia ghetto.

Du Bois' analysis of 5,000 surveys demonstrated existence of a racialized division of labour, where 61 percent of black men were employed in domestic or personal service and only 7 percent of them were employed in manufacturing jobs compared to 47 percent of the total male Philadelphia population (p.109), and Du Bois (1899) explains the discrepancy by exclusion of blacks from labour unions. For black females, the discrepancies were even higher, with 88 percent employed in personal and domestic service and 8.8 percent employed in manufacturing jobs (p.109). In terms of occupations of black males 21 years of age and older, 2 percent were "learned professionals," 6.5 percent were "conducting business on their own account," 7 percent were employed in "skilled trades," 5 percent were employed in clerical positions, with the remaining 80 percent of black males being unskilled laborers and servants (p.100, p. 109). Du Bois

(1899) also points out that there are 60 black policemen, 17 post office workers, and 11 municipal workers (p.132). Du Bois (1899) claims that even though not all black families strive to take advantage of educational opportunities there was a marked improvement in this area since only 18.56 percent of blacks are entirely illiterate (unable to read or write), which compared favourably to the Belgian population with 15.9 percent illiteracy rate or with Italian, Russian, and Irish American immigrants residing in Philadelphia who manifested respective illiteracy rates of 63.63 percent, 41.92 percent, and 25.79 percent (p.92). However, regardless of the favourable literacy comparisons to incoming immigrants and occasional examples of upward mobility, Du Bois (1899) speaks of systematic exclusion of blacks as equal social actors from mainstream white institutions and the existence of a racialized occupational hierarchy.

Underclass, the contemporary iteration of the term "lumpenproletariat," was coined by Myrdal (1963) who used it in a sense analogous to the classical theorists, referring to a social group of "unemployed, unemployables, and underemployed" (p.38) largely disconnected from the national social currents and affluence. Myrdal (1963), like Marx ([1848] 1994) or Du Bois (1899) tends to use the term predominantly as a structural rather than a behavioural or subcultural referent such as that advanced by Lewis in "Mexican Case Studies in the Culture of Poverty" (1959). Wilson (1987) provides an insightful dissection of the theoretical debates concerning the legitimacy and empirical validity of the term, while refuting simplistic reductionist analyses of the issue, instead focusing on the "interplay between ghetto-specific cultural characteristics and social and economic opportunities" (p. 18). Wilson (1987) emphasizes in particular the effects of corporate relocation and downsizing on post-civil rights urban ghettos characterized by

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endemic joblessness, which doubled between 1968 and 1980 (p. 17), and concentrated poverty defined as number of Census tracts with at least 40 percent poor, which also doubled between 1970 and 1997 (Wilson, 1996). Primarily, Wilson (1987) focuses on urban black residents defining underclass as those "outside of mainstream American occupational system … who lack training and skills" (p.8) and who either dropped out of the labour force or are long-term unemployed, long-term welfare recipients, long-term poor, and those engaged in crime and other illegal activities.

Wacquant (2010) employs contemporary descriptive data on inmates to show that less than half were employed full-time prior to sentencing, 60 percent come from households with income significantly below official poverty level, 60 percent were raised in single-parent household, and that the ethnoracial composition of the U.S. prisons reversed from 70 percent inmates being white at midcentury to almost 70 percent being non-white today (p.79). Wacquant (2010), like Du Bois (1899), stresses the intersectionality of class and race in explanation of contemporary U.S. incarceration trends, saying that "they have been finely targeted, first by class, second by that disguised brand of ethnicity called race" (p. 78) and lastly, by place of residence, which resulted in the overrepresentation in prisons of lower-class fractions of African American dwellers of deteriorating inner-city areas. Wacquant (2001) develops the classical critical ideas expressed by Rusche and Kirchheimer ([1939] 1968) updating them to account for postindustrial economic and neoliberal political realignments, and makes a historical, institutional claim that prisons emerged as the "substitute apparatus for enforcing the shifting colour line" and warehousing "segments of African American community devoid of economic utility and political pull" (p. 103).

To explain the contemporary situation, Wacquant (2001) discusses the history of the legal and institutional arrangements extracting economic value of black labour from slavery to Jim Crow sharecropping to the industrial ghettos of the 1950s and claims that in the post-industrial deregulated economy the black ghetto as an institution became obsolete, both in the sense of economic utility and in a sense of ability to nurture and protect its residents from the outside forces within a nexus of black businesses, churches, and schools. As the last middle-class blacks fled and jobs disappeared, the symbiotic relationship between ghetto and prison developed, as both warehoused the same surplus population and incentivized it to compete for the minimum wages and underemployed status in the deregulated fluid labour market (Wacquant, 2001).

Empirical research operationalizes the underclass hypothesis by measuring the impact of socioeconomic factors such as unemployment, income inequality, and poverty on the incarceration rate and, in regards to the minority threat version of the argument, the percentage of population which is black or Hispanic is used. The link between socioeconomic variables and imprisonment is claimed to be inconsistent and even elusive, overly sensitive to model specifications, while the link between minority presence and incarceration seems to be strong (Pfaff, 2008). In regards to existence of unemployment-incarceration link many studies did not find supporting evidence (Michalowski and Pearson, 1990; Arvanites, 1992; Jacobs and Carmichael, 2001; Smith, 2004; Yates and Fording, 2005; Spelman, 2009). Similarly, in regards to existence of the inequality-incarceration relationship, lack of supporting evidence was reported by several studies (Greenberg and West, 2001; Jacobs and Carmichael, 2001; Smith, 2004). Several

studies also failed to find support for the poverty-incarceration link (Taggart and Winn, 1993, Listokin, 2003; Smith, 2004).

However, a meta-review of 44 studies (Chiricos and Delone, 1992) measuring the effects of unemployment claims that regardless of the mediating effects of crime "labour surplus is consistently and significantly related to prison population and prison admissions when time-series and individual-level data" (p.421) are analyzed. Chiricos and Delone (1992) also suggest that available data on unemployment underreport the phenomena almost by 50 percent due to the removal of discouraged workers from the statistics, lack specificity in regards to describing the underclass, and frequently exclude jail populations which might be more homologous with the unemployed subproletariat fractions of interest than stock prison populations. Overall, aggregate quantitative measures of surplus labour and prison population leave many factors unaccounted for, including "the value of labour, judicial anxiety, moral panic, or punitive ideology … structural needs of capital … indicators of "social dynamite"" (Chiricos and Delone, 1992; p. 432) all of which are crucial for Rusche and Kirchheimer's ([1939] 1968) argument and its reiterations (Spitzer, 1975; Wacquant, 2001).

Findings from Chiricos and Bales' (1991) study analyzing outcomes for 2,773 adult felons sampled from the totality of criminal cases in two Florida counties that were initiated by police and made it to the level of the State's Attorney show a strong positive impact of unemployment on both pretrial and post-trial imprisonment, as well as expected higher odds of imprisonment for unemployed black young men accused of committing violent or public order offenses. Hochstetler and Shover (1997) analyzed data from 269 urban counties in the U.S. over a ten-year period using the residual-change

regression technique and found covariance in a state's use of incarceration in relation to both proportion of the young male (20-34 years of age) demographic group and the reserve labour army (i.e., the surplus population measured by unemployment rate) independent of fluctuations in street property crime (though violent crime was significantly related), percent of non-white residents, residents in poverty, and average income. D'Alessio and Stolzenberg (2002) found that city-level unemployment is a mediating variable between individual employment record and pretrial imprisonment, so that, in cities characterized by high unemployment, jobless individuals charged with armed robbery and burglary had higher odds of pretrial detention controlling for contextual and individual variables, yet Spitzer's (1975) "social dynamite" thesis was not supported and jobless black defendants were not more likely to be incarcerated prior to trial in cities with high unemployment.

Studies operating on higher levels of analysis also provide supporting evidence of an unemployment-incarceration link. Lessan (1991) analyzed time series between 1948 and 1985 and found that inflation and unemployment rates for African American and white men have a positive impact on incarceration rate trends (calculated as combined federal and state prison population rate) even when violent crime, age structure of the population, and cell capacity are held constant. The findings are interesting given that this is one of only a few studies explicitly taking into account the possibility of simultaneous crime-incarceration and incarceration-crime links (Lessan, 1991). Grimes and Rogers (1999) found that in Mississippi state-level unemployment positively impacts admissions and that a 1 percent increase in the former leads to a 2 percent "increase in the monthly net flow of state inmates within two years" (p.754). Greenberg and West (2001) analyzed

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panel data for 1970, 1980, 1990 and found that unemployment had a significant positive effect on state-level imprisonment rates. Sutton's (2010) cross-national study analyzing a time-series spanning from 1960 to 2000 for 15 developed Western democracies found significant relationship between unemployment and imprisonment rate calculated as combined population of convicted offenders and those awaiting trial.

Economic inequality seems to be associated with state incarceration rates as well (Jackson, 2009). Arvanites and Asher (1995) found that economic inequality is positively related to state-level incarceration rates and its indirect effect (through crime, hypothesized as the outcome of diminished educational and occupational prospects) was stronger than the direct effect (hypothesized as perceived economic underclass threat). Arvanites and Asher (1998) also found that, controlling for crime, income inequality was positively associated with total state incarceration rates defined as state plus local jail population (though overall direct effect of crime was stronger than direct effect of inequality) (p.216), and county jail incarceration rate as well. Interestingly, in the county jail model the total effect of inequality and proportion nonwhite was stronger than that of crime, but authors explain it away as a product of multicollinearity since opposite results were reached for total state incarceration model and the state prison incarceration model (Arvanites and Asher, 1998).

Jacobs and Helms (1996) compiled a time-series for 1950 – 1990 and found a significant influence of economic inequality operationalized as variance of incomes on combined federal and state admission rates. Going beyond the use of the Gini coefficient, Jacobs and Helms (1996) computed the income variance as measure sensitive to the presence of the rich individuals with the data from Current Population Survey and

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Internal Revenue Service due to the fact that IRS data are more specific setting the highest annual income bracket as 1 million dollars and up while early CPS established 25,000 dollars and up as the highest income bracket. Jacobs and Helms (1996) claim that variance of income measure is associated with the proportion of individuals in the two upper income categories while the Gini index better accounts for the proportion of individuals in lower income categories and the gap between middle-income earners and the poor. The Gini coefficient was not significantly associated with incarceration while variance of incomes was, and this finding has important theoretical implications as it is consistent with predictions about the use of incarceration to manage tensions in a society marked by sharp economic division and hardening class lines (Jacobs and Helms, 1996).

Poverty also might be associated with incarceration, and research seems suggestive of regional differences and historical contingency of the relationship. Arvanites (1992) analyzed state-level data for 1980 and 1988 and found that poverty was positively related to the state imprisonment rate in 1980 yet the relationship reversed and became negative in 1988. A separate analysis splitting southern states and non-southern states revealed that in the latter poverty was not associated with state incarceration rate either for 1980 or for 1988 (Arvanites, 1992). Beckett and Western (2001) studied welfare and prisons within the same framework of management of marginalized populations and found a significant relationship between poverty and state incarceration rate which also grew stronger over time from being very weak, almost non-existent in 1975 to weak positive in 1985 and strong positive in 1995. Interestingly, state welfare generosity was negatively related to incarceration and the relationship also grew stronger over time, which is interpreted as the emergence of a new penal-welfare regime (parallel

with Wacquant's (2001) argument), in which certain states shrink welfare programs while relying more on imprisonment (Beckett and Western, 2001). Also, poverty seems to impact both white and black incarceration rates, and a measure of poverty rate disparity was significantly related to black and white discrepancies in state-level prison admissions (Yates and Fording, 2005). Finally, states with higher income per capita seem to incarcerate fewer inmates (Stemen and Rengifo, 2011).

Race is linked with a variety of criminal-justice processes and outcomes, but this section is confined to a review of macro-level studies testing the minority presence effects on state-level incarceration. Arvanites (1992) suggests that "percent black was not only the strongest predictor of imprisonment rates … but its impact increased between 1980 and 1988" (p.38). McGarrell (1993) claims that controlling for violent crime and excluding southern states from the analysis percent black is still positively related to incarceration rate "whether of attempts to control surplus population or because of cultural beliefs and attitudes towards punitiveness" (p.22) and interprets the findings as supportive of the conflict perspective on crime and punishment. Arvanites and Asher (1995) analyzed 1990 cross-sectional state-level data to test the conflict perspective stipulating that minority presence has a direct impact on incarceration rate (hypothetically via creating a cultural conflict or perceived threat to the racial control of economic and political resources) or an indirect impact (through crime) and found that "percent nonwhite has a significant and direct effect on imprisonment levels across the U.S. but less of a direct effect in nonsouthern states" (p.27). Arvanites and Asher (1998) report anomalous results i.e., "no clear evidence of a direct race effect" as "indirect effect was greater than direct effect in four of the six equations" (p.214) which they interpret as

supportive of the instrumental, functionalist perspective rather than the cultural conflict or minority threat perspectives.

Contemporary studies using more sophisticated methodologies report results concurring with earlier studies. Greenberg and West (2001) analyzed panel data (which is superior to cross-sectional as it allows one to analyze actual rather than inferred change) at three points in time, in 1970, 1980, and 1990, and found that gender-specified measure of black population i.e., percent of black men, is significantly and positively related with state imprisonment rates, including those serving a sentence of at least 12 months. Contextual effect might be in place as the relationship between percent of black males and incarceration is weaker in states with a large proportion of black residents, and the results are consistent with both presence or absence of racial bias, as both whites and blacks alike seem to be incarcerated at higher rates in the states with larger black populations (Greenberg and West, 2001, p.639-640).

Jacobs and Carmichael (2001), in a pooled-time series studying 150 state-years from 1970, 1980, and 1990, found that not only percent black but also percent Hispanic have significant positive effects on state imprisonment rates and that the effects are historically contingent as they get stronger in 1990. Beckett and Western (2001) find evidence of historical contingency as well, as percent nonwhite has an overall positive impact on incarceration but no or negative impact in 1975 and 1985. Stemen and Rengifo (2011) also tested for dual minority threat, but unlike Jacobs and Carmichael (2001), they found that only percent black but not percent Latino is significantly related to state-level incarceration rates in a time-series between 1978 and 2004. Smith (2004) showed similar results in a time-series between 1980 and 1995 as the minority threat, operationalized as a

percent of black state residents was significant, while none of the socioeconomic threats were significant. Nicholson-Crotty (2004) utilized a fixed-effects technique (which controls for influence of alternative variables not directly specified in the model) to analyze a pooled time-series for 1975-1998 and found that percent of black residents in a state was significantly and positively associated both with prison admissions and incarceration rates, and called for a study of incarceration rates disaggregated by race.

Some discord exists in the literature in regards to the impact of the size of the black population on the discrepancy between disaggregated black and white imprisonment rates and relative levels of imprisonment rates. Oliver (2011) asserts that states with larger black population have lower black imprisonment rates, and Oliver and Yocom (2004) claim that states with smaller black population have greater black-white prison admission discrepancies, which is contrary to the minority threat hypothesis (predicting that the larger the minority group the stronger the perceived threat resulting in higher admissions and incarceration). Yates and Fording (2005) report that percent black has positive impact on black imprisonment rate, as predicted by minority threat argument, yet percent black has negative impact on black / white imprisonment rate disparity, suggesting that states with smaller African American populations over-incarcerate African Americans relative to whites, contrary to the minority threat argument. Keen and Jacobs (2009) resolve the confusion by employing fixed-effects analysis eliminating alternative explanations and find existence of an "inverted, U-shaped, nonlinear" (p.209) interactive relationship between the size of black population and black/white prison admissions. Racial arrest differences for property and violent crime do explain some percent of variance in the dependent variable, as well as certain political contexts, but

even controlling for that percent black is associated with admission discrepancies (Keen and Jacobs, 2009).

Several studies failed to find any significant relationship between minority presence and incarceration rates (Jacobs and Helms, 2001; Stucky, Heimer, Lang 2005; Spelman, 2009). In the first study indicated above the measure of total nonwhite population was used (Beckett and Western, 2001 also report weak results using similar measure which they explain by low incarceration rates of Asian Americans), in the second study the percent black was found nonsignificant, and neither percent black nor percent Hispanic was associated with incarceration in the last study, questioning the validity of minority threat hypothesis. Cross-national studies also report mixed results. Ruddell (2005) studied cross-sectional data for the 100 richest nations and found that countries with heterogeneous population did have higher incarceration rates. Sutton (2010) analyzed a time-series for 15 rich, developed countries and did find a positive effect of minority presence on incarceration but once the indicators of discrimination were added to the model in order to fully test the conflict argument the relationship actually becomes negative, suggesting that higher minority oppression results in lower imprisonment which seems to be an artifact of contemporary time trends in the data and the disappearance of legalized discrimination (which the measures capture) since the World War II in the context of skyrocketing imprisonment. This prompts Sutton (2010) to question whether percentage of minority can be used as a valid measure of group conflict (p.10) and to doubt if the status of "subaltern" ethnoracial groups, including indigenous people and immigrants, and the degree of conflict in different societies are adequately captured by such a generic measure (p. 12).

Literature on Democracy in Action Argument

It may be that incarceration is neither a utilitarian instrumental reaction to crime nor an attempt to manage tensions between socioeconomic and ethnoracial groups in a society but an expressive social policy sensitive to public ideological and cultural world views. Garland (2001) offered a multidimensional grand narrative of the crime control transformation in the U.S. and England which designated public opinion as the principal source of the shift. The full theoretical model suggests that two sets of factors underlie the change, namely the socioeconomic and cultural symptoms of late modernity on one hand, and political as well as policy realignments associated with the rise of neo-liberalism on the other hand. The first group of factors, among other things, radically increased exposure of both poor and middle-class individuals to crime in the course of their daily lives due to shifts in routine activities patterns, female workforce participation, increased opportunities for crimes, and the decreased cohesion of informal communal and situational control. Garland (2001) does not share the billiard-ball positivist reaction to crime increase, though, suggesting instead that broad cultural adaptation and political reinterpretation of crime control issues occurred within a wide context of diffuse anxieties and uncertainties of modern life resulting in dethronement of the rehabilitative paradigm that sought to alleviate individual or social deficiencies which lead to crime. What emerged instead was a diverse, and somewhat contradictory, constellation of policies aimed at control of the offender who was simultaneously redefined as a rational agent making a criminal choice and bearing complete personal responsibility. In this account, the middle-classes can be either seen as drifting rightward on the political

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spectrum or at least ceasing to actively support welfarist and rehabilitative strategies, resulting in subsequent policy shifts (Garland, 2001).

American exceptionalism, allegedly embodied in the U.S. Constitution and governmental structure, is a pertinent issue for understanding of relationship between democracy and crime (Christie, 2001; Tonry, 2009). The U.S. constitution was written in the context of a struggle against a tyrannical monarch and a remote, unaccountable parliament, hence localization, decentralization, and a complex system of checks and balances were seen as solutions, allowing for influence of the populace on a variety of issues including those of criminal justice (Black, 1988). Contemporary America is the only developed country which holds lay partisan elections for judges, and Switzerland is the only other developed country allowing lay elections for prosecutors besides the U.S. (Tonry, 2009). In addition, the contemporary American political system operates more on adversarial, conflict principles with single-member districts, single-party governments in a bipartisan system, rather than on proportional, cooperative principles within a multiple party system (Tonry, 2009). These factors make American criminal justice more responsive directly to the voting majority, as well as indirectly, via governors and other political representatives. In Europe, criminal justice is a sphere with limited popular input, as it is seen as the domain of pragmatic experts and independent judges, who are assumed to be less prone to emotive retributive responses, and are remote from political pressures to be able to demonstrate "tolerance from the above," especially since some of them experienced incarceration or internment (Christie, 2000, p.55).

Two distinct views on the relationship between the democracy and penal policies exist, one problematizing the very notion of punishment in a democracy (Bosworth,

2010) and the other stressing the opportunities for agency offered by democratic process (Barker, 2009). Bosworth's account (2010) tracing the evolution of scientific debates, actual correctional practices, and juxtaposing these with lived experiences of inmates is very critical of imprisonment, which is seen not as some peripheral phenomenon but the very expression of sovereign power of the state, emphasizing continuities in the use of exclusion and sensory deprivation throughout the history of American democracy, from the early Protestant prisons aiming at religious conversion of inmates to the contemporary diversified carceral constellation isolating illegal immigrants and suspected foreign combatants. Bosworth (2010) is critical of a democracy de facto relying on consistent segregation and inclusion on subordinate terms of de jure equal populations, her analysis is Foucauldian in that it questions the power to punish and its proper role in the realization of a substantively inclusive democratic social order, especially in the face of globalization and its geopolitical discontents.

Barker's (2009) account contextualizes democracy as an idea in concrete forms of collective agency and governmental structures in a comparative analysis of three American states, and emphasizes the potential opportunities democracy offers for meaningful civic input which can have profound impact on the criminal justice policy outputs. California's political structure is decentralized which theoretically allows input from diverse grass-roots organizations, yet the initiative process is often used as a mechanism for translating public will into policy, and it is prone to sloganization and dichotomization of complex social issues into binary yes/no vote so single-issue advocacy groups thrive in such an environment which results in polarized political participation and penal populism (Barker, 2009). On the other hand, Washington state

political structures are more horizontal and inclusive, conducive to deliberative democracy and in the context of high social capital and a functional civil society, minimalist penal policies emerge, which seek to use the least amount of coercion and reintegrate rather than stigmatize (Barker, 2009). Empirical research supports this point, as half of the difference in incarceration rates between California and Washington is attributed to differences in welfare generosity (Becket and Western, 2001). New York carries out criminal justice decision-making in commissions dominated by specialists highly insulated from public input, yet this technocratic pragmatism has resulted in a differentiated set of penal policies, emphasizing incarceration for recidivists and violent offenders, treatment for drug users, and intermediate, community-based penalties for trivial offences (Barker, 2009). Thus, inclusive political participation and informed deliberation, for Barker (2009), is a check against penal excesses.

Beckett and Godoy (2008) interpret the shift to punitiveness as a backlash against the extension of formal legal rights to groups previously excluded from full participation in the democratic process. In a grand narrative resembling these of Garland (2001) and Wacquant (2001), Beckett and Godoy (2008) suggest that incarceration growth is integral to the policies of neoliberalism and is, among other things, an attempt to deal with the social fallout of economic crises and deregulation. In particular, the authors describe specific developments enabling that punitiveness – namely, the popular support for tough-on-crime rhetoric among status-anxious groups concerned about their legal, symbolic, and economic standing as women, ethnoracial and sexual minorities are gaining legal rights and the dynamics of globalization are dissolving boundaries, allowing for the free movement of commodities and people (Beckett and Godoy, 2008). In this

context, public support for punitiveness is a part of nostalgia for the pre-anomic days of real or imaginary gemeinschaft, and an attempt to resurrect it by hollowing out the legal and political gains of previously marginalized groups. This is accomplished by politicizing disorder and crime and designating marginalized individuals as culprits.

Manza and Uggen (2006) developed an analogous expansion-contraction argument in their quantitative historical study of disenfranchisement showing that it was originally reserved for only those convicted of high crimes such as treason, yet in post-Civil War America disenfranchisement was extended to regular felons to deprive ex-slaves of newly won liberties, based on the fact that a large black population in a state was the strongest predictor of the enactment of disenfranchisement laws, and suggesting that the echo of racism and classism can be recognized in recent expansion of disenfranchisement in six states to include misdemeanor offenders. Miller (2008) identified a subtler but crucial form of political exclusion in her study of crime control policy formulation at the federal, state, and local levels. Her analysis of the witnesses allowed to testify at policy hearings show that both at the U.S. Congress and the Pennsylvania state legislature, federal law enforcement agency representatives as well as single-issue advocacy groups vocalizing law-and-order rhetoric were prevalent, while only at the local level in Philadelphia and Pittsburg did wider-focused citizen groups have a strong voice, which resulted in a paradoxical situation where the individuals who were most impacted by law enforcement, i.e. urban residents, had little or no influence on the formulation of policy at the national and state levels (Miller, 2008).

Many of the abovementioned addressed the vague anxieties, nostalgic sentiments and corresponding politicization of incivilities and crime within a perceived disorderly

world of routine exposure to victimization in which sympathetic rehabilitative solidaristic responses were lacking public support while narratives of personal responsibility, rational choice, and retribution were ascending (Carrier, 2010). Crime became an object of intense ideological debate, and also a metaphor for a nexus of social issues at the core of American society, where opinions about appropriate penal responses are divided across class, race, and cultural lines (Finckenauer, 1978; Gordon, 1994; Costelloe, Chiricos, and Gertz, 2004). Bobo and Johnson (2004) found that black and white respondents, for example, differ in their punitiveness as measured by support for the death penalty and war on drugs, with blacks being less punitive than whites partly due to their belief in the unfairness of the criminal justice system, and racial prejudice having a large effect on white punitiveness, and to a lesser extent, on black punitiveness. Religious beliefs also have an influence on matters of crime and punishment, with studies suggesting that conservative protestants do not differentiate crime by seriousness, treating it all as morally wrong, and that members of all Christian denominations are more punitive, as measured by support for the death penalty, than non-believers (Curry, 1996; Wozniak and Lewis, 2010), even though evidence of compassion and support for rehabilitation among believers exists as well (Applegate et al., 2000; Unnever et al., 2005)

Citizen ideology also is associated with a variety of criminal justice attitudes, processes and outcomes. Langworthy and Whitehead (1986) found that liberals are less likely to support punitive measures than conservatives. Huang et al. (1996) found that political conservatism of jurisdiction, measured by percentage supporting Republican presidential candidates, is associated with courts issuing sentences of greater length to violent offenders. Percival (2010) analyzed county-level data in California and found that

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increase in population conservatism corresponds with higher incarceration rates for black and Hispanic offenders. Some research reports supportive evidence of citizens ideology's impact on state-level incarceration (Taggart and Winn, 1993; Greenberg and West, 2001; Jacobs and Carmichael, 2001; Sorensen and Stemen, 2002; Jackson, 2009) though other studies do not find consistent significant association between these variables (Smith, 2004; Fording and Yates, 2005; Stucky, Heimer, and Lang, 2005; Schneider, 2006; Spelman, 2009; Stemen and Rengifo, 2011).

Taggart and Winn (1993) found that liberal ideology of state population measured by percent of vote for liberal presidential candidate in 1972 elections was significantly and negatively associated with state-level incarceration rate in the bivariate analysis of cross-sectional 1984 data yet the relationship disappeared in the multiple regression. However, the measure of state political culture, a nine-point scale indicating moralistic-traditionalist cultural continuum, remained significant in multiple regression, with traditionalist states being the ones in which the role of government was seen primarily in terms of order maintenance (Taggart and Winn, 1993). Greenberg and West's (2001) panel analysis, operationalizing citizen ideology as a percentage of politically conservative population in each state from 51 CBS News-New York Times polls, and also using a percentage of population in each state affiliated with denominations literally interpreting the Bible, found that both measures were independently positively associated with state-level incarceration rates, suggesting that conservative political and fundamentalist values of the citizenry might have effect on levels of punishment.

Jacobs and Carmichael's (2001) time-series study utilizing fixed effects and random effects analytic techniques found, consistent with Greenberg and West (2001),

that both measures of citizen ideology on a liberal-conservative continuum and Christian fundamentalism, are significantly associated with state-level incarceration (conservatives and fundamentalists being associated with higher incarceration rates). Jacobs and Carmichael (2001) used Berry et al.'s (1998) multidimensional measure of ideology changeable over time, which included ratings of state congressional representatives, state-level election data representing ideological splits, party presence in state legislature and partisan control of governor's office. Sorensen and Stemen (2002) also found supportive evidence for the positive association of conservative citizen ideology with state-level incarceration rates and admission rates using Berry et al.'s (1998) measure, while government ideology (but not citizen ideology) was associated with drug offender admissions. Finally, Jackson (2009) found significant negative influence of citizen liberal ideology on incarceration rate in every model including these variables.

Literature on the Partisanship Hypothesis

Perhaps incarceration is not an instrumental response to crime, nor an attempt to manage ethnoracial or economic tensions in a given society, nor even an expressive response to public ideological views on crime but a social policy consistently implemented by the Republican Party. Republican officials and politicians may favour incarceration as it is consistent with their agenda emphasizing individual responsibility and retributive justice for street criminals, or, as is suggested by some researchers, increased law and order rhetoric and the use of incarceration is a pragmatic attempt to resolve an electoral handicap due to the limited pool of voters benefitting from right-wing economic policies and to gain support of less-affluent voters (Finckenauer, 1978; Scheingold, 1991; Costelloe, Chiricos, and Gertz, 2004; Jacobs and Jackson, 2010). A

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time-series analysis of fluctuations in the salience of crime in the Gallup polls found that, controlling for crime rate and media coverage, public concern with crime actually lagged behind politicians' pronouncements on the issue, which is suggestive of the important role of law-and-order rhetoric initiated by Republican politicians in the mid-1960s as an explanation of the subsequent skyrocketing rates of incarceration (Beckett, 1997).

Sociological literature suggests that Republican Party politicians consistently employed tough-on-crime rhetoric in the post-World War II era (Finckenauer, 1978; Tonry, 2009). Hofstadter (1965), a consultant for Goldwater in 1952 and 1958, wrote that conservatives know "how much political leverage can be got out of the extreme animosities," even acknowledging that such divisive and paranoid style of politics is "not always right-wing in affiliation" (p. 3). Hofstadter (1965) spoke of the entrenchment of paranoid discourses in American politics and that many leaders do not view "social conflict as something to be mediated and compromised" but rather as a "conflict between good and absolute evil" (p.31) and stated that Goldwater broke with the legacy of Republican party which historically allied itself with blacks and reoriented towards white voters by rhetorically coupling urban unrest and racial issue with crime. Goldwater made law-and-order a central theme in his 1964 campaign, second only to the government's role in creating a conducive atmosphere for free enterprise, and repeatedly made allusions to civil unrest and crime, speaking of "violence in our streets … growing menace in our country tonight, to personal safety, to life, to limb and property" (Schneider, 2003, p.242) and suggesting programmatically that "moderation in pursuit of justice is no virtue" (p. 245).

Phillips, who served as a special assistant to Nixon's campaign manager in 1968, wrote a controversial book in 1969 which directly spoke of electoral advantages derived from regional, religious, ethnoracial divisions and claimed that these were instrumental in creating a conservative majority for the years to come, suggesting that anti-black sentiments will channel urban Catholics and white blue-collar workers into the Republican Party. Phillips (1969) talked about racial polarization as being politically fruitful, predicting that this strategy will lead to weakening of the Republican Party in the Northeast but that this would be offset by the gains in the South and West. Although the book stated that the ideas it contained by no means corresponded to official presidential campaign strategy, some commentators suggested that a dramatic discrepancy would be unlikely, given Phillips' lead position in the campaign and his subsequent service in the Justice Department, under the same Nixon campaign manager John Mitchell, who emerged as Attorney General (Weaver, 1969). A combination of racial polarization and tough-on-crime rhetoric turned out to be effective, as Nixon won presidency, and the same approach, exemplified by the electoral use of black murderer and rapist Willie Horton, helped George H.W. Bush defeat Michael Dukakis in 1988 (Jacobs and Jackson, 2010).

Republican politicians kept their promise of harsher sanctions, as research shows supportive evidence of the link between Republican strength and incarceration or admission rates (Jacobs and Helms, 1996; Beckett and Western, 2001; Jacobs and Carmichael, 2001, Sorensen and Stemen, 2002; Smith, 2004; Stucky, Heimer, and Lang, 2005; Yates and Fording, 2005; Keen and Jacobs, 2009; Stemen and Rengifo, 2011). In a broader sense, Republican strength is seen as tied to a variety of criminal justice

processes and outcomes, including the legality of the death penalty in a given state, the number of prison sentences, higher execution odds for convicts on death row, longer sentences for black defendants, longer sentences for juvenile offenders, and lower likelihood of enactment of bills reducing reliance on incarceration (Jacobs and Carmichael, 2002; Weidner and Frase, 2003; Jacobs et al., 2007; Helms and Costanza, 2010; Carmichael, 2010; Brown, 2012).

Jacobs and Helms (1996) found that, on the national level, Republican strength was significantly positively associated with combined federal and state admission rate lagged by one year in their analysis of annual time-series for a period between 1950 and 1990. Republican strength was operationalized as a cumulative scale taking into account the presence of Republican politicians in the senate, congress, and the White House, as well as the percentage of Gallup polls respondents who self-identified as Republicans, quantifying both national and state-level dimensions of phenomena. Jacobs and Helms (2001) ran a similar time-series analysis for 1950-1990 and found that combined federal and state incarceration rate lagged by two years is significantly and positively associated with presence of a Republican president and also with a measure of consecutive Republican presidential terms supporting the partisan hypothesis and suggesting that the longer a GOP president stayed in office the higher was the incarceration rate, even though in the last years of the time-series the incarceration growth was fading.

On the state level, where the bulk of the incarceration takes place, Republican strength defined by presence of a Republican governor and percentage of Republicans in state legislatures, again positively impacts the state imprisonment rate, controlling for violent crime, in the analysis of 150 state-years from 1970, 1980, and 1990 (Jacobs and

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Carmichael, 2001). Beckett and Western (2001) arrive at similar conclusions as the percentage of Republicans in state legislatures was positively associated with incarceration rates in 1975, 1985, and 1995. Smith (2004) concurs with previous results, suggesting also that for each Democratic member of a state legislature, the incarceration rate goes down by seven inmates per 100,000 of population though also claims that Republican control of a state's governor's office is not associated with incarceration (which is counterintuitive). Stucky, Heimer, and Lang (2005) provide analogous findings in their analysis of annual time-series for 1978-1996, where the percentage of Republican legislators but not Republican governors influences admissions to prison. However, the relationship between Republican Party legislators and admissions is contingent on electoral competition, with higher incarceration in jurisdictions with higher competition and little effect of Republican legislators on admissions in low competitive districts, which is consistent with the overall premise of the partisanship argument, but also adds contextual specificity rather than portraying Republicans as indiscriminately punitive (Stucky, Heimer, Lang, 2005).

Race is another variable which adds specificity to the partisanship hypothesis. It seems that political variables have more impact on black rather than white incarceration rates, since Republican legislatures, Republican governors, and judicial conservatism positively impact black rates, as well as black-white incarceration disparity, while only the presence of Republican governor was positively associated with the white rate where the effect was seven times smaller (Yates and Fording, 2005). Interestingly, the effect of Republican legislature, Republican governor, and judicial conservatism faded as the relative size of the state population that is black increased, which is contrary to the

minority threat hypothesis, but the authors suggest that once blacks become a substantial

voting block, the effects of partisanship and conservative elite on incarceration rate are

diminished (Yates and Fording, 2005). Keen and Jacobs (2009) criticize the notion of a

linear negative relationship between the black population size and prison admissions,

suggesting instead that a "inverted, U-shaped, nonlinear relationship" (p.209) exists, but

they also point out the significance of Republican strength in predicting racial disparity in

prison admissions, even while controlling for conservative ideology. Keen and Jacobs

(2009) use a different approach in defining Republican strength, employing a percentage

of vote for Republican presidential candidate which was significant, while Republican

governor presence was nonsignificant, which they explain by the "heavy emphasis

Republican presidential candidates placed on racial code words in their law-and-order

campaigns" (p.230).

Spending on corrections seems to be the specific mechanism linking Republican

strength with incarceration. Caldeira and Cowart (1980) found that GOP presidential

administrations expended more funds on corrections and criminal justice compared to

their Democratic counterparts. Stucky, Heimer and Lang (2007) validate that claim on the

state level as they found that percentage of Republicans in a state legislature is positively

associated with spending on corrections, while governors had no such impact. Spelman

(2009) further solidified the findings of previous research, suggesting that spending

explains 30 percent of the variance in total prison population under state jurisdiction,

including private, federal and local jail populations, and suggesting that political

variables such as Republican control of legislature increase spending, which goes into the

creation of additional prison capacities. Brown (2012) adds also that the odds of enacting

incarceration-reducing bills' are lower in states with a strong GOP presence in their legislatures and that exhibit a greater dependence on federal money to operate state corrections. Recent research focuses on alternative mechanisms, namely on influence of Republican-dominated political contexts on prosecutorial plea bargaining behaviour and on judicial sentencing behaviour, suggesting that the proximity of elections is associated with increased conviction odds and less dismissals by prosecutors, and that the proportion of county votes for Republican state attorney and temporal closeness of judge's election have a positive nonlinear impact on harshness of sentence (Dyke, 2007; Huber and Gordon, 2004).

Literature on Electoral Cycle Argument

Perhaps incarceration is not an instrumental response to crime, but a social policy which is implemented by both parties during the election cycle to broaden their appeal to voters. If Durkheim ([1893] 1972) was right that crime has a potential to increase group solidarity as definitions of and responses to crime are based on strongly defined sentiments shared by the members of a given society, then such a consensus can be an attractive electioneering device for either party. Caplow and Simon (1999) assert that any candidate for political office in the U.S. has to portray her/himself as committed to harsh penalties for street criminals in order to be electable. Chevigny (2003) suggests that fear of crime is a potent fuel for political campaigns especially in unequal societies characterized by an incapacity or reluctance of government to use ameliorative social policies. Enns (2010) claims that the American public is punitive, and that this factor explains the growth in federal, i.e., nationwide incarceration rates between 1953 and 2003, even controlling for crime rate, economic inequality, drug use, and party in power,

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suggesting that Republicans and Democrats were both receptive to retributive collective sentiments.

However appealing linear narratives of universal public punitiveness may be, a detour is in order as the research shows more complexity and ambiguity on the issue. Cullen, Fisher, and Applegate (2000) argue that the public does support or even favour harsh sanctions but that there is a lot of ambiguity and willingness to downgrade penalties, as well as wide support for intermediate sanctions if no violence was involved and the offender is young and shows potential for normalization. Tyler and Boeckmann (1997) found that support for the "three strikes and you are out" habitual felon law in California had less to do with fear of crime and perceptions of dangerousness and more with classical Durkheimian concerns about the moral cohesion of society, traditional family roles, and growing diversity (this factor was equally salient among whites and minorities, suggesting perhaps that ethnocentrism is a better explanation rather than racism per se). Roberts (1992) concedes that the public does support punitive sanctions yet that it is no more punitive than the judges and that politicians overestimate public punitiveness.

Wacquant (2010) points out that contemporary situation with incarceration is a "bipartisan achievement" as the growth was "uninterrupted by changes in political majorities in statehouses, Congress, and the White House" (p.77). In reexamining the legal and political roots of the growth, other literature recognizes the salience of the Safe Streets Act of 1968, which "from its inception … was controlled by an emerging coalition of southern Democrats and western Republicans who shared a social conservatism and growing anxiety about crime" (Simon, 2007, p.92). The Act passed

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almost unanimously, allocating generous financial streams in the form of block grants to the states modernizing their police and corrections in line with 1967 President's Commission on Crime vision emphasizing law enforcement use of technology and offender rehabilitation (Simon, 2007). The next paradigmatic piece of legislation is the Violent Crime Control and Law Enforcement Act of 1994, which allocated over $9 billion in prison funding and called for an additional 100,000 police officers to strengthen the force (U.S. Department of Justice, 1994). Both the 1968 and 1994 laws were passed in a Democratic-dominated Congress and with Democratic president, in the context of extreme electoral competition and a Republican revanche, as in 1968, six months after the law passed, Republicans won the presidency, and in 1994, just a few days after that law's enactment, Republicans gained majority in the House of Representatives for the first time in 40 years, and also captured the Senate (Simon, 2007). The fact that both bills were passed in the midst of presidential or congressional campaigns lends tentative face validity to the electoral cycle hypothesis.

Empirical research suggests that, on the national level, there is support for the impact of electoral cycle on incarceration. Jacobs and Helms (1996) found a significant positive impact of a dummy variable designating presidential election year on cumulative federal and state prison admission rate in their time-series for 1950-1990 which was nonpartisan in nature i.e. not-contingent on the partisan orientation of the presidential election actual winner. This was explained by adoption of law-and-order stance by Democratic Party presidential candidates due to its popularity with voters. The finding of significant positive nonpartisan effect of presidential election year was replicated with a less volatile dependent variable than prison admissions, namely with cumulative federal

and state imprisonment rate, and research suggested that during national campaigns candidates can not risk appearing soft on crime (Jacobs and Helms, 2001).

Research suggests that mechanisms of presidential impact on imprisonment include allocation of money for criminal justice issues, presidential agenda setting power residing in rhetorical salience and frequency of crime issues in speeches, and also presidential influence on congress (Caldeira and Cowart, 1980; Marion, 1992; Oliver, 2003). Interestingly, Marion (1992) found that though "Reagan and Bush have each made more speeches than any other presidents, neither party stands out as being more concerned with crime than the other" (p.169) and that there was no conclusive evidence that there are more crime-related speeches during election years compared to non-election years. Oliver (2003) found that a presidents' activity on crime has a significant temporally lagged impact on Congressional committees' crime-related hearings. Also, Oliver and Marion (2006) replicated Caldeira and Cowart (1980) study and showed that presidential allocation of finances to criminal justice is becoming less substantive than in the past, i.e., less contingent on crime rates, and "more symbolic and is often a gesture used by presidents to gain political and popular support" (p. 451). Spelman (2009) further strengthened that argument by demonstrating a strong positive impact of presidential election cycle on correctional spending.

Since presidential debates are symbolic and significant part of crime politics is local (Zimring and Hawkins, 1991) additional validation of the electoral cycle hypothesis is given by supportive state-level results (Smith, 2004; Yates and Fording, 2005). Gubernatorial election cycle significantly and positively impacts incarceration in Smith's (2004) study, while presidential election cycle has no effect on state-level incarceration,

and the author claims that previous research has misinterpreted state-level effect for national-level effect, as only the 1980 presidential election year was significant and negative in the analysis. Further support for state-level election effect and important theoretical refinement comes from Yates and Fording (2005), who found that gubernatorial elections have positive significant effects on black incarceration rates but no such effect on white incarceration rates. Spelman (2009) reported anomalous results as neither presidential nor gubernatorial electoral cycle was associated with state-level incarceration rates.

Oliver (2010) found that both parties adopt tough-on-crime stances and that ideology does not matter, but partisan control of government and electoral competition do, with higher competition associated with higher incarceration for black state residents. Marion, Smith and Oliver (2009) concur stating that "Republican governors did not devote more of their speeches to crime issues" (p. 469), that governors from both parties were equally likely to use symbolic rather than concrete language and "Democratic governors did not support more liberal anticrime policies than Republicans" (p. 471). Interestingly, state-level gubernatorial electoral cycle did not impact correctional spending nor did presence of a Republican governor, yet "district level competition is marginally related to spending" (Stucky, Heimer, Lang, 2007, p.114). Spelman (2009) also found no evidence of gubernatorial election cycle effect on correctional spending. Unah and Coggins (2010) suggest that gubernatorial rhetoric strongly impacts imprisonment rates controlling for crime rates, unemployment, police capacity, and state ideological climate, but in a manner contextualized by governors' institutional power since strong governors have multiple channels of influence on incarceration policy such

as funding requests, rejection of bills, and liaisons with various administrators and governmental bodies. Punitive gubernatorial rhetoric, as research suggests, sets the agenda for the operation of the entire state criminal justice system which responds, judging by incarceration rate, regardless of the crime rate (Unah and Coggins, 2010).

Literature on Criminal Justice Policy Hypothesis

Criminological research suggests that the prison population is influenced by a myriad of internal criminal justice factors, including the certainty of arrest and odds of conviction, as the criminal justice system operates in a manner of a funnel whereby only 1 out of 100 felonies result in a conviction and prison time (Zimring and Hawkins, 1991; Blumstein and Beck, 1999). It may be that punishment is an artifact of criminal justice policies and available institutional alternatives rather than an instrumental response to the reality of crime or crime as a constructed social issue. Literature shows that in late 1970s state legislatures as well as the U.S. Congress began enacting laws constraining the discretion of judges in regards to sentencing and the discretion of other actors in the criminal justice system (Tonry, 1999) so that indeterminate sentencing policies were increasingly replaced by various structured sentencing policies. By 1996, 14 states adopted determinate sentencing versus 36 states with indeterminate sentencing, and by 2002 17 states had adopted determinate sentencing, while 18 states adopted presumptive sentencing, and 8 states operated via voluntary guidelines (U.S. Department of Justice, 1996; Stemen, Rengifo, Wilson, 2005).

In general, determinate sentencing is characterized by a "fixed term … and a set release date with no review by an administrative agency (parole board)" (U.S. Department of Justice, 1996, p.1) and presumptive sentencing can be either determinate

or indeterminate but constrains judges' decision-making via either offense-centered systems or "grid-based guidelines" (Engen, 2009, p.323) which demand the judge to substantiate any deviation from the range of pre-established sentences in writing and establish appellate examination of the deviation (U.S. Department of Justice, 1996). Criminologists suspected that the shift from indeterminate to determinate sentencing might have consequences for the size of prison population, perhaps via increased admissions or increased time served for the average offender, and the removal of releases contingent on parole boards (Blumstein, 1988; Zimring and Hawkins, 1991; Cristie, 2000).

In general, sentencing is an important determinant of incarceration. Blumstein and Beck (1999) found that 88 percent of the incarceration growth between 1980 and 1996 is attributable to the increasing likelihood of conviction to real prison time and the increasing length of the sentences while only 12 percent of the growth is explained by crime rate increase. Empirical research demonstrates that determinate sentencing is associated with changes in state-level incarceration (Marvel, 1995; Marvel and Moody, 1996; Greenberg and West, 2001; Jacobs and Carmichael, 2001, Smith, 2004; Nicholson-Crotty, 2004; Yates and Fording, 2005; Stemen and Rengifo, 2011). Some research found determinate sentencing to be nonsignificant in regards to state-level incarceration (Taggart and Winn, 1993; Sorensen and Stemen, 2002; Stucky, Heimer, and Lang, 2005; Zhang, Maxwell, and Vaughn, 2009).

Marvel (1995) found that sentencing guidelines "are associated with declines in prison population growth in the six states where legislators decreed that guideline framers consider prison capacity" (p.696) in setting the length of prison sentences. Marvel and

Moody (1996) found divergent effects of determinate sentencing, as in Indiana the relationship with incarceration was positive while in Washington and Minnesota the relationship was negative, and no significant relationship was observed in seven other states in a time-series for 1976-1984, plus determinate sentencing positively influenced commitments in California and Indiana but not in other states. Several studies show that determinate sentencing has a significant negative impact on state-level incarceration (Greenberg and West, 2001; Jacobs and Carmichael, 2001; Smith, 2004). Nicholson-Crotty (2004) criticized the findings of cross-sectional studies and claimed that the time-series methodology is more appropriate, showing that determinate sentencing-incarceration relationship is mediated by prison capacity and correctional spending, so "when mandatory guidelines are linked to capacity and expenditures, these policies have had either a negative or nonsignificant" (p.395) effect on prison commitment rates, while mandatory guidelines non-contingent on resources had a positive effect on commitment and incarceration.

Contemporary research provides more specificity concerning sentencing effects on the prison population. Yates and Fording (2005) show that determinate sentencing has a significant negative impact on white incarceration rates but nonsignificant for black incarceration. However, in a model testing interactive effects of black incarceration rate and black / white incarceration disparity, determinate sentencing has a significant positive impact on racial incarceration disparity (Yates and Fording, 2005). Spelman (2009) tested the effects of several types of sentencing laws and found that presumptive sentencing has both an immediate and a long-term negative impact on incarceration which gets stronger over time, truth-in-sentencing laws requiring inmates to serve a determinate significant

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proportion of their sentence have small initial but substantial positive effect over time, and habitual offender laws such as two-strike or three-strike laws have little effect, perhaps because they are applicable only to a small specialized contingent of offenders. Stemen and Rengifo (2011) provide a refined account of sentencing effects, claiming that determinate sentencing regardless of other policies negatively impacts incarceration rates, that policies constraining release decisions i.e., parole, have more implications for prison population than policies restricting sentencing, that presumptive sentencing only reduces the prison population when done in tandem with determinate sentencing, and that voluntary sentencing guidelines have no effect on incarceration even with determinate sentencing, because judges can ignore the advised sentence and increase it.

Some researchers claim that sentencing had only limited effects on incarceration growth. Sorensen and Stemen (2002) assert that determinate sentencing, mandatory sentencing, and truth-in-sentencing impact neither commitments nor incarceration rates, that only presumptive sentencing is negatively associated with admission and incarceration rates, and that three strike laws appear to increase prison admission for those arrested on drug violations charges, but overall sentencing policies did not have a strong effect on prison population. Stucky, Heimer, and Lang (2005) make the even stronger claim that, contrary to previous research, presumptive sentencing has no effect on state-level incarceration rates. Zhang, Maxwell and Vaughn (2009) used hierarchical multivariate linear models and found that "on the aggregate, sentencing reforms are not directly related to change in state prison populations" (p.190) and that only the abolition of parole is negatively associated with incarceration, that three-strikes laws decrease new commitments and voluntary guidelines increase commitments, that no element of

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sentencing reform was associated with time served, so that overall sentencing had a small impact and then only insofar it increased admissions. Pfaff (2011) makes similar claim, saying that increases in incarceration are due to increased admissions, as there is no evidence of increased length of stay in prison, contrary to Blumstein and Beck (1999). An important critique of the nonsignificance of the sentencing argument is that research ignores prosecutorial discretion and charging decisions, and there is some evidence of a reluctance on the part of prosecutors to use harshest laws while charge downgrading influences sentencing (Engen, 2009)

The effect of alternative sanctions, such as probation, on incarceration is completely ignored by the research literature, a significant deficiency given that some states with small incarceration rates have a substantial proportion of their population on probation supervision (Phelps, 2011). Only Smith (2004) included probation rates in his study and found no significant association with state-level incarceration rates. The effects of marijuana decriminalization are neglected as well, yet knowing that drug convictions account for 29 percent of incarceration growth between 1980 and 1996 (Blumstein and Beck, 1999) it is not illogical to suggest that states where the penalty for possession is removed may have lower incarceration rates. Smith (2004) did not find support for this claim, but Spelman (2009) did find that marijuana decriminalization had an immediate negative impact on incarceration rates which grew even stronger in the long run, and was exceeded only by the effects of violent crime, presumptive sentencing, and spending; he also showed that decriminalization was associated with decreased spending on corrections.

CHAPTER 3 RESEARCH DESIGN

The purpose of this chapter is to provide a description of the current project and its methodology. I will begin by discussing the general issues such as the type of research method I use, the project's spatial and temporal scope, as well as the unit of analysis. Then I will discuss the data and data collection in general, and my dependent and independent variables specifically. Finally, I will describe the analytic technique and display a generic equation for the multilevel model utilized in this research.

This project is a theory-driven secondary data analysis of state-level time-series trends in the U.S. between 1980 and 2005. I use aggregate state-level data to explore the association between a variety of socioeconomic, demographic, and political factors and incarceration because this approach allows linking multiple theoretical accounts about the functioning of society and outcomes in the penitentiary system. Specifically, I intend to test the empirical validity of major theoretical accounts of the change in incarceration rates over time, including the orthodox utilitarian argument, the conflict or underclass perspective, the democracy in action hypothesis, the partisan use of incarceration argument, the electoral cycle hypotheses, and the policy artifact view. The eclectic approach allows me to test the merits of competing explanations.

The population of interest includes all 50 U.S. states. Temporal dimension of the study extends beyond a cross-sectional analysis into a time-series covering the period from 1980 to 2005. The time span is appropriate to address the research question since it focuses on the years of the imprisonment boom and extends into the period marked by the leveling-off of the incarceration rates. The state-year is the proposed unit of analysis for this study. I choose state-year units of analysis because they are appropriately aligned

with my research question focusing on the explanation of incarceration rates which vary widely at the state-level and over time, and I will employ analytic techniques which can adequately deal with hierarchical data in which repeated measures, in my case – individual years, are clustered in groups – in my case, in states.

In regard to temporality, sampling for the proposed project is theoretically-driven in that it focuses on the years marked by the extreme growth of incarceration rates and the following decade of stabilization, and also driven by reasons of convenience or data availability since creating long exhaustive time series is problematic and the data from the 1970s have significant gaps in regard to explanatory variables. Geographically speaking we include the whole population of interest which is all 50 American states. However, two states have been dropped from the analysis, Nebraska – because it has a unicameral legislature which makes it impossible to calculate average percent of Democratic seats in lower and upper chamber of state legislature, and Louisiana – because there were major issues with missing data. All but four variables had a complete number of observations for the required 1248 state-years, yet due to missing data in the political competition measures a listwise deletion was performed which reduced the number of state-years to 1131, which is an adequate quantity of observations to obtain robust regression models.

Data and Data Collection

In order to evaluate the relationships between incarceration rates and socioeconomic, demographic, and political factors I have performed a secondary data analysis using a nation-wide state-level dataset entitled "State Politics Data with Judiciary Politics Data" compiled under primary investigator Stephanie Lindquist (2007)

from the Department of Political Science at Vanderbilt University which includes time-series data from 1975 to 2004. The dataset is publically available at the State Politics and Policy Quarterly website in a variety of file formats, and it is organized as a multiple records dataset in which every state has multiple annual records, one per state per year per variable which is crucial for the SAS Mixed Procedure which I use for analysis (Singer, 1998). The dataset is appropriate as it is aligned with the logic of my research, specific hypotheses, and includes a substantial number of key explanatory and control variables at the state-level.

In addition, I used "Measurement of Partisan Balance of State Government" MS Excel format dataset publically available at the State Politics and Policy Quarterly website compiled by Carl Klarner (with 2007 updates) to extract data on partisan control of the state-level executive branch (i.e. governors' party) and on partisan control of state legislatures. The dataset is appropriate as it is aligned with my partisan control of state government hypothesis and units of analysis, includes all fifty states and the explanatory variables pertaining to the partisan strength at the state governments. Finally, I used Shufeldt and Flavin's (2011) MS Excel dataset to extract values for political competition estimates, the Ranney Index and Holbrook Van Dunk Measure, from 1970 to 2003. That dataset was generously shared with me by Mr. Shufeldt and Mr. Flavin.

I had to perform some primary data collection, or at least data location and entry, as the bulk of "State Politics Data with Judiciary Politics Data" (2007) variable values did not go beyond 1994 or 1997, and many variables of interest were not included. To find values for 1997-2005 period, and also for some missing years in the 1980s, I consulted multiple annual editions of reference literature such as the Sourcebook of Criminal

Justice Statistics, Geographic Profile of Employment and Unemployment, Statistical

Abstract of the United States, the Book of the States, Probation and Parole in the United

States, and the Digest of Education Statistics (see Table 1 in the next section for details).

After I found the values for the variables of interest, I entered them into the Excel

spreadsheets which I later combined with time-series from "State Politics Data with

Judiciary Politics Data" (2007) and finally merged into SAS for statistical analysis. I was

very cautious during data entry and always double-checked the values I entered followed

by frequencies checks in SPSS or SAS. Only one typo was found and fixed during pre-

analysis data cleaning stage.

I compiled an exhaustive time-series for sixteen major variables so each state had

perfect amount of observations per every year per variable. Yet citizen ideology measure

was missing for every state for 2005, 29 observations for divorce rate were missing due

to California, Indiana and Hawaii non-reporting of divorces and dissolutions for some

years, and both measures of political competition, the Ranney partisan state government

control index and Holbrook Van Dunk electoral competition index were missing for 2004

and 2005 because these indexes are calculated by political scientists for eight-year cycles

and in 2012 not all of the data necessary for calculation was available. We decided to

balance group sizes (Garson, 2013), and even though the statistical technique employed

for analysis is capable of handling missing data, listwise deletion was performed i.e. all

cases that had missing values for any of the variables were omitted from final analysis, so

the maximum number of observations dropped from 1248 to 1131, a 9 percent reduction.

I performed multilevel analysis of select models on both 1248 and 1131 maximum

observations, and unemployment and marijuana decriminalization were significantly negatively associated with incarceration in the former but not in the latter case.

Description of Dependent and Independent Variables

To test several competing theoretical accounts of incarceration, I use state-level incarceration rate per 100,000 as a dependent variable. The "State Politics Data with Judiciary Politics Data" (2007) dataset included incarceration rates for 1980 – 1994 period for every state, and I have obtained missing data from the various annual editions of The Sourcebook of Criminal Justice Statistics, an authoritative source of various data on criminal justice processes and characteristics funded by Bureau of Justice Statistics of U.S. Department of Justice and operated by University of Albany, School of Criminal Justice, Hindelang Criminal Justice Research Center and offered for public access online. To be specific, The Sourcebook of Criminal Justice Statistics defines incarceration rate as a number of inmates serving a sentence of one year or longer per 100,000 state resident population. Although some researchers proposed to analyze annual prison admission rates or aggregate institutionalization rates including both inmates and patients in the mental hospitals (Jacobs and Helms, 1996; Harcourt, 2007), I side with the researchers considering the state-level incarceration rate a more relevant and comprehensive measure of punitiveness taking into account likelihood of imprisonment, length of sentences, and early releases (Jacobs and Carmichael, 2001; Jackson, 2009). Univariate analysis of my dependent variable indicates that it is normally distributed.

Table 2: Variables: Sources and Measures									
Variables	Measure					Source			
Dependent Variable									
Incarceration Rate per 100,000	Inmates serving sentences of at least 1 year per 100,000 population					Bureau of Justice Statistics, _Sourcebook of Criminal Justice Statistics_			
Independent Variables									
Violent Crime Rate per 100,000	Homicide, rape, robbery, assault per 100,000 population					Bureau of Justice Statistics, _Sourcebook of Criminal Justice Statistics_			
Property Crime Rate per 100,000	Burglary, larceny, vehicle theft per 100,000 population								
Percent Unemployed	Unemployed individuals as a percent of civilian noninstitutional population 16 and older.					Bureau of Labor Statistics, _Geographic Profile of Employment and Unemployment_			
Percent in Poverty	Individuals below poverty as a percent of state population.					Census Bureau, _Statistical Abstract of the United States_			
Percent African American	Estimated percent of population which is African					Census Bureau, _Population Estimates Program_			
Percent Hispanic	Estimated percent of population which is Hispanic					Census Bureau, _Population Estimates Program_			
Gini Coefficient	Income inequality index, 1 = absolute inequality					Galbraith and Hale (2006)			
Citizen Ideology	Berry et al. (1998) ideology scale, higher score = more liberal					State Politics and Policy Quarterly. 2005. _State Politics Data with Judiciary Politics Data_ .			
Percent Democratic Legislators	Average number of Democratic seats in both chambers of state legislatures					Klarner (2003), Klarner (2007)			
1 if Democratic Governor	Dummy measure of partisan control of executive power in the state, 1 = Democratic governor					Klarner (2003). The Council of State Governments, _The Book of the States_			
1 if Gubernatorial Election Year	Dummy measure of electoral cycle, 1 = gubernatorial election year					The Council of State Governments, _The Book of the States_			
1 if Determinate Sentencing Law	Dummy measure, 1 = presence of laws establishing fixed sentence length and abolishing discretionary					Stemen and Rengifo (2011)			
1 if Habitual Offender Law	Dummy measure, 1 = presence of three-strikes laws establishing super-penalties for repeat offenders					Chen (2008)			
1 if Marijuana Decriminalization Law	Dummy measure, 1 = presence of law decriminalizing possession of 1 ounce of marijuana					MacCoun et al. (2009)			
Probation Rate per 100,000	Individuals under probation supervision per 100,000					Bureau of Justice Statistics, _Probation and Parole in the United States_			
Control Variables									
Divorce Rate per 1,000	Divorces per 1,000 population					Center for Disease Control and Prevention, _National Vital Statistics System_			
Spending on Primary and Secondary Education as Percent GSP	State spending on primary and secondary education as a percent of gross state product					National Center for Education Statistics, _Digest of Education Statistics_			
Ranney Index 8 year period	Index measuring partisan control of state government calculated for 8-year periods, 1 = complete Democratic control					Shufeldt and Flavin (2011)			
Holbrook Van Dunk Index 8 year period	Index measuring district-level electoral competition calculated for 8-year periods, 100 = perfect competition					Shufeldt and Flavin (2011)			

Table 2 above provides a detailed description of the 15 independent variables and

4 dependent variables which I use to test six competing accounts of incarceration change

in the U.S. between 1980 and 2005. Key explanatory variables for the utilitarian

hypothesis are the violent crime rates combining instances of homicide, rape, robbery, and assault per 100,000 state residents, and the property crime rates combining instances of burglary, larceny, and motor vehicle theft per 100,000 respectively. Underclass hypothesis is operationalized by five variables, including three socioeconomic variables such as percent of state residents that are unemployed, percent of individuals in poverty, and Gini coefficient measuring the income inequality where one represents complete inequality and zero represents perfect equality, and two demographic variables such as percent of state residents that are African American and percent of Hispanic residents respectively. Key explanatory variable for the democracy in action hypothesis is a dynamic annual citizen ideology scale ranging from zero to a hundred where high values represent liberalism and lower values represent conservatism computed by Berry et al. (1998) and available in the "State Politics Data with Judiciary Politics Data" (2007) dataset. The partisan use of incarceration hypothesis is operationalized by two variables, the partisan control of the executive branch of state government i.e. the party of the governor, and the partisan control of the legislative branch of state government i.e. the average percent of Democratic seats in both chambers of state legislatures. The predictor variable for the electoral cycle hypothesis is a dummy variable where one represents gubernatorial election year in a given state. Finally, four variables operationalize the criminal justice policies hypothesis, one continuous variable – the probation rate per 100,000 of state residents, and three dummy variables, where one represents presence of the three-strikes law, determinate sentencing law, and marijuana decriminalization law in a given state for particular year between 1980 and 2005. Additional information on my explanatory variables is contained in the chapter four of my dissertation.

Following Smith's study (2004) I use four control variables in my multilevel analysis, including the violent and property crime rates per 100,000 state residents, state divorce rates per 1,000, and the state spending on primary and secondary education as a percentage of state gross product. In order to contribute to the literature and expand our understanding of the relationship between incarceration and the socioeconomic, demographic, and political variables I also include two measures of partisan competition used in political science literature, the Ranney index and Hoolbrook Van Dunk measure, as additional control variables.

Ranney index (1976) is a measure of partisan composition of legislatures and governors' offices, i.e. a measure of partisan control of the state government, coded so that 1 represents complete Democratic control and .5 represents complete Republican control. Index takes into account proportion of seats in both chambers of state legislature, Democratic percentage in governor's elections, and proportion of time legislative and executive state branches were controlled by Democratic Party. Holbrook Van Dunk (1993) is a measure of the degree of competitiveness of state legislature elections, i.e. a measure of electoral vulnerability, coded so that a hundred represents complete competitiveness (this value is actually impossible as long as somebody wins) and zero represents low competitiveness. Measure takes into account percentage of votes cast for the winning candidate, margin of victory, whether the seat is seat is "safe" (55 percent and up votes cast for winner), and if the seat was contested or not. Political scientists suggest that Ranney index better fits models implying partisan competition and Holbrook Van Dunk better fits models implying public pressure and policy outcomes (Shufeldt and

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Flavin, 2011), so I will use each measure in a separate model to tap into different dimensions of the state-level political context.

Analytic Technique

I start my analysis with presenting the descriptive statistics for the sample as a whole to familiarize readers with the data, variable measures, means, and standard deviations. Then I present visual representations such as time-trend graphs to depict change in my major variables over time and scatterplots to demonstrate presence or absence of bivariate relationships between incarceration and variables of interest. I finalize the preliminary stage in data analysis with presenting the correlations between incarceration and my independent variables in order to demonstrate statistical significance, direction, and strength of the said relationships.

The data which I analyze for this project are hierarchical in structure (Field and Miles, 2010) which means that there are naturally occurring groups, i.e. 48 states, and repeated annual observations for each variable for every individual year between 1980 and 2005 nested within each state. Traditional approaches, such as Ordinary Least Squares (OLS) regression employed by Smith (2004) whose study I am replicating, can only deal with one level of analysis, either operating on the individual level ignoring the group context or on the group level ignoring the individual, and each approach has its issues. Ignoring the group context is problematic as values of observations for any given variable, for example – incarceration, drawn from the same state may be more similar than if drawn randomly, and these observations will have correlated errors which is a direct violation of the independence assumption of the multiple regression (Luke, 2004). Correlated residuals, as a result of not accounting for clustering of measures within states,

will lead to downward misestimation of standard errors which might lead to incorrect conclusions about statistical significance and false positives or false negatives. In addition, OLS regression, by ignoring the context, ignores the fact that every state can have different average incarceration rate and different effect of time on incarceration, i.e. assumes homogeneity of regression slopes (Field and Miles, 2010).

To avoid issues with hierarchical data analysis associated with traditional OLS regression such as autocorrelation, I am utilizing hierarchical linear models with random intercepts using the Mixed Procedure of the SAS statistical program. Hierarchical linear modeling is better aligned with the logic and design of this dissertation as it is can be used to analyze data with two or more levels simultaneously, analyze variability between and within groups, has no independence or slope homogeneity assumptions, and includes both fixed and random effects (Singer, 1998; Luke, 2004; Field and Miles, 2010; Garson, 2013). Literature suggests that a multilevel approach is more efficient with time-series cross-sectional data compared to OLS as it produces a narrower estimated coefficients' range, higher quality of standard error, and allows for more flexibility as "fully or partially time-invariant predictors can be estimated simultaneously with varying group-level indicators" (Shor et al., 2007). Multilevel models with random intercepts will not pool the variability into the single error term but divide it into the state-level, between-group variability, and the individual-level, variability across years within the state. Therefore, use of hierarchical linear models with random intercepts is appropriate due to technique's efficiency, conservative estimates, compatibility with the state-level repeated annual measure design of the study, size and multiple-record organization of the dataset (Singer, 1998; Shor et at., 2007; Garson, 2013).

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The analytical strategy utilizing hierarchical approach involves two steps. First, I will build an unconditional means model in order to assess the need for multilevel approach. The null model is specified as $Y_{ij} = \gamma_{00} + u_{0j} + r_{ij}$ where Y_{ij} is the dependent variable, γ_{00} is the sample mean, a fixed effect, u_{0j} is the random effect representing variability between states and r_{ij} is the random effect representing variability within states. i.e. essentially a one-way random effects ANOVA (Singer, 1998; Luke, 2004). Utilizing the unconditional means model I will calculate the intraclass correlation and determine wether clustering within states is present, and what is the proportion of the variance in the dependent variable which is explained by the difference between states and difference across years within individual states (Singer, 1998).

Second, once the need for multilevel approach is determined, I will test each of the six hypothesis, one at a time, using specific models, first including only the independent variables operationalizing each hypothesis, then including both predictors and the control variables utilized in Smith's study (2004), then adding the measures of political competition, one at a time, to the model containing predictor and control variables. A generic random intercepts and slopes model can be specified as:

Level 1: $Y_{ij} = \beta_{0j} + \beta_{1j} X_j + r_{ij}$

Level 2: $\beta_{0j} = \gamma_{00} + u_{0j}$ and $\beta_{1j} = \gamma_{10} + u_{1j}$

where Y_{ij} is the dependent variable, β_{0j} is the intercept, $\beta_{1j} X_j$ is the slope, r_{ij} is the error term for the individual year, γ_{00} is the sample mean of intercepts (a fixed effect), u_{0j} is the source of level-2 variance, i.e. represents variability of intercepts between states, γ_{10} is the mean value of level-1 slope (a fixed effect), and u_{1j} is the second source of level-2 variance, i.e. represents variability of level-2 slopes (Luke, 2004). This model will allow

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for the level-1 intercepts and slopes to vary between level-2 groups, i.e. we will be able to partition incarceration fluctuation into variability across individual years within states and variability between states and see which independent variables are associated with the incarceration fluctuation.

In conclusion, I summarize the content of this chapter. This dissertation is a theory-driven secondary data analysis of nationwide state-level time-series between 1980 and 2005. I analyze publically available nation-wide state-level dataset entitled "State Politics Data with Judiciary Politics Data" (2007). To account for the spatial and temporal correlation of data, where individual years are nested in the states, I am using hierarchical linear models with random intercepts utilizing the Mixed Procedure in SAS statistical software. The following chapter is devoted to data analysis, and it contains specifics about the analysis steps which I made, describes intraclass correlations, and estimates of the random and fixed effects for the variables of interest.

CHAPTER 4 ANALYSIS

I will start this chapter of my dissertation with presenting descriptive statistics for the sample at large to familiarize the reader with the mean, standard deviation, and range of variables considered in the analysis of incarceration change. Then I will display the figure representing the dynamics of change in my dependent variable, state incarceration rate, between 1980 and 2005. Third, I will present the results of the unconditional means model for the sample at large computed by using the SAS Mixed Procedure, to represent the variance in incarceration rates within and between states. Then I will proceed with discussing the results for each of my six hypotheses, presenting the time trend graphs, scatterplots, results of Pearson's correlations and independent samples t tests for all my independent variables. I will conclude this section with presentation of random coefficients model results for each of my hypotheses, first discussing the models with predictors only and then discussing the models including both the predictors and control variables.

Table 3 below provides a wealth of information about the major variables in my dataset. The first column represents the number of observation per each variable, and as I am doing a multilevel analysis comparing 48 states over a period of 26 years, the maximum number of observations is 1248 and all but four variables have the maximum possible number of observations, suggesting that this is a complete time-series with low number of missing cases. Two out of 50 states were dropped, Nebraska – due to the unicameral nature of its legislature, making it impossible to calculate the average percent of Democratic seats in both chambers of state assembly, Louisiana – due to consistent large number of missing values for key variables. Citizen ideology measure was not

available for any state for 2005, and political competition measures, the Ranney Index

(Ranney, 1976) of partisan control of state-level government and the Holbrook Van Dunk

Index (Holbrook and Van Dunk, 1993) of state-level elections competitiveness are

missing for all states for 2004 and 2005 because these variables are computed for an

eight-year cycle and the data for 2012 were not available.

Table 3: Description of Variables: State-Level, 1980-2005					
Variable	N	Minimum	Maximum	Mean	Standard Deviation
Incarceration Rate per 100,000	1248	28	768	272.59	143.141
Violent Crime Rate per 100,000	1248	47	1244	462.20	237.777
Property Crime Rate per 100,000	1248	1776	7941	4226.85	1156.735
Percent Unemployed	1248	2	18	5.94	2.059
Percent in Poverty	1248	2	27	13.00	3.844
Percent African American	1248	0.2	37	9.48	9.008
Percent Hispanic	1248	0.4	43.7	6.25	8.150
Gini Coefficient	1248	0.333	0.5109	0.40	0.028
Citizen Ideology	1200	8	96	48.53	14.825
Percent Democratic Legislators	1248	11	98	55.22	17.211
1 if Democratic Governor	1248	0	1	0.51	0.500
1 if Gubernatorial Election Year	1248	0	1	0.26	0.436
1 if Determinate Sentencing Law	1248	0	1	0.27	0.445
1 if Habitual Offender Law	1248	0	1	0.21	0.410
1 if Marijuana Decriminalization Law	1248	0	1	0.20	0.399
Probation Rate per 100,000	1248	147	6519	1245.28	826.519
Ranney Index 8 year period	1131	0.63385	0.99904	0.86	0.084
Holbrook Van Dunk Index 8 year period	1131	17	71	44.23	11.501
Divorce Rate per 1,000	1219	2	17.6	4.84	1.620
Spending on Primary and Secondary Education as Percent of Gross State Product	1248	2.13	6.32	3.63	0.580

Table 3 above provides a wealth of information about the major variables in my

dataset. The first column represents the number of observation per each variable, and as I

am doing a multilevel analysis comparing 48 states over a period of 26 years, the

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maximum number of observations is 1248 and all but four variables have the maximum possible number of observations, suggesting that this is a complete time-series with low number of missing cases. Two out of 50 states were dropped, Nebraska – due to the unicameral nature of its legislature, making it impossible to calculate the average percent of Democratic seats in both chambers of state assembly, Louisiana – due to consistent large number of missing values for key variables. Citizen ideology measure was not available for any state for 2005, and political competition measures, the Ranney Index (Ranney, 1976) of partisan control of state-level government and the Holbrook Van Dunk Index (Holbrook and Van Dunk, 1993) of state-level elections competitiveness are missing for all states for 2004 and 2005 because these variables are computed for an eight-year cycle and the data for 2012 were not available.

Even a cursory look at Table 3 suggests that there is a substantial variability in incarceration, crime, economic, demographic, and political indicators between 48 states over the observed period from 1980 to 2005. Incarceration rate, for example, has a minimum value of 28 inmates serving a sentence of one year or longer per 100,000 state residents and a maximum value of 768 per 100,000 respectively, with a sample mean of 272.59 and a standard deviation of 143.14. Violent crime rate combining instances of homicide, rape, robbery, and assault has a minimum value of 47 per 100,000 state residents, a maximum value of 1244, a mean of 462, and standard deviation of 237.77 respectively. Property crime including episodes of larceny, burglary, and motor vehicle theft has a minimum value of 1776 per 100,000 state residents, a maximum value of 7941, a sample mean of 4226.85, and a standard deviation of 1156.73.

Economic and demographic indicators exhibit sufficient variability. Percent of state residents that are unemployed has a sample mean of 5.9, and a standard deviation of 2.05. Percent of state residents that are below the poverty line has a grand mean of 13, and a standard deviation of 3.84. Gini coefficient representing state income inequality on a scale from zero representing absolute equality to one representing absolute inequality has a mean of 0.4, lowest value of 0.33 and the highest value of 0.51, and standard deviation of .028. Demographic composition of states in regard to ethnoracial categories is highly variable, so that the estimated percent of state Black residents has a sample average of 9.48 and a standard deviation of 9, a minimum value of 0.2 percent and maximum value of 37 percent, and the estimated percent of state residents that are Hispanic has a sample average of 6.25 with a standard deviation of 8,1, a minimum value of 0.4 percent and a maximum value of 43.7 percent.

Political context measures are not invariant either. Dynamic citizen ideology measure (Berry, Lingquist, Fording and Hanson, 1998) combining the annual state electorate and legislators' ideological orientations into a scale variable ranging from zero to a hundred with higher values representing increasing liberalism has a grand mean of 48.53 and a standard deviation of 14.82. Percent of Democratic seats in both chambers of state legislatures has a sample mean of 55.22 and a standard deviation of 17.21. The two political competition measures, Ranney Index of partisan state-level government control and Holbrook Van Dunk index of electoral competition, kindly given to me as an Excel file by Shufeldt and Flavin (2011) who computed these measures for eight-year cycles, show variance as well. Ranney index, calculated so that .5 represents complete Republican control and 1 represents complete Democratic control of the state government

(Ranney, 1976), has a sample mean of 0.86 and a standard deviation of .08. Holbrook

Van Dunk index coded as a scale from zero to a hundred so that higher values represent

more competition in state elections (Holbrook and Van Dunk, 1993) has a sample mean

of 44.23 and a standard deviation of 11.5. Governors' party, a dummy variable coded so

that one stands for Democratic party, has a mean of 0.51 and there are 633 state-years

with Democratic governors and 590 state-years with Republican Governors in my

sample. Governors' election year is a dummy variable with a mean of 0.26, and there

were 319 state-years with gubernatorial elections and 929 state-years with no

gubernatorial elections in my sample.

   Criminal justice policy variables are also included in Table 1. The only scale

variable in this group, the state probation rate, has a sample mean of 1245.28 individuals

under state probation supervision per 100,000, and a standard deviation of 826.51.

Determinate sentencing law, a dummy variable symbolizing the state laws establishing

fixed sentences and abolishing discretionary parole, has a sample mean of 0.27, and there

are 910 state-years in the no determinate sentencing law category and 338 state-years in

the determinate sentencing law category in my sample. Habitual offender law, a dummy

variable symbolizing the three-strikes state laws establishing super-penalties for repeat

offenders, has a sample mean of 0.21 and 982 state-years fall into the no-habitual

offender law category and 266 state-years fall into the habitual offender law category in

my sample. Finally, marijuana decriminalization, a dummy variable symbolizing the state

laws making it not a crime to possess an ounce of marijuana, has a sample mean of 0.20

and 1000 state-years fall into the no-marijuana decriminalization law category and 248

state-years fall into the marijuana decriminalization law category in my sample.

Figure 6. Average State Incarceration Rate per 100,000, U.S., 1980 to 2005.
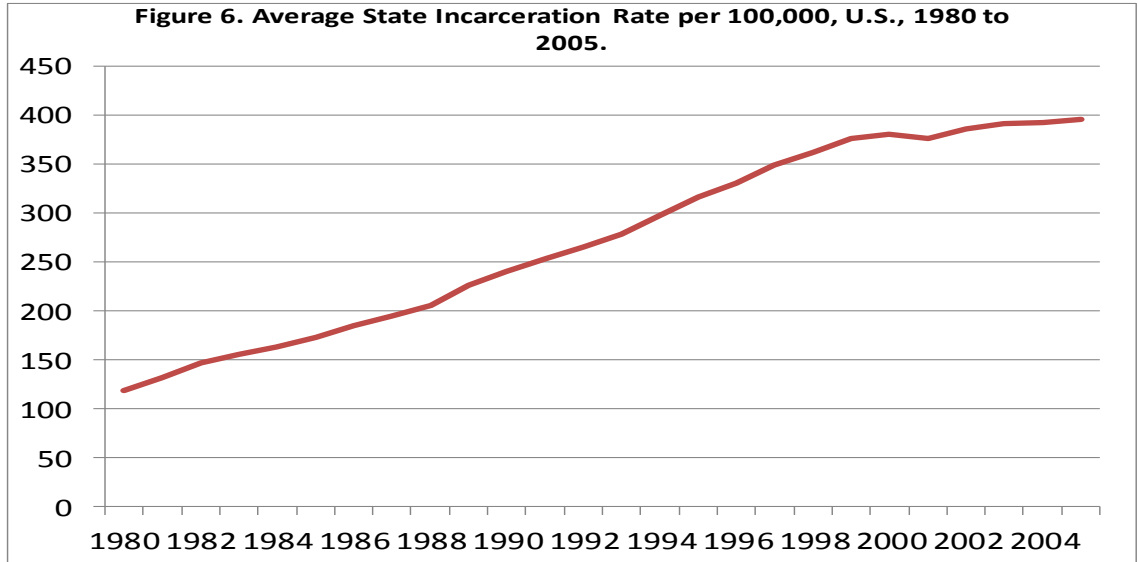
Figure 6 above provides a visual representation of the change in my dependent variable, state incarceration rate per 100,000, between 1980 and 2005. A clear linear growth pattern appears in Figure 1, and the state incarceration rate increased noticeably from an average of 118 inmates per 100,000 serving a sentence of one year or longer in 1980 to roughly 400 inmates per 100,000 in 2005 respectively, almost quadrupling over the observed period. Not to make any false equivalences but to give extra context and to make these numbers more intelligible, in 1980 the average U.S. state incarceration rate was analogous to these of European states such as France, Spain and United Kingdom with respective incarceration rates of 90, 110 and 125 per 100,000 yet by 2005 average U.S. state incarceration rate was closer to Chile, South Africa, or Ukraine with respective rates of 375, 402, and 415 per 100,000 (Christie, 2000; Lacey, 2008).

Table 4: Correlations between State Incarceration Rates and Independent Variables, 1980 - 2005.

Variable	r
Gini Coefficient	.649***
Percent African American	.479***
Probation Rate	.410***
Violent Crime Rate	.402***
Citizen ideology	-.269***
Percent Unemployed	-.260***
Percent Hispanic	.260***
Percent in Poverty	.091***
Percent Democratic Legislators	-0.085***
Property Crime Rate	.031
n = 1248	

Notes: 1248 observations were used for every variable except citizen ideology which only had 1200 observations, missing observations for 2005 for every state.

Table 4 above summarizes the results of Pearson's bivariate analysis of the correlations between my dependent variable and my continuous independent variables operationalizing the six hypotheses I am testing. Providing support for the underclass hypothesis I found that there is a strong significant positive relationship (r = .649, p < .001) between the Gini coefficient and the state incarceration rate. Providing further support for the underclass hypothesis, I found that there is a significant moderate positive relationship (r = .479, p < .001) between percent of state population that is Black and the incarceration rate. In addition, I found a significant but weak positive relationship (r = .260, p < .001) between percent of state population that is Hispanic and the incarceration rate. Contrary to the underclass hypothesis, I found that there is a significant but weak negative relationship (r = -.260, p < .001) between percent of state population that is

unemployed and incarceration rate. This counterintuitive finding may be explained by lagged effects as the unemployment was falling while incarceration rate was growing between 1980 and 2005. Finally, in line with underclass hypothesis I found a significant but very weak positive relationship (r = .091, p < .001) between percentage of state population in poverty and incarceration rate.

Providing support for the criminal justice policies hypothesis, I found a significant positive relationship between the probation rate and the incarceration rate (r = .410, p < .001) which is moderate in strength. Providing support for the utilitarian hypothesis I found a significant positive relationship between the violent crime rate and the incarceration rate (r = .402, p < .001) which is moderate in strength, but I found no significant relationship between property crime and incarceration rate which is contrary to the utilitarian hypothesis. Providing support for the democracy in action hypothesis I found a significant negative relationship between citizen ideology and incarceration rate (r = -.269, p < .001) which is weak in strength, but the direction of relationship is as expected since higher values represent increasing liberalism and lower values – increasing conservatism respectively. Providing support for the partisan use of the incarceration I found significant negative relationship (r = -.085, p < .001) between the average percent of Democratic seats in both chambers of state legislatures and the incarceration rate, but the strength of the relationship is extremely weak albeit in the hypothesized direction.

The initial results of the Pearson's bivariate analysis suggest stronger support for the underclass hypothesis, moderate support for the utilitarian use of incarceration hypothesis, moderate support for the criminal justice policies hypothesis, and weaker

support of the ideological and political hypotheses. To further scrutinize the six

competing hypotheses, I employ Hierarchical Linear Modeling - an advanced analytical

technique which is better aligned with the repeated-measure design of the study and time-

series cross-sectional data where variance occurs on more than one level, with individual

years clustered within states (Luke, 2004).

Table 5. The Mixed Procedure Estimation of Null Model Covariance Parameters		
	Null Model: Model 1	Add Year: Model 2
Intercept	259.49 (14.02)***	113.41 (9.76)***
Year	————————	12.97 (.80)***
Intercept Variance	8996.46 (1943.37)***	4442.07 (943.91)***
Intraclass Correlation	.46	.84
Correlation Between Random Intercept and Random Slope	————————	.1207
N	1131	1131
Notes: Numbers in parentheses are standard errors; 1131 observations were used to estimate parameters on exhaustive data without any missing values.		
p* < .05 p** < .01 p***<.001 (two-tailed)		

Table 5 above represents the results of the unconditional means model produced

by using the SAS Mixed Procedure. This is a model without predictor variables which is

used as a baseline to estimate variation in state incarceration rate (Singer, 1998). I use

Restricted Maximum Likelihood method of variance estimation, I specify "between –

within" denominator degrees of freedom estimation of the fixed effect, and I specify the

covariance structure of my data as unstructured i.e. nonsystematic, non-patterned (Field

and Miles, 2010; Neupert, 2013). This unconditional means model has two random

components, the intercept ($\blacksquare$) symbolizing level – 2 variation between states and the residual ($\blacksquare$) symbolizing level – 1 variation within states. For this model I use 48 subjects i.e. states and there is a maximum of 24 annual observations per state. I use the two random components of the model to calculate the intraclass correlation, $\blacksquare$ / ($\blacksquare$ + $\blacksquare$) = 8996.46 / (8996.46 + 10443) = .46 (Singer, 1998).

I interpret the results of the null modell (Model 1) represented in Table 3 as indicating that there is a significant between-state variance ($\blacksquare$ = 8996.46, z = 4.63, p < .0001) as well as significant within-state variance ($\blacksquare$ = 10443, z = 23.27, p < .0001) in incarceration. Intraclass correlation in incarceration rates value is .46 suggesting that 46 percent of the variance in incarceration rates is explained by differences between states and that 54 percent of the variance in incarceration is explained by differences within states across time, i.e. that states fluctuated around their own means slightly more than they differed from other states. Results suggest that there is substantial clustering of incarceration within states and that Ordinary Least Squares technique would likely produce inaccurate results (Singer , 1998; Neupert, 2013).

To follow up on the results of the null model, I continue analysis by explicitly including time as a variable in my model as a level – 1 within-state fixed effect and also as a random slope. As Model 2 in Table 3 shows, once time is taken into account, the value of intercept at time zero i.e. at 1980 becomes 113.41 inmates per 100,000, and with each subsequent time point the state incarceration rate increases by 12.97 (t = 16.08, p < .0001). The estimated G correlation matrix portion of SAS output suggests that correlation between the random intercept (state incarceration rate which is allowed to vary between states) and the random slope (time measured in annual increments which

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effects are allowed to vary between states) is 0.1207 i.e. positive. That allows us to speculate that states which started off with higher incarceration rates tend to increase their incarceration rates more steeply over time.

Covariance parameter estimates section of SAS output not presented here indicates that now we have four random parameters, two from the null model, plus a random slope (τ_{11}) and a covariance of intercept and slope (τ_{01}). Intercept variance is significant (τ_{00} = 4442.07, z = 4.71, p < .0001), and so is slope variance (τ_{11} = 30.42, z = 6.44 , p < . 0001), but there is no significant covariance between the two (τ_{01} = 44.37, z = .80, p = .42). I interpret that as evidence of significant variance between states as well as significant variance within states across time. Note that the intercept variance, symbolizing between-state difference in incarceration rates, has decreased from 8996.46 from the null model to 4442.07 after accounting for time. I use the values of random parameters from this section to calculate intraclass correlation, τ_{00} / (τ_{00} + σ^2) = 4442.07 / 4442.07 + 851.15 = .84. I interpret the intraclass correlation as suggesting that after accounting for time, 84 percent variation in incarceration rates is between states and 16 percent variation is within states across years.

I use Raudenbush and Bryk's formula (2002, p. 79 cited in Neupert, 2013, p. 214) to compute the portion of variance accounted for at level-1: {σ^2(null model) - σ^2 (add year model)} / σ^2 (null model) = {10443 – 851.15 } / 10443 = .92. To compute the portion of variance accounted for at level-2 I use Raudenbush and Bryk's formula (2002, p. 74 cited in Neupert, 2013, p. 214): {τ_{00} null model - τ_{00} add year model} / τ_{00} null model = {8996.46– 4442.07 } / 8996.46= .51. I interpret these results as indicating that adding time allows to account for 92 percent of level-1 variation i.e. within states across

time as well as to account for 51 percent of level-2 variation i.e. variation in incarceration

between states. The fit of the model after accounting for time has improved based on SAS

estimations of Akaike's Information Criterion (AIC) and the – 2 Log Likelihood (- 2LL).

Null model has AIC of 13818.1 and -2LL of 13814.1 and the model adding year has AIC

of 11247 and -2LL of 11239 and smaller values indicate better fit (Field and Miles,

2010).

Since I have presented the descriptive statistics on my major variables in Table 3,

the time-trend graph for my dependent variable in Figure 6, the results of Pearson's

bivariate analysis of correlation betweem my dependent and independent variables in

Table 4, and the results of baseline null model describing variation between and within

states as well as results of a model accounting for time in Table 5 I shall proceed with

discussion of my major independent variables logically grouped within six hypothesis

representing six major accounts of incarceration change which I intend to test.

Utilitarian Hypothesis: Punishment is an instrumental response to crime. State-level
violent and property crime rates will be positively associated with incarceration rates.

In this section I will present time-trend graphs which show dynamics of change

between 1980 and 2005 in my independent variables pertinent to the utilitarian

hypothesis. My independent variables are the annual state-level violent crime rates

combining instances of homicide, rape, robbery and assault per 100,000 state residents

and the annual state-level property crime rates combining instances of burglary, larceny,

and motor vehicle theft per 100,000 state residents. I use the official measures of violent

and property crime rates compiled by Federal Bureau of Investigation as Uniform Crime

Report and published in various annual editions of Sourcebook of Criminal Justice

Statistics. Following the time-trend graphs are the scatterplots and Pearson's r coefficient results for bivariate relationships between my dependent and independent variables. I will conclude this section with presenting the results of hypothesis testing using multilevel models with random intercepts – the Mixed Procedure in SAS, first displaying the model with predictors only, and closing with models including both predictors and control variables.

Figure 7. Average State Violent Crime Rate Juxtaposed on Average State Incarceration Rate, U.S., 1980 to 2005.
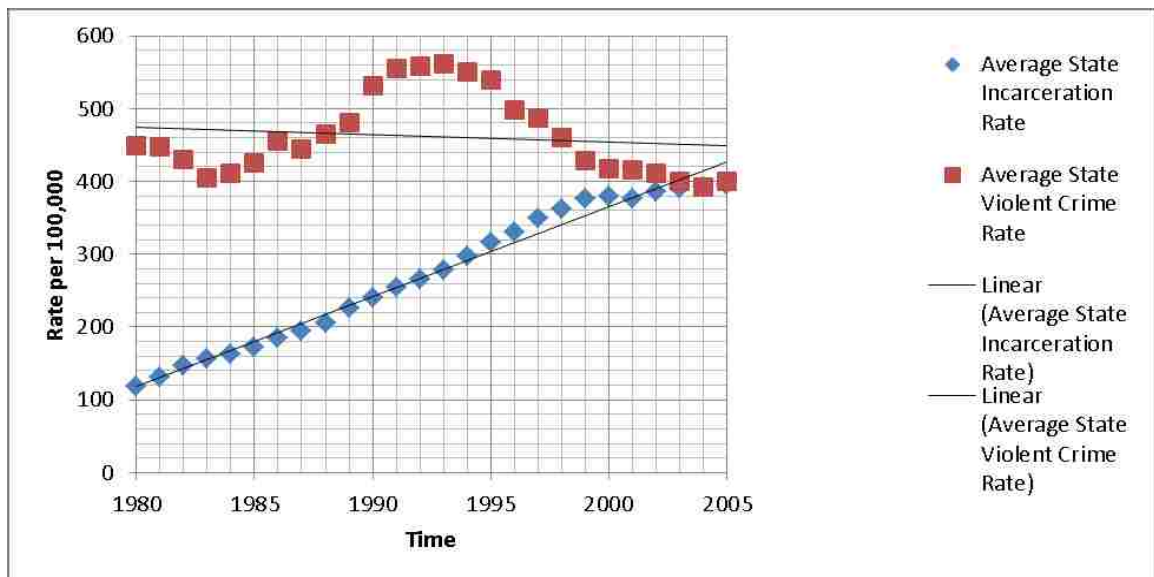
Figure 8. Average State Property Crime Rate Juxtaposed on Average State Incarceration Rate, U.S., 1980 to 2005.
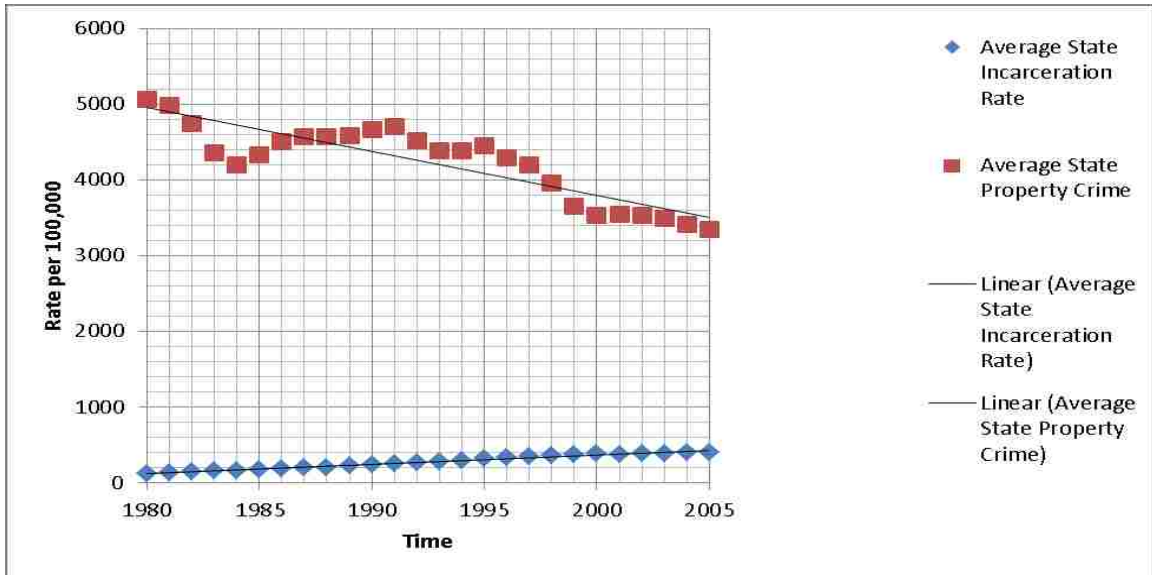
The time-trend graphs above supply a visual representation of change in my

dependent and independent variables between 1980 and 2005. I chose to juxtapose the

dependent and independent variables since they are similarly standardized as a rate per

100,000 state residents hence a visual comparison is possible. Figure 7 shows that the

average state incarceration rate has increased substantially, from 118 inmates per 100,000

state population in 1980 to 395 inmates per 100,000 state population in 2005. Figure 7

also demonstrates that the average state violent crime rate combining the instances of

homicide, rape, robbery, and assault has decreased overall if the start and finish dates of

the time-series are compared, from 449 per 100,000 state residents in 1980 to 399 per

100,000 residents in 2005, yet there was a period of steep growth which started in 1983

and lasted until the maximum violent crime rate of 561 per 100,000 was reached in 1993

followed by an uninterrupted decline till 2004. A similar trend appears on the Figure 8,

with property crime decreasing overall from a high of 5065 per 100,000 in 1980 to 3341

in 2005, with a period of growth which started in 1984 and lasted until a peak rate of

4703 in 1991 followed by an uninterrupted decline till 2005.

Figure 9. Scatterplot of Bivariate Relationship between State Incarceration Rate and the State Violent Crime Rate, U.S.,1980 to 2005.
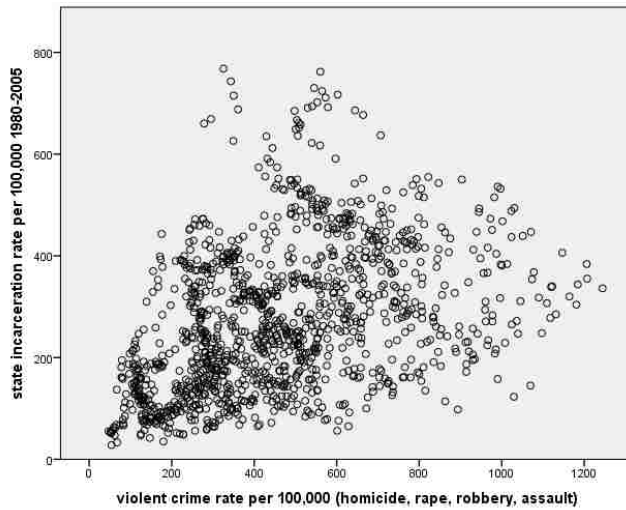
Figure 10. Scatterplot of Bivariate Relationship between State Incarceration Rate and the State Property Crime Rate, U.S., 1980 to 2005.
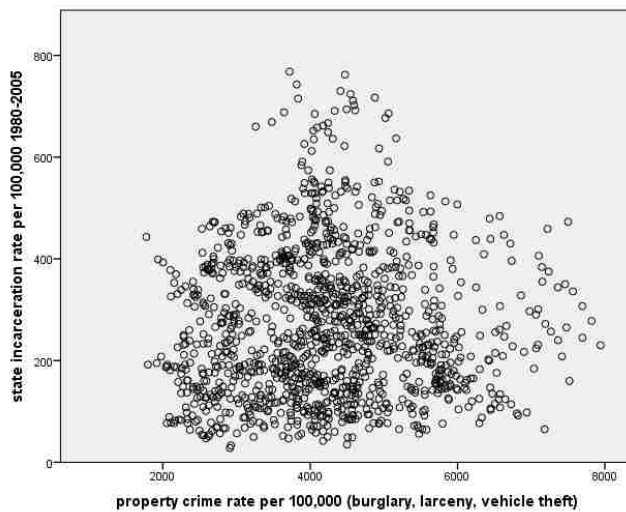
The scatterplots above take us to the next step in data analysis by allowing us to visualize presence or absence of the relationship between the dependent and the independent variables. Figure 9 shows a linear positive relationship between incarceration rate and violent crime rate. Figure 10 shows no linear relationship between incarceration rate and property crime rate.

Table 6. Correlations between State Incarceration Rates and Utilitarian Hypothesis Variables.

Variable	r
Violent Crime Rate	.402***
Property Crime Rate	.031
N = 1248	

p* < .05 p** < .01 p***<.001 (two-tailed)

Providing support for the utilitarian hypothesis, I found that there is a significant positive relationship of moderate strength (r = .402, p < .001) between violent crime rate and the incarceration rate (see Table 6 above). Contrary to the utilitarian hypothesis, I found that there is no significant relationship (r = .031, p = .272) between violent crime rate and the incarceration rate. My bivariate analysis suggests partial support for the utilitarian hypothesis since total violent crime rate combining the homicide, rape, robbery and aggravated assault is associated with state incarceration rate at high level of significance in the hypothesized direction, yet property crime rate is not associated with state incarceration rate.

Table 7 below represents the results of the random coefficients model produced by using the SAS Mixed Procedure which allows for the intercept and the time slope to vary while holding the predictors' effects fixed. Model 1 includes all the predictor variables from the utilitarian hypothesis as fixed effects, and Model 2 includes both the predictor variables and the control variables used by Smith (2004) such as divorce rate per 1,000 state residents, and state spending on primary and secondary education as a percent of state gross product as fixed effects as well. Model 3 is similar to Model 2 except I add the measure of partisan state government control, and Model 4 is similar to Model 2 except I add the measure of electoral competition. I use Restricted Maximum Likelihood method of variance estimation, I specify "between – within" denominator degrees of freedom estimation of the fixed effect, and I specify the covariance structure of my data as unstructured i.e. nonsystematic, non-patterned (Field and Miles, 2010; Neupert, 2013). For all models I use 48 subjects i.e. states and maximum of 24 annual observations per subject adding to 1131 observations total; a number of observations with missing values were dropped listwise to ensure completely exhaustive time-series data and meaningful comparison of the models

Table 7. The Mixed Procedure Estimation of Fixed Effects and Parameters for the Utilitarian Hypothesis Models, 1980 - 2005.

Variable		Model 1		Model 2		Model 3		Model 4	
Intercept		163.56 (14.44)***		173.06 (20.55)***		206.08 (25.93)***		186.84 (22.36)***	
Year		11.81 (.83)***		12.12 (.84)***		12.16 (.85)***		12.16 (.85)***	
Violent Crime Rate		.10 (.001)***		.09 (.01)***		.10 (.01)***		.09 (.01)***	
Property Crime Rate		-0.1 (.002)***		-.01 (.002)***		-.01 (.002)***		-.01 (.002)***	
Divorce Rate		——————		2.52 (2.04)		2.41 (2.04)		2.57 (2.05)	
Education Spending		——————		-7.56 (3.46)*		-6.94 (3.47)*		-7.12 (3.48)*	
Ranney Index		——————		——————		-44.62 (21.75)*		——————	
Holbrook Van Dunk Index		——————		——————		——————		-.40 (.26)	
Intercept Variance		4102.82 (898.54)***		3551.18 (837.51)***		3578.28 (846.38)***		3538.1 (833.91)***	
Intraclass Correlation		.84		.81		.81		.81	
Proportion of Level-2 Variance Explained		.54		.61		.60		.61	
Proportion of Level-1 Variance Explained		.92		.92		.92		.92	
N		1131		1131		1131		1131	

Notes: Numbers in parentheses are standard errors; 1131 observations were used to estimate parameters on exhaustive data without any missing values;
p* < .05 p** < .01 p***<.001 (two-tailed)

Table 7 above represents the results of the random coefficients model produced by using the SAS Mixed Procedure which allows for the intercept and the time slope to vary while holding the predictors' effects fixed. Model 1 includes all the predictor variables from the utilitarian hypothesis as fixed effects, and Model 2 includes both the predictor variables and the control variables used by Smith (2004) such as divorce rate per 1,000 state residents, and state spending on primary and secondary education as a percent of state gross product as fixed effects as well. Model 3 is similar to Model 2 except I add the measure of partisan state government control, and Model 4 is similar to Model 2 except I add the measure of electoral competition. I use Restricted Maximum Likelihood method of variance estimation, I specify "between – within" denominator degrees of freedom estimation of the fixed effect, and I specify the covariance structure

of my data as unstructured i.e. nonsystematic, non-patterned (Field and Miles, 2010; Neupert, 2013). For all models I use 48 subjects i.e. states and maximum of 24 annual observations per subject adding to 1131 observations total; a number of observations with missing values were dropped listwise to ensure completely exhaustive time-series data and meaningful comparison of the models.

Table 7 above indicates that there is a statistically significant positive association between state violent crime rates and state incarceration rates, yet a statistically significant negative association between state property crime rates and incarceration rates in the utilitarian hypothesis Model 1. Model 2 in Table 7 includes the same predictor variables as utiliatarian hypothesis Model 1 as well as control variables used by Smith (2004). There is a statistically significant positive association between violent crime rates and state incarceration rates, and a statistically significant negative association between property crime rates, educational spending and incarceration rates net of control variables in Model 2.

Model 3 which includes Ranney index, the measure of partisan control of the state government, demonstrates a significant negative relationship between the index and the incarceration rates. Nothing changes radically in the utilitarian hypothesis Model 4 which includes Holbrook Van Dunk index, the measure of district electoral competition (see Table 7 above for details). I interpret these results as supportive of the independent effect of partisan control over the state government on my dependent variable net of control variables with stronger Democratic control negatively associated with incarceration rates, but results are non-supportive of the electoral competition effect net of control variables.

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Findings of multilevel analysis with SAS Mixed Procedure are partially supportive of the utilitarian hypothesis as violent crime rate is positively associated with incarceration net of control variables and political competition measures. Contrary to the expectations of the utilitarian hypothesis, state property crime is associated with incarceration at a high level of significance net of control variables and political competition measures but the direction of relationship is negative which contradicts the logic of utilitarian use of incarceration as a response to increasing crime rate.

Underclass Hypothesis: Punishment is a tool for managing economic and ethnoracial tensions. State-level income inequality, unemployment, poverty, and percentage of Hispanic and Black residents will be positively associated with state-level incarceration rates.

In this section I will present time-trend graphs which show dynamics of change between 1980 and 2005 in my independent variables pertinent to the underclass hypothesis. My independent variables are the Gini coefficient operationalizing state income inequality, percent of state residents who are unemployed, percent below poverty line, percent Black, and percent Hispanic. I use the Census Bureau's Population Estimates Program data on state-level ethnoracial composition. Following the time-trend graphs are the scatterplots and Pearson's r coefficient results for bivariate relationships between my dependent and independent variables. I will conclude this section with presenting the results of hypothesis testing using multilevel models with random intercepts – the Mixed Procedure in SAS.

Figure 11. Average State Gini Coefficient, U.S., 1980 to 2005.
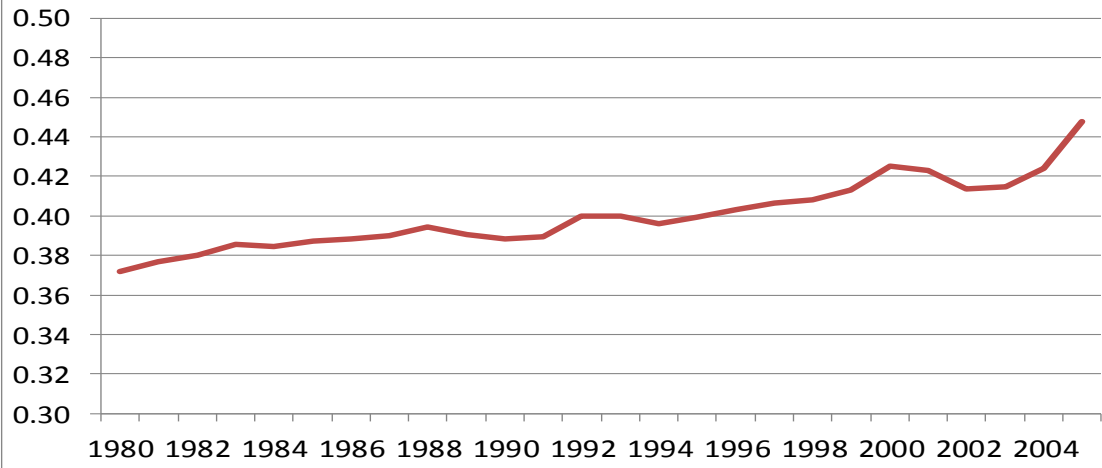
Figure 12. Average State Percent Unemployed, U.S., 1980 to 2005.
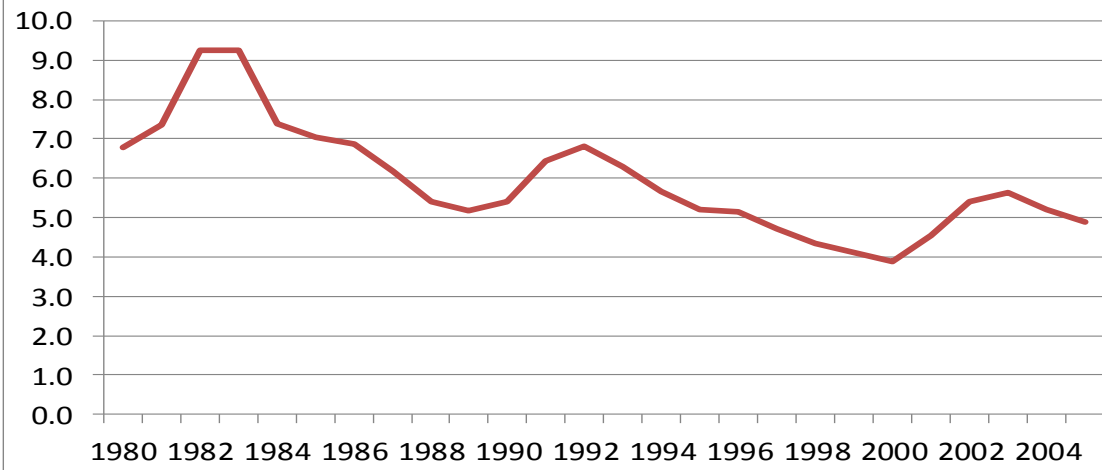
Figure 13. Average State Percent Poverty, U.S., 1980 to 2005.
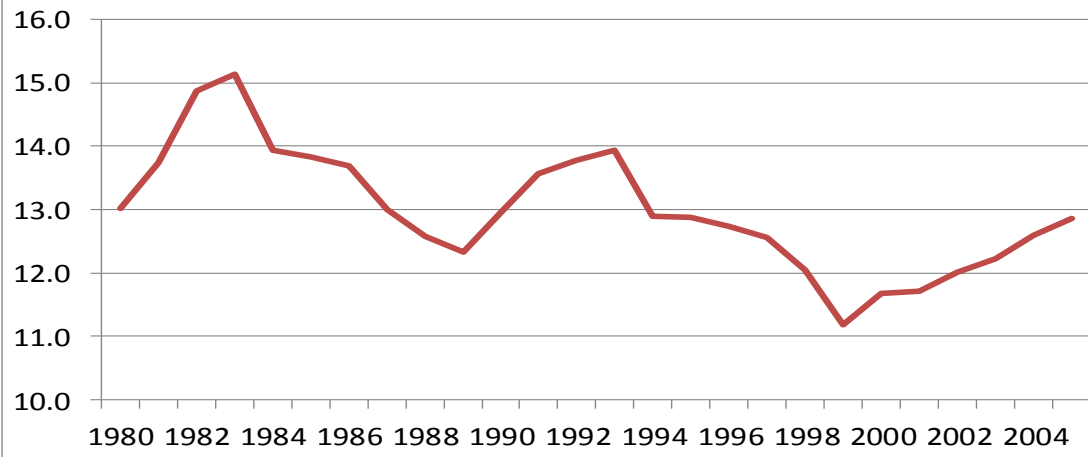
Figure 14. Average Estimated Percent of Black State Residents, U.S., 1980 to 2005.
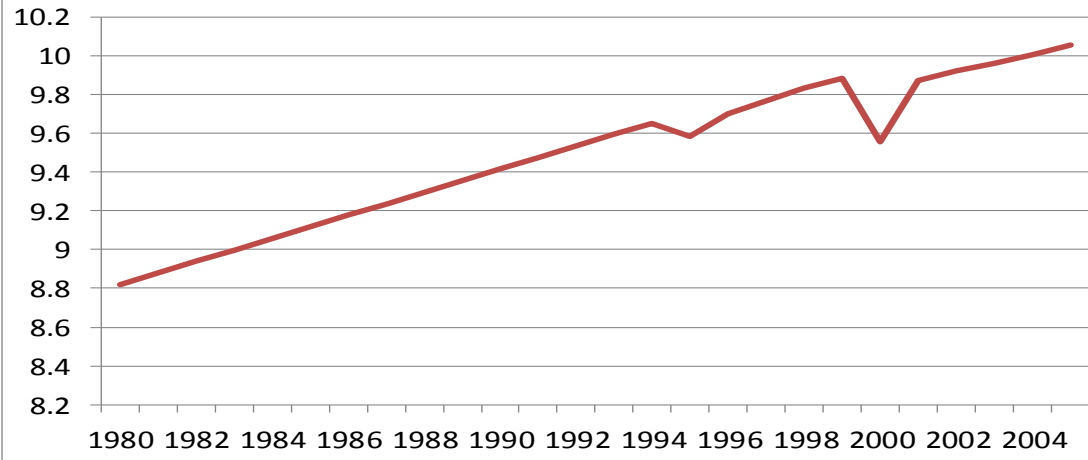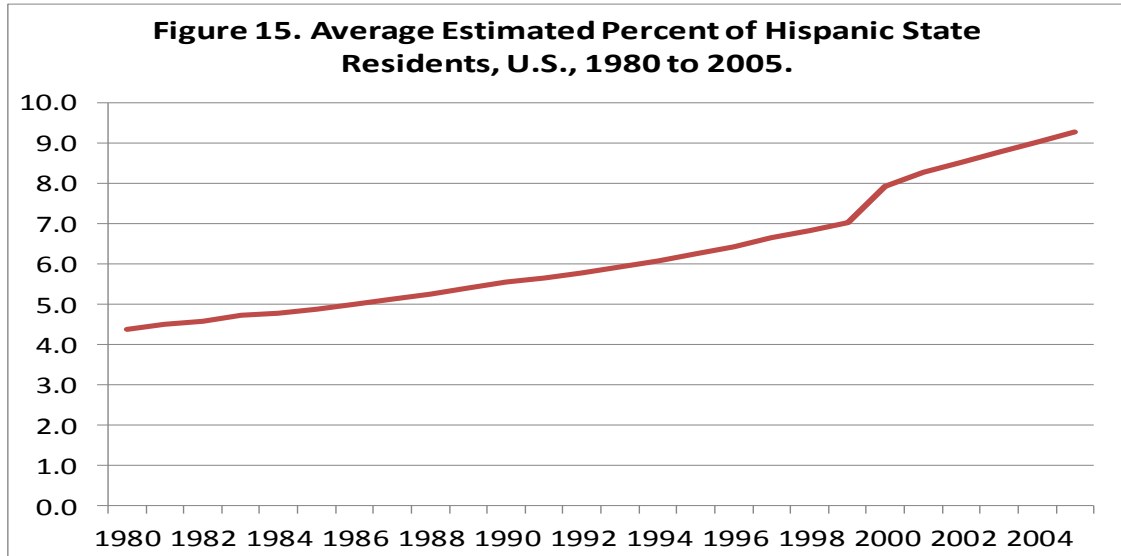
Figure 15. Average Estimated Percent of Hispanic State Residents, U.S., 1980 to 2005.

The time-trend graphs above supply a visual representation of change in my dependent and independent variables between 1980 and 2005. The average state Gini coefficient increased steadily, with a noticeable bump around 2001 and further growth around 2003, which suggests that over time the income inequality has increased. The unemployment rate declined consistently since the peak in early 1980s but not linearly – there were two increases, one in early 1990s and the other in early 2000s. The poverty rate time-trend resembles the unemployment trend but with an important difference – during the early 2000s, the poverty grew while unemployment declined, which might suggest realignment in the labour market towards proliferation of minimum wage part-time jobs. The percentage of state residents that are Black has increased somewhat over time, the slight dip in the line around 2000 is due to the fact that Census data were used for that year which might have slightly different methodology than Current Population Estimate Series. The percentage of state residents that are Hispanic has increased

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substantially over time, more than doubling from roughly 4 percent in 1980 to over 9 percent by 2005.

Figure 16: Scatterplot of Bivariate Relationship between Average State Incarceration Rate and the Average State-level Gini Coefficient, U.S., 1980 to 2005.
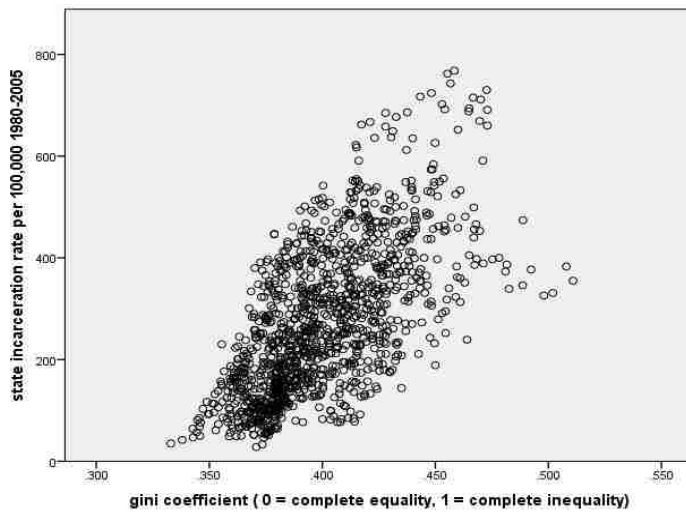
Figure 17. Scatterplot of Bivariate Relationship between Average State Incarceration Rate and the Average Percent of State Population That Is Unemployed, U.S., 1980 to 2005.
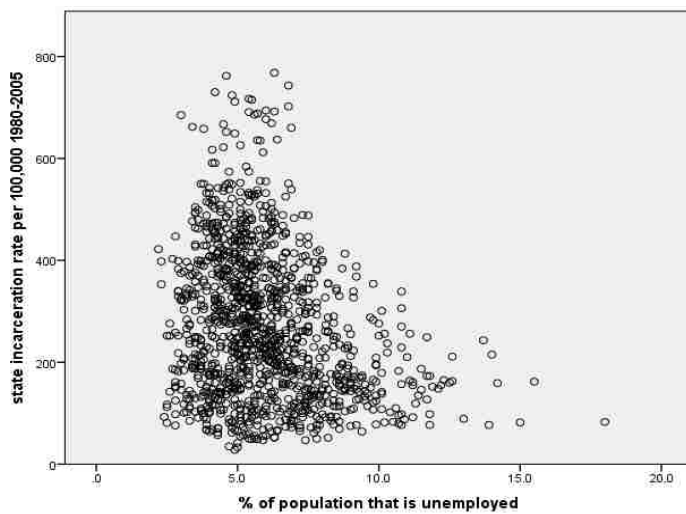
Figure 18. Scatterplot of Bivariate Relationship between Average State Incarceration Rate and the Average Percent of State Population in Poverty, U.S., 1980 to 2005.
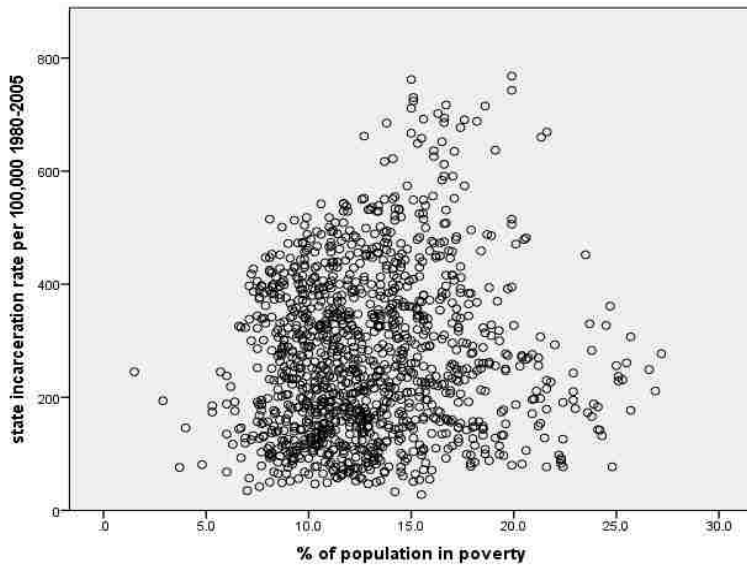
Figure 19. Scatterplot of Bivariate Relationship between Average State Incarceration Rate and the Average Percent of State Population That Is Black, U.S., 1980 to 2005.

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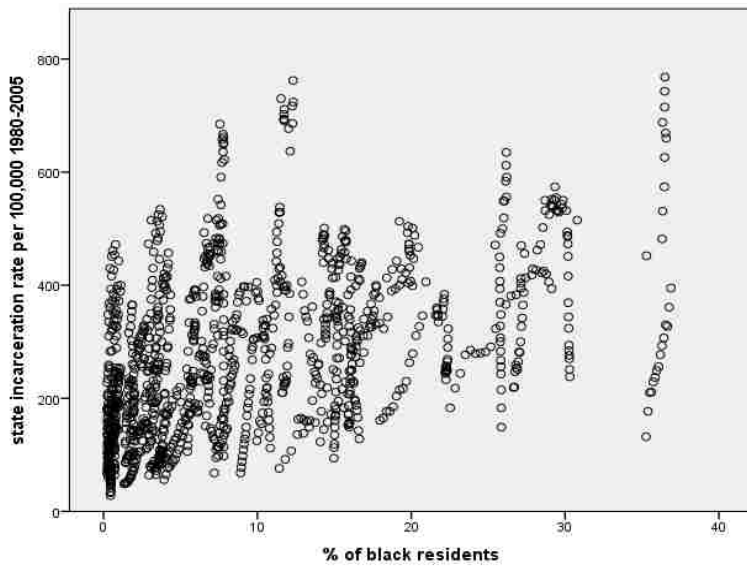
Figure 20. Scatterplot of Bivariate Relationship between Average State Incarceration Rate and the Average Percent of State Population That is Hispanic, U.S., 1980 to 2005.
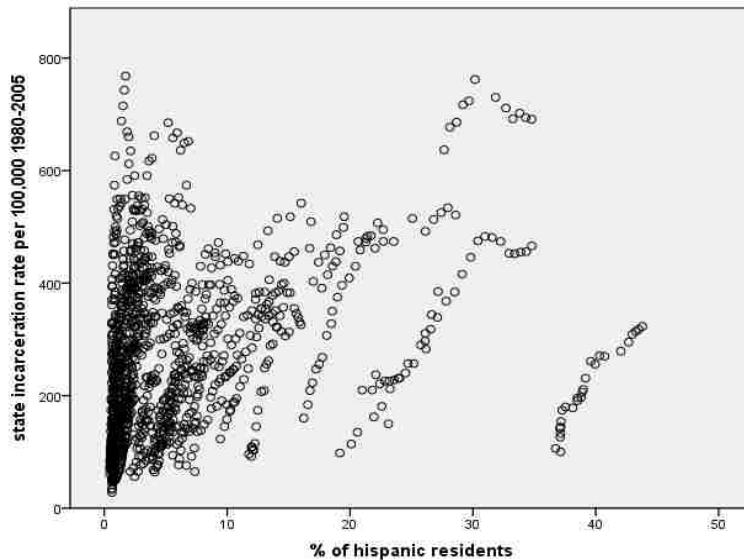
The five scatterplots above take us to the next step in data analysis beyond visualizing change over time in merely one variable by providing visual representations of bivariate relationship between my dependent variable, the state incarceration, and each of the independent variables pertinent to the underlcass hypothesis. The scatterplot on Figure 16 shows a positive linear relationship between incarceration rate and the Gini coefficient, which allows us to speculate that states with higher income inequality might also have higher incarceration rates. The scatterplot on Figure 17 exhibits a weak negative linear relationship between incarceration rate and percent of population that is unemployed, suggesting that states with lower unemployment might have higher incarceration rates. Figure 18 shows not a clear linear pattern but rather a blob suggesting that there is no linear relationship between percent of state population in poverty and the state incarceration rate. The scatterplot on Figure 19 shows no linear relationship between

incarceration rate and percent of population that is Black but appears to show vertical

lines suggestive of state-level effects, with each of verticals line perhaps representing a

state and its demographic situation. A similar yet less pronounced pattern appears on

Figure 20, which does not exhibit a linear relationship between percent of state

population which is Hispanic and incarceration rate, hence I suspect that the vertical lines

are representing a state and its demographic situation. Thus, out of five scatterplots, only

two display a clear linear pattern, the scatterplot on Figure 16 showing a positive linear

relationship between incarceration rate and the Gini coefficient and the scatterplot on

Figure 17 showing a negative linear relationship between incarceration rate and percent

of state residents that are unemployed, while Figure 18, Figure 19, and Figure 20 do not

display any clear linear bivariate relationship.

Table 8. Correlations between State Incarceration Rates and Underclass Hypothesis Variables

Variable	Pearson's r
Gini Coefficient	.649***
Percent Black	.479***
Percent Hispanic	.260***
Percent Unemployed	-.260***
Percent in Poverty	.091***
N = 1248	

p* < .05 p** < .01 p***<.001 (two-tailed)

After performing the Pearson's bivariate correlation I found that there is a strong

significant positive relationship (r = .649, p < .001) between the Gini coefficient and the

state incarceration rate. Providing further support for the underclass hypothesis, I found that there is a significant moderate positive relationship (r = .479, p < .001) between percent of state population that is Black and the incarceration rate. In addition, I found a significant but weak positive relationship (r = .260, p < .001) between percent of state population that is Hispanic and the incarceration rate. Contrary to the underclass hypothesis, I found that there is a significant but weak negative relationship (r = -.260, p < .001) between percent of state population that is unemployed and incarceration rate. This counterintuitive finding may be explained by lagged effects as the unemployment was falling while incarceration rate was growing between 1980 and 2005. Finally, in line with underclass hypothesis I found a significant but very weak positive relationship (r = .091, p < .001) between percentage of state population in poverty and incarceration rate.

My bivariate analysis findings suggest partial support for the underclass hypothesis: while the Gini coefficient is strongly and positively associated with state-level incarceration rate, the percent of state residents that are Black is moderately and positively associated with incarceration rate, the percent of state residents that are Hispanic is weakly and positively associated with state-level incarceration rates, and percent of state residents in poverty is also associated with incarceration rate at high level of significance yet the relationship is extremely weak. Contrary to the underclass hypothesis, the percentage of state population that is unemployed is negatively and weakly correlated with state-level incarceration rate. Hence, four out of five variables operationalizing the underclass are associated with incarceration in the predicted direction. Table 8 above summarizes the findings of bivariate analysis.

Table 9. The Mixed Procedure Estimation of Fixed Effects and Parameters for the Underclass Hypothesis Models, 1980 - 2005.

Variable	Model 1	Model 2	Model 3	Model 4
Intercept	30.93 (51.95)	110.50 (58.75)	140.09 (61.13)*	123.50 (60.42)*
Year	12.55 (.87)***	12.04 (.91)***	12.06 (.92)***	12.09 (.92)***
Percent Black	5.46 (.94)***	4.41 (.91)***	4.36 (.93)***	4.27 (.92)***
Percent Hispanic	-.85 (1.05)	-.48 (1.01)	-.46 (1.02)	-.55 (1.02)
Gini Coefficient	88.29 (137.36)	30.16 (142.03)	32.18 (141.87)	25.28 (142.19)
Percent Poverty	1.14 (.58)*	.82 (.57)	.89 (.57)	.87 (.57)
Percent Unemployed	-1.55 (0.76)*	-83 (.75)	-.84 (.75)	-.85 (.75)
Violent Crime Rate	—————	.08 (.01)***	.08 (.01)***	.08 (.01)***
Property Crime Rate	—————	-.01 (.002)***	-.01 (.002)***	-.01 (.002)***
Divorce Rate	—————	3.26 (2.07)	2.95 (2.08)	3.12 (2.08)
Education Spending	—————	-7.23 (3.52)*	-6.7 (3.5)	-6.96 (3.53)*
Ranney Index	—————	—————	-39.67 (21.92)	—————
Holbrook Van Dunk Index	—————	—————	—————	-.26 (.27)
Intercept Variance	3792.15 (897.13)***	3449.79 (947.66)***	3640.91 (1005.90)***	3576.53 (984.48)***
Intraclass Correlation	.82	.81	.82	.82
Proportion of Level-2 Variance Explained	.58	.62	.60	.60
Proportion of Level-1 Variance Explained	.92	.92	.92	.92
N	1131	1131	1131	1131

Notes: Numbers in parentheses are standard errors; 1131 observations were used to estimate parameters on exhaustive data without any missing values;

$p* < .05$ $p** < .01$ $p***<.001$ (two-tailed)

Table 9 above represents the results of the random coefficients model produced by using the SAS Mixed Procedure which allows for intercepts and slopes to vary while holding the predictors' effects fixed. Model 1 includes all the predictor variables from the underclass hypothesis as fixed effects, and Model 2 includes both the predictor variables and the control variables used by Smith (2004) such as violent and property crime rates per 100,000 state residents, divorce rate per 1,000 state residents, and state spending on primary and secondary education as a percent of state gross product per capita as fixed effects as well. Model 3 is similar to Model 2 except I add the measure of partisan state government control, and Model 4 is similar to Model 2 except I add the measure of

electoral competition. I use Restricted Maximum Likelihood method of variance estimation, I specify "between – within" denominator degrees of freedom estimation of the fixed effect, and I specify the covariance structure of my data as unstructured i.e. nonsystematic, non-patterned (Field and Miles, 2010; Neupert, 2013). For all models I use 48 subjects i.e. states and maximum of 24 annual observations per subject adding to 1131 observations total; a number of observations with missing values were dropped listwise to ensure completely balanced design, exhaustive time-series data, and meaningful comparison of the models.

Table 9 above indicates that there are statistically significant positive associations between percent Black, percent in poverty and state incarceration rates in the underclass hypothesis Model 1. Also, there is a statistically significant negative association between percent unemployed and state incarceration rates. Model 2 includes the same predictor variables as Model 1 as well as three control variables used by Smith (2004). There are statistically significant positive associations between percent Black, violent crime and state incarceration rates in Model 2. Also, there are statistically significant negative associations between property crime, spending on primary and secondary education, and state incarceration rates in Model 2. Percent Hispanic ceased to be significantly associated with incarceration in Model 2, and so did two socioeconomic variables which were significant in Model 1 i.e. the percent of state residents in poverty and percent of unemployed are no longer associated with incarceration controlling for violent crime, educational spending, and divorce rates.

Nothing changes radically in Model 3 which includes the measure of partisan control of the state government except that education spending ceases being significant.

Nothing changes radically in Model 4 which includes the measure of district electoral

competition except that education spending becomes significant again (see Table 9 above

for details), I interpret these results as non-supportive of explanatory value of the political

context measures used in political science in the current test of the underclass hypothesis.

Findings of the multilevel analysis with SAS Mixed Procedure are partially

supportive of the underclass hypothesis as percent Black is positively associated with

incarceration even controlling for violent crime and socioeconomic variables. Contrary to

the expectations of the underclass hypothesis, neither income inequality, nor poverty, nor

unemployment, nor percent of Hispanic state residents are associated with incarceration

net of control variables. See Table 9 above for significance levels and fixed effects

estimates for all four models testing the underclass hypothesis.

*Public Opinion / Democracy in Action Hypothesis: Punishment is a social policy
sensitive to public opinion. State-level population conservatism will be positively
associated with state-level incarceration rates*.

In this section I will present a time-trend graph which shows dynamics of change

in my independent variable operationalizing the democracy in action hypothesis between

1980 and 2005. My independent variable is the annual state-level citizen ideology

measure (Berry et al., 1998) representing citizens' position between the poles of

conservatism and liberalism. Citizen ideology measure is dynamic as it is calculated

annually in a way that includes the electorate ideology in each district in the state by

assessing the incumbent's and challenger's ideology as well as the actual electoral

outcome, and the Congress representatives' ideological orientation based on ratings of

political interest groups (Berry et al., 1998). Citizen ideology is measured as a scale from

zero to a hundred, with higher values signifying more liberal ideology, and is available

for the period from 1980 to 2004. Following the time-trend graph is the scatterplot and

Pearson's r coefficient results for bivariate relationship between my dependent and

independent variable. I will conclude this section with presenting the results of

hypothesis testing using multilevel models with random intercepts – the Mixed Procedure

in SAS, first introducing the model with the predictor only, and closing with models

including both the predictor and control variables.

Figure 21. Average Citizen Ideology, U.S., 1980 - 2004 (higher value = more liberal)
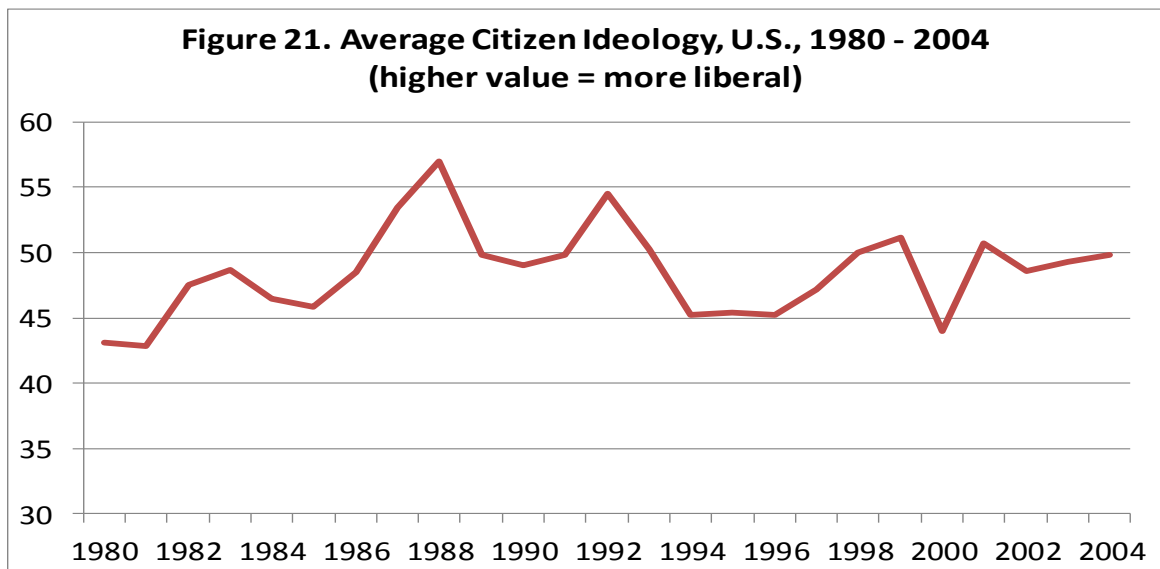
Figure 21 above suggests that average citizen ideology score has increased

somewhat from a value of 43 in 1980 to a value of 49 in 2004, yet it did not grow linearly

but fluctuated repeatedly reaching an absolute peak value of 57 in 1988 and a lesser peak

of 52 in 1992, and plummeted to 44 in 2000. Oveall, the citizen ideology moved in the

liberal direction.

Figure 22. Scatterplot of Bivariate Relationship between Average State Incarceration Rate and the Average State Citizen Ideology, U.S., 1980 to 2005.
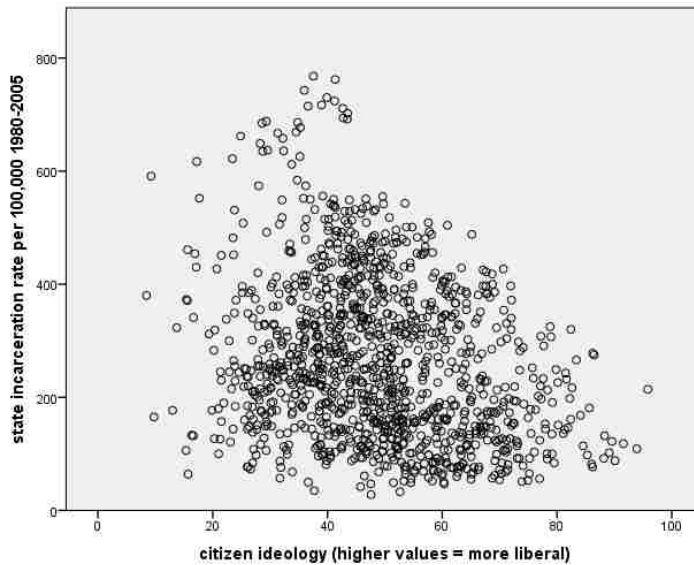
The scatterplot in Figure 22 displays a negative linear relationship between the state incarceration rate and citizen ideology between 1980 and 2005.

Table 10. Correlations between State Incarceration Rates and Democracy in Action Hypothesis Variable.

Variable	r
Citizen Ideology	-.269***
N = 1200	

p* < .05 p** < .01 p***<.001 (two-tailed)

Providing support for the democracy in action hypothesis, I found that there is a significant negative relationship (r = -.269, p < .001) between the citizen ideology and the

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state incarceration rate. The direction of the relationship is in line with hypothesis, since

the variable is coded so that lower values represent increasing conservatism, therefore we

can interpret the results as conforming to the expectation that states with more

ideologically conservative population are likely to have higher incarceration rate. Even

though the relationship is statistically significant and in the predicted direction its

strength is rather weak.

Table 11. The Mixed Procedure Estimation of Fixed Effects and Parameters for the Citizen Ideology Hypothesis Models, 1980 - 2005.

	Model 1	Model 2	Model 3	Model 4
Variable				
Intercept	129.44 (11.94)***	187.71 (21.51)***	218.00 (26.46)***	199.15 (23.02)***
Year	13.00 (.80)***	12.12 (.84)***	12.16 (.85)***	12.16 (.85)***
Citizen Ideology	-.33 (.15)*	-.33 (.14)*	-.32 (.14)*	-.32 (.14)*
Violent Crime Rate	————	.10 (.01)***	.10 (.01)***	.10 (.01)***
Property Crime Rate	————	-.01 (.002)***	-.01 (.002)***	-.01 (.002)***
Divorce Rate	————	2.33 (2.04)	2.24 (2.04)	2.38 (2.04)
Education Spending	————	-7.00 (3.47)*	-6.44 (3.48)	-6.63 (3.48)
Ranney Index	————	————	-41.91 (21.76)	————
Holbrook Van Dunk Index	————	————	————	-.35 (.26)
Intercept Variance	4215.56 (902.03)***	3381.83 (800.90)***	3420.15 (812.16)***	3391.40 (801.92)***
Intraclass Correlation	.83	.81	.81	.81
Proportion of Level-2 Variance Explained	.53	.62	.62	.62
Proportion of Level-1 Variance Explained	.92	.92	.92	.92
N	1131	1131	1131	1131

Notes: Numbers in parentheses are standard errors; 1131 observations were used to estimate parameters on exhaustive data without any missing values;
p* < .05 p** < .01 p***<.001 (two-tailed)

Table 11 above represents the results of the random coefficients model produced

by using the SAS Mixed Procedure which allows for the intercept and the time slope to

vary while holding the predictors' effects fixed. Model 1 includes all the predictor

variables from the utilitarian hypothesis as fixed effects, and Model 2 includes both the

predictor variables and the control variables used by Smith (2004) such as violent and property crime rates, divorce rate per 1,000 state residents, and state spending on primary and secondary education as a percent of state gross product as fixed effects as well. Model 3 is similar to Model 2 except I add the measure of partisan state government control, and Model 4 is similar to Model 2 except I add the measure of electoral competition. I use Restricted Maximum Likelihood method of variance estimation, I specify "between – within" denominator degrees of freedom estimation of the fixed effect, and I specify the covariance structure of my data as unstructured i.e. nonsystematic, non-patterned (Field and Miles, 2010; Neupert, 2013). For all models I use 48 subjects i.e. states and maximum of 24 annual observations per subject adding to 1131 observations total; a number of observations with missing values were dropped listwise to ensure completely exhaustive time-series data and meaningful comparison of the models.

Table 11 above indicates that there is a statistically significant negative association between state citizen ideology and incarceration rates in Model 1. Model 2 in Table 11 includes the same predictor variables as Model 1 as well as control variables used by Smith (2004). There is a statistically significant negative association between citizen ideology, property crime rates, educational spending and incarceration rates net of control variables, and a significant positive association between violent crime rates and incarceration net of control variables in Model 2.

Nothing changes drastically in Model 3 which includes Ranney index, the measure of partisan control of the state government, and the citizen ideology is still negatively associated with incarceration rates. The Ranney index has no independent

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effect on dependent variable net of control variables. Model 4 which includes Holbrook

Van Dunk index, the measure of district electoral competition (see Table 11 above for

details), and the said index has no independent effect net of control variables. I interpret

these results as not supportive of the independent effect of partisan control over the state

government or electoral competition on my dependent variable net of control variables,

but as supportive of the independent explanatory value of citizen ideology net of political

competition measures.

Findings of multilevel analysis with SAS Mixed Procedure are supportive of the

democracy in action hypothesis as citizen ideology, coded so that lower values represent

conservatism, is negatively associated with incarceration net of control variables and

political competition measures. Interestingly, measures of political competition have no

independent effect on the incarceration in this model, while citizen ideology does even

controlling for political context.

*Partisan Republican Use of Incarceration Hypothesis: Punishment is a social policy
consistent with Republican Party agenda. States with strong Republican Party presence
in the legislature and Republican governors will have higher incarceration rates.*

I will open this section with presenting a time-trend graph which shows dynamics

of change between 1980 and 2005 in my first independent variable operationalizing the

partisan Republican use of incarceration hypothesis. My first independent variable is the

annual percent of Democratic seats (and, by implication, of Republican seats) in both

chambers of state legislatures measuring the partisan control of the state-level legislative

branch of government compiled by Klarner (2003) and updated by Lindquist (2007)

based on various annual editions of the Book of the States. Nebraska was excluded from

the sample since it has a unicameral legislature making it impossible to calculate the

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average percent of Democratic seats in both chambers. Following the time-trend graph is the scatterplot and Pearson's r coefficient results for bivariate relationship between the state incarceration and percent of Democratic seats in both houses of state legislatures. Then I will present a bar chart and results of an independent samples t test for my second independent variable which is the partisan control of state-level executive branch of government operationalized as a dummy variable indicating presence or absence of Republican governor in each state annually from 1980 to 2006. I will conclude this section with presenting the results of hypothesis testing using multilevel models with random intercepts – the Mixed Procedure in SAS, first displaying the model with the predictors, and then introducing models including both the predictors and control variables.

Figure 23. Average Percent of Democratic Seats in Both Chambers of State Legislatures, U.S., 1980 - 2005.
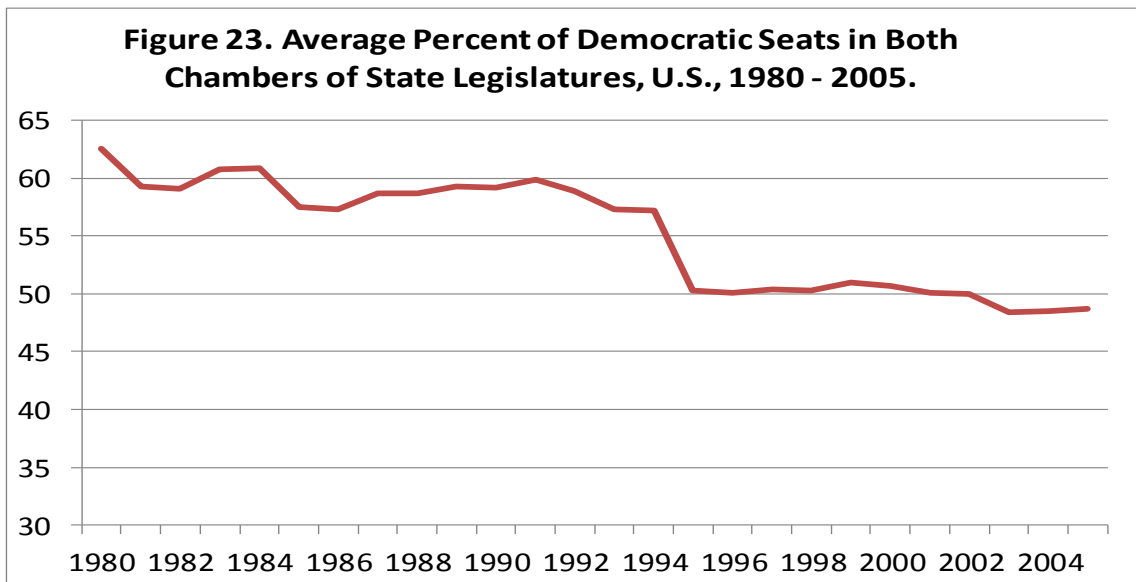
The time-trend graph above helps in visualizing the change in the partisan control of state-level legislative branch of government. Overall, Figure 23 shows a steady decline in the number of Democratic legislators from a high of 62.5 percent in 1980 to 48.7 percent in 2005, suggesting that Democratic party equaled with Republican party in regard to quantitative representation by 1995, lost its majority status in 2002, and did not have the number of seats necessary to control the legislative process through the end of the analyzed time-series.

Figure 24. Scatterplot of Bivariate Relationship between Average State Incarceration Rate and the Average Percent of Democratic Seats in Both Chambers of State Legislature, U.S., 1980 to 2005.
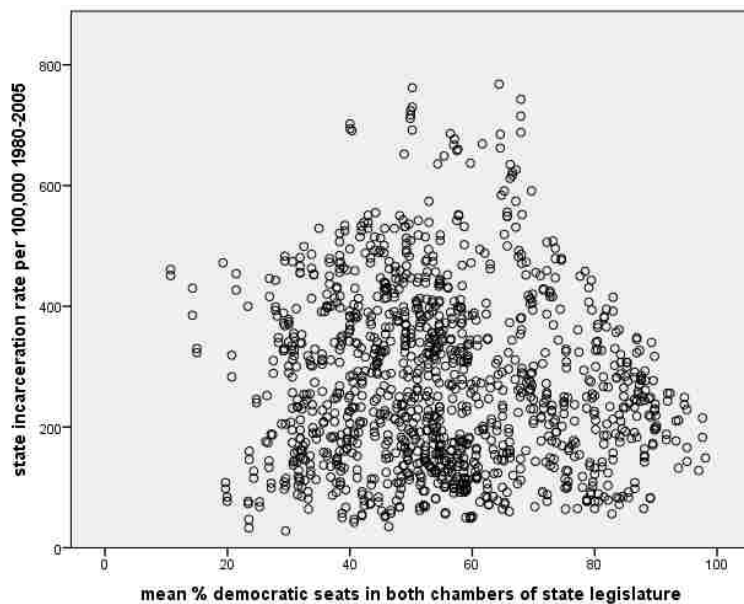
Figure 24 above shows no linear relationship between the percent of Democratic seats in both chambers of state legislatures and the incarceration rates.

Table 12. Correlation between State Incarceration Rate and Partisan Use of Incarceration Hypothesis Variable.

Variable	Pearson's r
Mean Percent of Democratic Seats in Both Chambers of Legislature	-.085**
N = 1248	

p* < .05 p** < .01 p***<.001 (two-tailed)

Providing support for the partisan use of incarceration hypothesis, I found that there is a significant negative relationship (r = -.085, p < .01) between percent of Democratic seats in state legislatures and the incarceration rate, but the relationship is extremely week. The direction of correlation fits with the hypothesis – the lower percentage of Democratic legislators correlates with higher incarceration rate. I am not measuring directly the number of Republican legislators but by default the lower percentage of Democratic legislators presumes higher percentage of Republican legislators. The results fit the hypothesis that percentage of Republicans in state legislatures is positively correlated with incarceration rate.

Figure 25. Average State Incarceration Rate and Governors' Party, U.S., 1980 - 2005
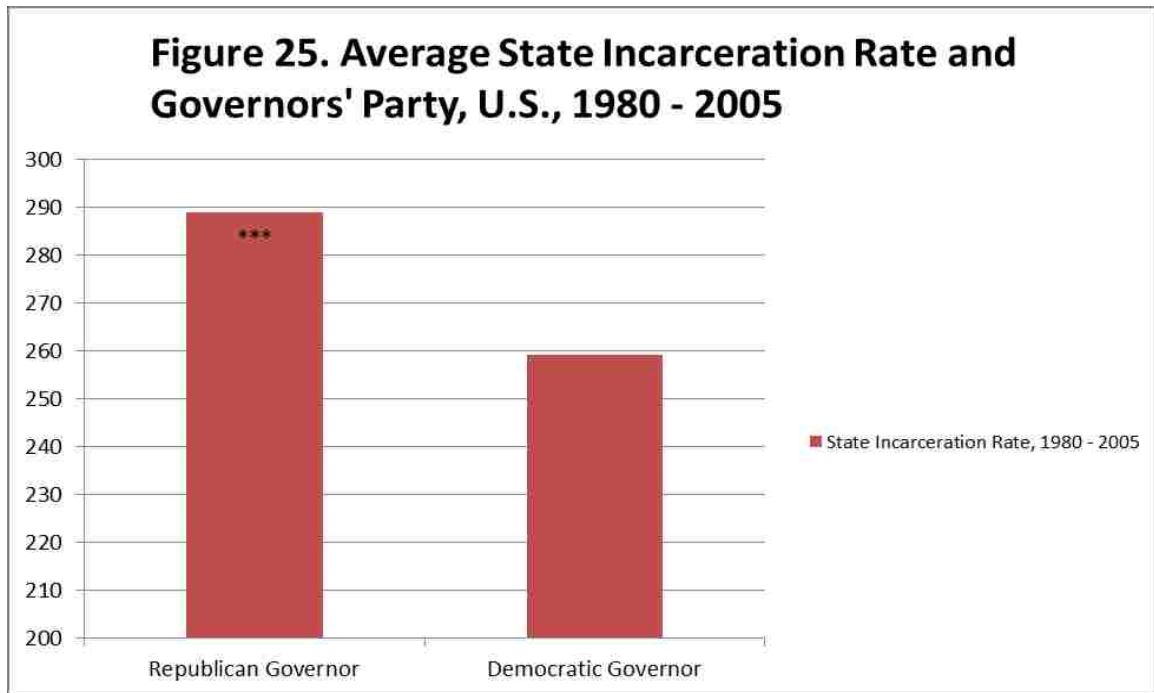
Figure 25 above indicates that states with Republican governors have mean incarceration rate of 289 per 100,000 between 1980 and 2005, while states with democratic governors have mean incarceration rate of 259 per 100,000 respectively. I carry out an independent samples t test to ascertain if there is a significant difference in mean state incarceration rates between states headed by Democratic and Republican governors. Independent samples t test provides support for the partisan Republican use of incarceration. I found that there is a significant difference in incarceration rate observed between the states with Republican governors and states with non-Republican governors ($t = 3.633$, $p < .001$), see Table 13 below for details. States with Republican governors have a higher mean incarceration rate (289 per 100,000) than states with Democratic governors (259 per 100,000). The data fit the hypothesis that incarceration rates vary by governors' party.

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Table 13. Independent Samples Test for Mean State Incarceration Rate by Party of Governor, 1980 - 2005.

Variable		Levene's Test for Equality of Variances		t-test for Equality of Means				
		F	Sig.	t	df	Sig.(2-tailed)	Mean Difference	Std. Error Difference
Mean State Incarceration Rate	Equal Variances Assumed	13.425	.000	3.633	1221	.000	29.692	8.173
	Equal Variances Not Assumed			3.619	1182.7	.000	29.692	8.205

N = 1223

Notes: 25 state-years were excluded because only mainstream parties were coded

p* < .05 p** < .01 p***<.001 (two-tailed)

Table 14 below represents the results of the random coefficients model produced by using the SAS Mixed Procedure which allows for the intercept and the time slope to vary while holding the predictors' effects fixed. Model 1 includes all the predictor variables from the partisan use of incarceration hypothesis as fixed effects, and Model 2 includes both the predictor variables and the control variables used by Smith (2004) such as violent and property crime rates, divorce rate per 1,000 state residents, and state spending on primary and secondary education as a percent of state gross product as fixed effects as well. Model 3 is similar to Model 2 except I add the measure of partisan state government control, and Model 4 is similar to Model 2 except I add the measure of electoral competition. I use Restricted Maximum Likelihood method of variance estimation, I specify "between – within" denominator degrees of freedom estimation of the fixed effect, and I specify the covariance structure of my data as unstructured i.e.

nonsystematic, non-patterned (Field and Miles, 2010; Neupert, 2013). For all models I use 48 subjects i.e. states and maximum of 24 annual observations per subject adding to 1106 observations total; a number of observations with missing values as well as 25 state-years with non-mainstream party governors were dropped to ensure completely exhaustive time-series data and meaningful comparison of the models.

Table 14. The Mixed Procedure Estimation of Fixed Effects and Parameters for the Partisan Use of Incarceration Hypothesis Models, 1980 - 2005.								
		Model 1		Model 2		Model 3		Model 4
Variable								
Intercept		171.02 (15.53)***		223.07 (22.37)***		258.48 (27.47)***		236.84 (236.84)***
Year		12.43 (.76)***		11.49 (.80)***		11.53 (.81)***		11.53 (.81)***
Percent Democratic Legislators		-.90 (.17)***		-.93 (17)***		-.93 (.17)***		-.93 (.17)***
1 If Democratic Governor		-2.43 (2.35)		-3.47 (2.29)		-3.91 (2.29)		-3.09 (2.30)
Violent Crime Rate		————		.10 (.01)***		.10 (.01)***		.10 (.01)***
Property Crime Rate		————		-.02 (.002)***		-.02 (.002)***		-.02 (.002)***
Divorce Rate		————		3.55 (2.09)		3.50 (2.08)		3.72 (2.09)
Education Spending		————		-4.60 (3.52)		-3.85 (3.53)		-4.33 (3.53)
Ranney Index		————		————		-48.11 (21.72)*		————
Holbrook Van Dunk Index		————		————		————		-.44 (.27)
Intercept Variance		5573.47 (1212.34)***		4373.52 (1019.97)***		4320.89***		4219.24 (987.20)***
Intraclass Correlation		.87		.85		.85		.84
Proportion of Level-2 Variance Explained		.38		.51		.51		.53
Proportion of Level-1 Variance Explained		.92		.92		.93		.93
N		1106		1106		1106		1106
Notes: 25 observations of Governors' party were dropped as only two mainstream parties were considered								
p* < .05 p** < .01 p***<.001 (two-tailed)								

Table 14 above represents the results of the random coefficients model produced by using the SAS Mixed Procedure which allows for the intercept and the time slope to vary while holding the predictors' effects fixed. Model 1 includes all the predictor variables from the partisan use of incarceration hypothesis as fixed effects, and Model 2

includes both the predictor variables and the control variables used by Smith (2004) such as violent and property crime rates, divorce rate per 1,000 state residents, and state spending on primary and secondary education as a percent of state gross product as fixed effects as well. Model 3 is similar to Model 2 except I add the measure of partisan state government control, and Model 4 is similar to Model 2 except I add the measure of electoral competition. I use Restricted Maximum Likelihood method of variance estimation, I specify "between – within" denominator degrees of freedom estimation of the fixed effect, and I specify the covariance structure of my data as unstructured i.e. nonsystematic, non-patterned (Field and Miles, 2010; Neupert, 2013). For all models I use 48 subjects i.e. states and maximum of 24 annual observations per subject adding to 1106 observations total; a number of observations with missing values as well as 25 state-years with non-mainstream party governors were dropped to ensure completely exhaustive time-series data and meaningful comparison of the models.

Table 14 above indicates that there is a statistically significant negative association between average percent of Democratic seats in both chambers of state legislatures and incarceration rates, but party of governor is not significant in Model 1. Model 2 in Table 14 includes the same predictor variables as Model 1 as well as control variables used by Smith (2004). There is a statistically significant negative association between percent of Democratic legislators, property crime rates, and incarceration rates net of control variables, and a significant positive association between violent crime rates and incarceration net of control variables in Model 2.

Nothing changes drastically in Model 3 which includes Ranney index, the measure of partisan control of the state government, and the percent of Democratic

legislators is still negatively associated with incarceration rates. However, the Ranney

index has an independent negative effect on dependent variable net of control variables.

Nothing changes radically in Model 4 which includes Holbrook Van Dunk index, the

measure of district electoral competition (see Table 14 above for details). I interpret these

results as not supportive of association between electoral competition and incarceration,

but as supportive of the independent effect of partisan control over the state government

on my dependent variable net of control variables.

Findings of multilevel analysis with SAS Mixed Procedure are partially

supportive of the partisan use of incarceration hypothesis as partisan control of state

legislature, coded so that lower values represent increasing Republican control, is

negatively associated with incarceration net of control variables and political competition

measures. Contrary to the partisan use of incarceration hypothesis, governor's party is not

associated with imprisonment. One measure of political context, the Ranney index

representing partisan control of state government, is negatively associated with

incarceration rates.

Electoral Cycle Hypothesis: Incaceration is a social policy which is appealing to voters.
Both parties use incarceration to widen their appeal during gubernatorial election cycle.
Governors' election years will be positively associated with incarceration.

In this section I will present a bar chart and results of an independent samples t

test for my independent variable operationalizing the electoral cycle hypothesis. My

independent variable is a dummy coded so that one represents gubernatorial election year

for this particular state and zero represents non-gubernatorial election year for this

particular state for the period from 1980 to 2005. I used various editions of the Book of

States as a source to create this variable. I will conclude this section with presenting the

results of hypothesis testing using multilevel models – the Mixed Procedure in SAS, first

displaying the model with predictor only and closing with models including both the

predictor and control variables.

Figure 26. Average State Incarceration Rate and Gubernatorial Elections, U.S., 1980 - 2005
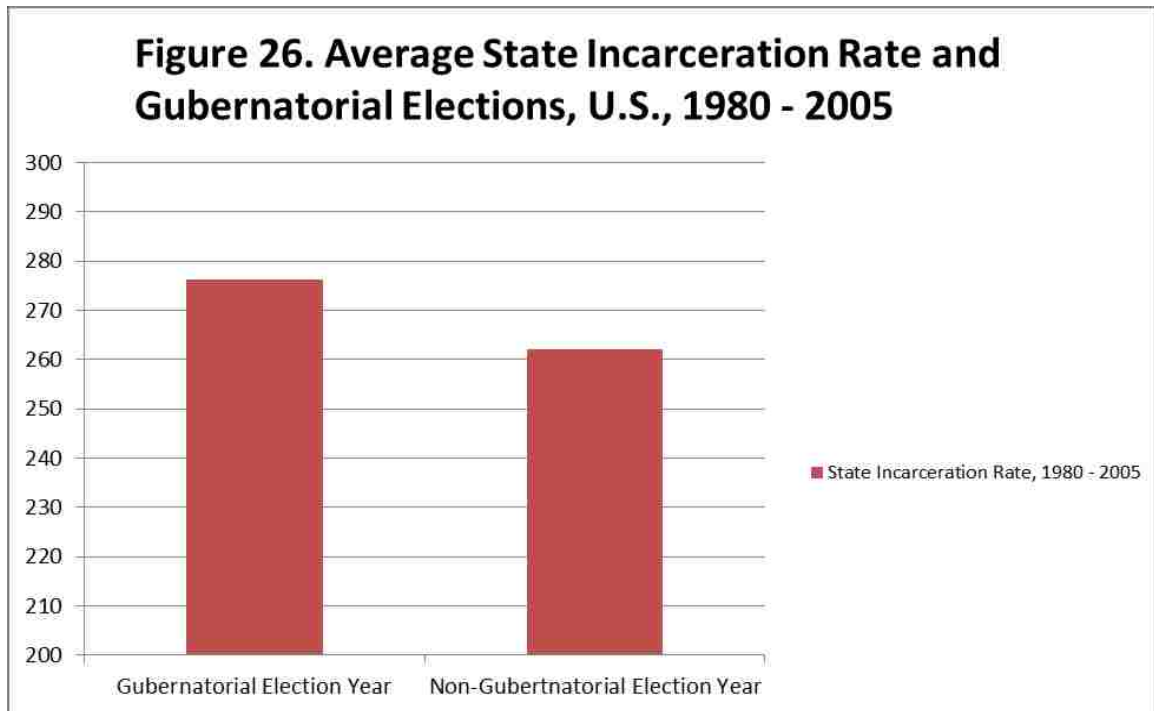
Figure 26 above indicates that states during gubernatorial election year have a

mean incarceration rate of 276 per 100,000 between 1980 and 2005, while states during

non-gubernatorial election years have a mean incarceration rate of 262 per 100,000

respectively. I carry out an independent samples t test to see if there is a significant

difference in mean state incarceration rates between these two groups of states.

Independent samples t test does not provide support for the electoral cycle explanation of

incarceration growth. There is no significant difference in incarceration rate between the

states during gubernatorial elections and states during non-gubernatorial election years (t

= 1.524, p = .128), see Table 15 below for details. The data do not fit the hypothesis that

incarceration rates vary by election year.

Table 15. Independent Samples Test for Mean State Incarceration Rate by Gubernatorial Election Year, 1980 - 2005.

Variable		Levene's Test for Equality of Variances		t-test for Equality of Means				
		F	Sig.	t	df	Sig.(2-tailed)	Mean Difference	Std. Error Difference
Mean State Incarceration Rate	Equal Variances Assumed	.131	.718	1.524	1246	.128	14.153	9.284
	Equal Variances Not Assumed			1.529	554.46	.127	14.153	9.257

N = 1248

p* < .05 p** < .01 p***<.001 (two-tailed)

The results of multilevel analysis summarized in Table 16 below fail to support

electoral cycle hypothesis. Gubernatorial election year is not associated with

incarceration rates in either of the four models. Given that intraclass correlation is 84 to

81 percent i.e. a strong clustering of data is present, I suspect that Ordinary Least Squares

regression used by Smith (2004) produced a false positive unable to deal with

autocorrelation in the data. Multilevel analysis, being a more optimal technique for

dealing with spatially and temporally correlated data in repeat-measure designs, does not

produce results supportive of gubernatorial election cycle association with incarceration.

Table 16. The Mixed Procedure Estimation of Fixed Effects and Parameters for the Gubernatorial Election Cycle Hypothesis Models, 1980 - 2005.

	Model 1	Model 2	Model 3	Model 4
Variable				
Intercept	113.00 (9.78)***	172.81 (20.55)***	205.61 (25.94)***	186.52 (22.37)***
Year	12.97 (.80)***	12.12 (.84)***	12.16 (.85)***	12.16 (.85)***
1 If Gubernatorial Election Year	1.54 (1.99)	1.68 (1.94)	1.61 (1.93)	1.65 (1.93)
Violent Crime Rate	—————	.09 (.01)***	.1 (.01)***	.09 (.01)***
Property Crime Rate	—————	-.01 (.002)***	-.01 (.002)***	-.01 (.002)***
Divorce Rate	—————	2.54 (2.04)	2.45 (2.05)	2.62 (2.05)
Education Spending	—————	-7.64 (3.47)*	-7.02 (3.47)*	-7.20 (3.48)*
Ranney Index	—————	—————	-44.31 (21.75)*	—————
Holbrook Van Dunk Index	—————	—————	—————	-.40 (.02)
Intercept Variance	4446.34 (944.82)***	3550.50 (837.17)***	3577.38 (845.97)***	3537.52 (833.60)***
Intraclass Correlation	.84	.81	.81	.81
Proportion of Level-2 Variance Explained	.51	.61	.60	.61
Proportion of Level-1 Variance Explained	.92	.92	.92	.92
N	1131	1131	1131	1131

Notes: Numbers in parentheses are standard errors; 1131 observations were used to estimate parameters on exhaustive data without any missing values;

p* < .05 p** < .01 p***<.001 (two-tailed)

Criminal Justice Policies Hypothesis: Incarceration is an artifact of criminal justice policies. States with habitual offender laws and high probation rates will have higher incarceration rates, while states with determinate sentencing laws and marijuana decriminalization will have lower incarceration rates.

First, I will open this section by displaying a time-trend graph, a scatterplot, and Pearson's r results for probation rate per 100,000 state residents which is the first independent variable operationalizing this hypothesis stipulating that incarceration rate is an outcome of criminal justice policies. I used various annual editions of the Probation and Parole bulletin published by U.S. Bureau of Justice Statistics to compute this variable. Second, I will present bar charts and results of independent samples t tests for my three remaining independent variable operationalizing this hypothesis. I used U.S. Department of Justice (1997) research brief and Chen's (2009) article as sources to create

a dummy variable representing presence of a three-strikes law establishing super-penalties for repeat offenders in a given state. I used National Survey of State Sentencing Structures published by the U.S. Department of Justice (1996) as well as articles by Marvell and Moody (1996), and Stemen and Rengifo (2011) as sources to create a dummy variable representing presence of determinate sentencing law abolishing discreationary parole and introducing fixed sentences determined by a judge in a given state. For information on marijuana decriminalization I used various editions of Sourcebook of Justice Statistics as well as a table from MacCoun et al. (2009) listing states that have no criminal penalties for possession of an ounce of marijuana. Third, I will conclude this section with presenting the results of hypothesis testing using multilevel models with random intercepts – the Mixed Procedure in SAS, first displaying the model with predictors only and closing with models including both the predictors and control variables.

Figure 27. Average State Probation Rate Juxtaposed on Average State Incarceration Rate, U.S., 1980 to 2005.
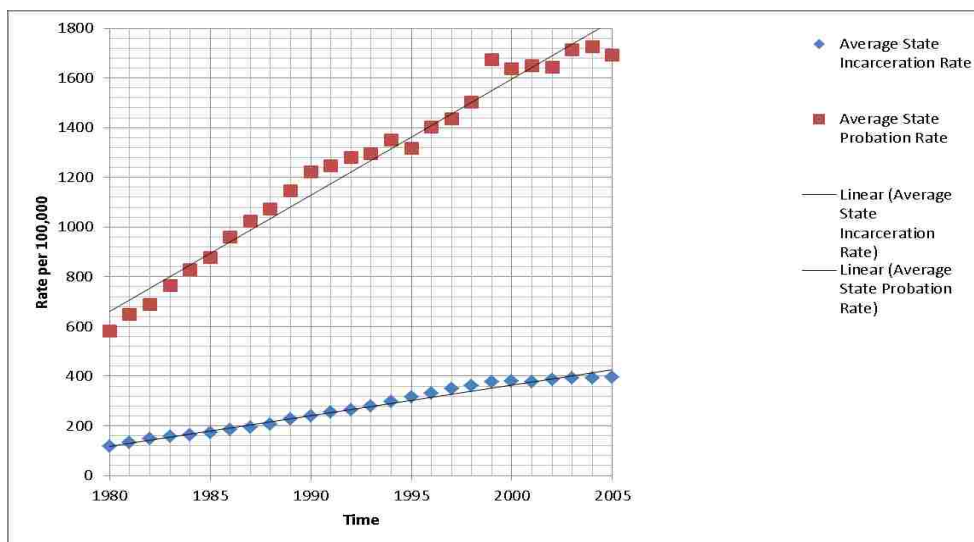
Figure 27 above supplies a visual representation of time-trends in probation rate

and incarceration rate between 1980 and 2005. I chose to juxtapose the dependent and

independent variables since they are similarly standardized as a rate per 100,000 state

residents hence a visual comparison is possible. Figure 27 shows that the average state

probation rate has increased substantially, from roughly 580 inmates per 100,000 state

residents in 1980 to roughly 1700 inmates per 100,000 state residents in 2005, roughly a

three-fold increase. In 1980 there were 4.9 times more individuals under probation

supervision than inmates but by 2005 there were 4.28 times more individuals under

probation supervision than inmates.

Figure 28. Scatterplot of Bivariate Relationship between Average State Incarceration
Rate and the Average State Probation Rate, U.S., 1980 to 2005.
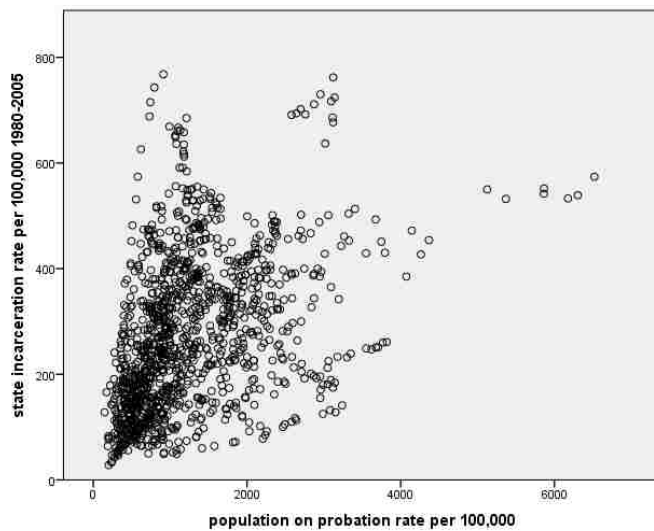
Figure 28 above shows a linear positive relationship between incarceration rate

and probation rate, suggesting that higher incarceration rates are correlated with higher

probation rates. Results of bivariate analysis are consistent with the positive linear

relationship suggested by Figure 28 as I found that there is a significant positive

relationship (r = .410, p < .001) between incarceration rate and probation rate which is

moderate in strength (see Table 17 below). Results are supportive of the hypothesis as I

expected that states will not use probation as an alternative sanction depressing

incarceration rate but as a complementary punitive mechanism.

Table 17. Correlation between State Incarceration Rates and Probation Rates

Variable	Pearson's r
Probation Rate Per 100,000	.410***
N = 1248	

p* < .05 p** < .01 p***<.001 (two-tailed)

Figure 29. Average State Incarceration Rate and States with Three-Strikes Laws, U.S., 1980 - 2005
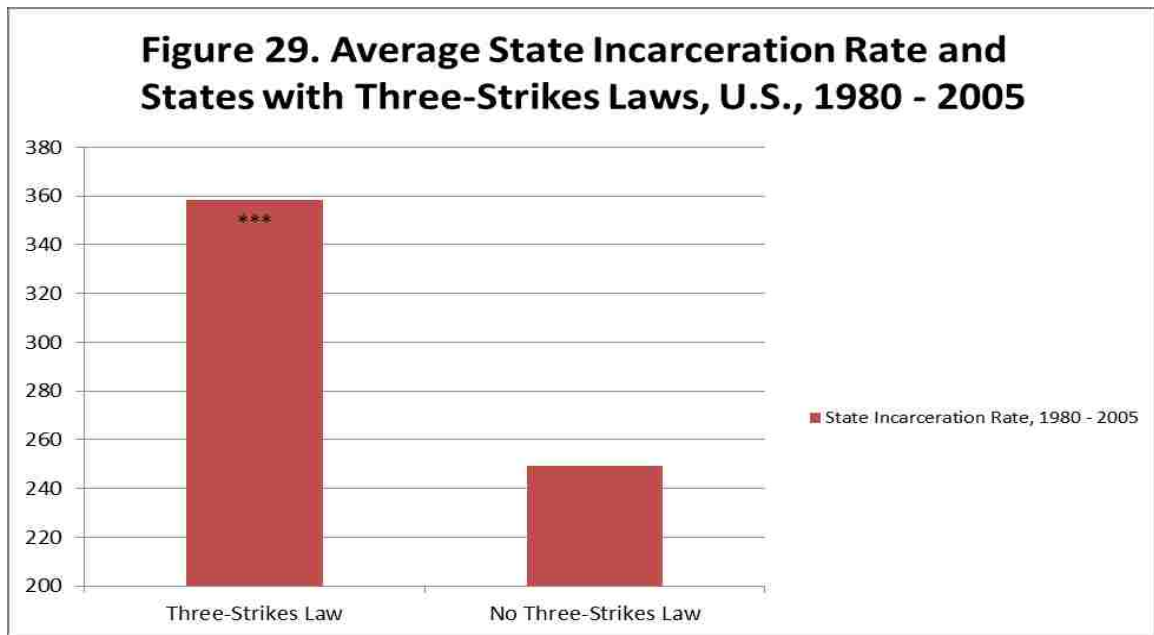
Figure 29 above indicates that states with habitual offender laws also known as three-strikes laws have a mean incarceration rate of 358 per 100,000 between 1980 and 2005, while states without such laws have a mean incarceration rate of 249 per 100,000 respectively. I carry out an independent samples t test to determine if there is a significant difference in mean state incarceration rates between these two groups of states. Providing support for criminal justice policies hypothesis I found that there is a significant difference in incarceration rate between the states with three-strikes laws and the states without such laws ($t = -11.606$, $p < .001$), see Table 18 below for details. States with three-strikes laws have a higher mean incarceration rate (358 per 100,000) than states with no three-strikes laws (249 per 100,000). The data fit the hypothesis that incarceration rates vary by presence of three-strikes laws.

Table 18. Independent Samples Test for Mean State Incarceration Rate by Three-Strikes Law, 1980 - 2005.

| Variable | | Levene's Test for Equality of Variances | | t-test for Equality of Means | | | | |
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference
Mean State Incarceration Rate	Equal Variances Assumed	22.849	.000	-11.606	1246	.000	-109.125	9.403
	Equal Variances Not Assumed			-13.807	560.059	.000	-109.125	7.904

N = 1248

p* < .05 p** < .01 p***<.001 (two-tailed)

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Figure 30. Average State Incarceration Rate and States with Determinate Sentencig Laws, U.S., 1980 - 2005
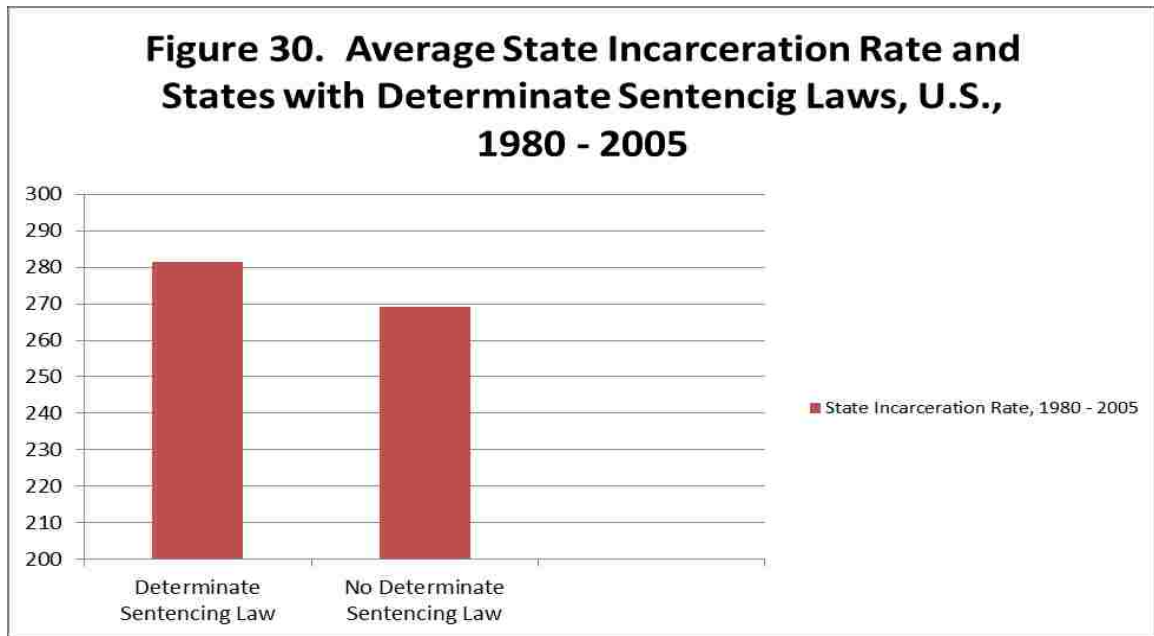
Figure 30 above indicates that states with determinate sentencing laws which abolish discretionary parole have a mean incarceration rate of 281 per 100,000 between 1980 and 2005, while states without such laws have a mean incarceration rate of 269 per 100,000 respectively. I carry out an independent samples t test to determine if there is a significant difference in mean state incarceration rates between these two groups of states. Contrary to the hypothesis, there is no significant difference in incarceration rate between the states with determinate sentencing laws and the states without such laws (t = - 1.331 , p = .184), see Table 19 below for details. The data do not fit the hypothesis that incarceration rates vary by presence of determinate sentencing laws.

Table 19. Independent Samples Test for Mean State Incarceration Rate by Determinate Sentencing Law, 1980 - 2005.

| Variable | | Levene's Test for Equality of Variances | | t-test for Equality of Means | | | | |
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference
Mean State Incarceration Rate	Equal Variances Assumed	.448	.503	-1.331	1246	.184	-12.128	9.115
	Equal Variances Not Assumed			-1.326	599.348	.185	-12.128	9.144

N = 1248

p* < .05 p** < .01 p***<.001 (two-tailed)

Figure 31 below indicates that states with marijuana decriminalization laws which abolish criminal penalties for possession of an ounce of marijuana have a mean incarceration rate of 265 per 100,000 between 1980 and 2005, while states without such laws have a mean incarceration rate of 274 per 100,000 respectively.

Figure 31. Average State Incarceration Rate and States with Marijuana Decriminalization Laws, U.S., 1980 - 2005
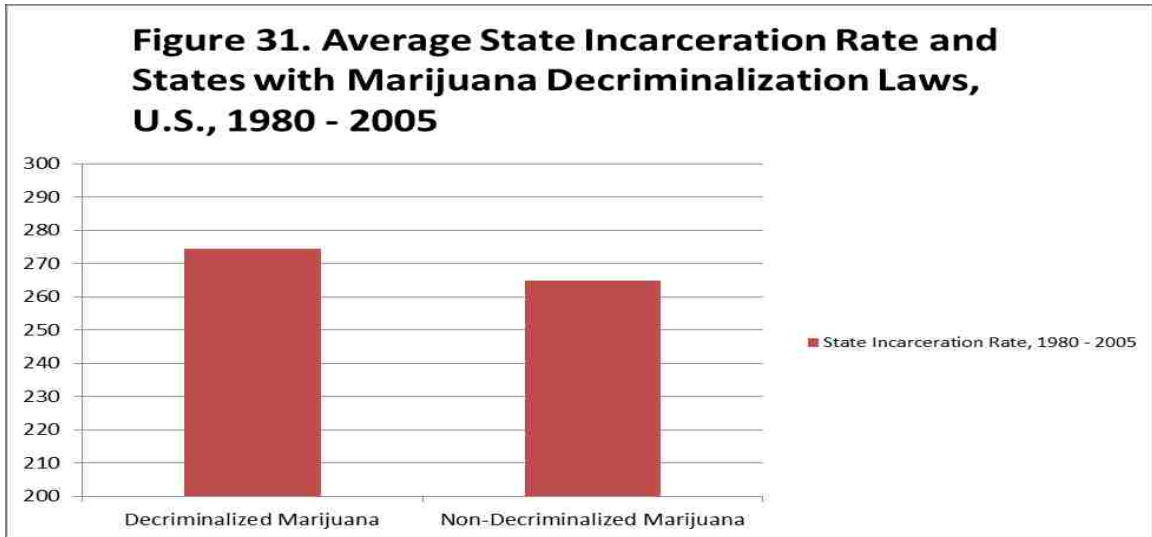
Table 20. Independent Samples Test for Mean State Incarceration Rate by Marijuana Decriminalization Law, 1980 - 2005.

| Variable | Levene's Test for Equality of Variances | | | | | t-test for Equality of Means | | |
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference
Mean State Incarceration Rate	Equal Variances Assumed	.001	.980	.939	1246	.348	9.536	10.155
	Equal Variances Not Assumed			.938	378.45	.349	9.536	10.165

N = 1248

p* < .05 p** < .01 p***<.001 (two-tailed)

I carry out an independent samples t test to determine if there is a significant difference in mean state incarceration rates between these two groups of states. Contrary to the hypothesis, there is no significant difference in incarceration rate between the states with marijuana decriminalization laws and the states without such laws (t = .939, p = .348), see Table 20 above for details. The data do not fit the hypothesis that incarceration rates vary by presence of marijuana decriminalization laws.

Table 21. The Mixed Procedure Estimation of Fixed Effects and Parameters for the Criminal Justice Policies Hypothesis Models, 1980 - 2005.

Variable	Model 1	Model 2	Model 3	Model 4
Intercept	114.08 (10.49)***	164.23 (21.02)***	194.96 (26.16)***	176.43 (22.90)***
Year	11.91 (.85)***	11.17 (.89)***	11.21 (.89)***	11.22 (.89)***
Probation Rate per 100,000	.01 (.003)**	.01 (.003)**	.01 (.003)**	.01 (.003)**
1 If Three-Strikes Law	16.14 (4.72)**	17.63 (4.71)**	17.47 (4.71)**	17.35 (4.72)**
1 If Determinate Sentencing Law	-4.65 (5.80)	-5.29 (5.66)	-5.36 (5.65)	-5.34 (5.66)
1 If Marijuana Decriminalization Law	-28.41 (13.49)*	-24.33 (12.79)	-22.68 (12.84)	-24.63 (12.80)
Violent Crime Rate	————	.10 (.01)***	.10 (.01)***	.09 (.01)***
Property Crime Rate	————	-.01 (.002)***	-.01 (.002)***	-.01 (.002)***
Divorce Rate	————	2.99 (2.04)	2.89 (2.04)	3.02 (2.05)
Education Spending	————	-5.96 (3.48)	-5.38 (3.49)	-5.61 (3.49)
Ranney Index	————	————	-42.01 (21.65)	————
Holbrook Van Dunk Index	————	————	————	-.34 (.26)
Intercept Variance	4510.99 (976.06)***	3524.36 (847.12)***	3560.98 (859.22)***	3544.59 (852.38)***
Intraclass Correlation	.84	.82	.82	.82
Proportion of Level-2 Variance Explained	.50	.61	.60	.61
Proportion of Level-1 Variance Explained	.92	.92	.92	.92
N	1131	1131	1131	1131

Notes: Numbers in parentheses are standard errors; 1131 observations were used to estimate parameters on exhaustive data without any missing values;

$p^* < .05$ $p^{**} < .01$ $p^{***} < .001$ (two-tailed)

Table 21 above represents the results of the random coefficients model produced by using the SAS Mixed Procedure which allows for the intercept and the time slope to vary while holding the predictors' effects fixed. Model 1 includes all the predictor variables from the criminal justice policies hypothesis as fixed effects, and Model 2 includes both the predictor variables and the control variables used by Smith (2004) such as violent and property crime rates, divorce rate per 1,000 state residents, and state spending on primary and secondary education as a percent of state gross product as fixed effects as well. Model 3 is similar to Model 2 except I add the measure of partisan state

government control, and Model 4 is similar to Model 2 except I add the measure of electoral competition. I use Restricted Maximum Likelihood method of variance estimation, I specify "between – within" denominator degrees of freedom estimation of the fixed effect, and I specify the covariance structure of my data as unstructured i.e. nonsystematic, non-patterned (Field and Miles, 2010; Neupert, 2013). For all models I use 48 subjects i.e. states and maximum of 24 annual observations per subject adding to 1131 observations total; a number of observations with missing values were dropped listwise to ensure completely exhaustive time-series data and meaningful comparison of the models.

Table 21 indicates that there is a statistically significant positive association between three-strikes laws, probation rates, and incarceration rates in Model 1. Also, there is a significant negative association between marijuana decriminalization laws and incarceration rates in Model 1. Model 2 in Table 21 includes the same predictor variables as Model 1 as well as control variables used by Smith (2004).There is a statistically significant positive association between three-strikes laws, probation rates and incarceration rates net of control variables in Model 2, while marijuana decriminalization becomes nonsignificant.

Nothing changes drastically in Model 3 which includes Ranney index, the measure of partisan control of the state government, and the three-strikes laws and probation rates are still positively associated with incarceration rates. Ranney index is not associated with dependent variable net of control variables. Nothing changes radically in Model 4 which includes Holbrook Van Dunk index, the measure of district electoral competition (see Table 21 above for details), and the said index is not associated with

incarceration net of control variables. I interpret these results as not supportive of association between either measure of partisan control of the state government or measure of electoral competition and incarceration net of control variables.

Findings of multilevel analysis with SAS Mixed Procedure are partially supportive of the criminal justice policies hypothesis as three-strikes laws establishing super-penalties for repeat offenders and probation rates are positively associated with incarceration net of control variables and political competition measures. Contrary to the criminal justice policies hypothesis, determinate sentencing laws establishing fixed sentences and abolishing discretionary parole and laws decriminalizing possession of marijuana are not associated with imprisonment net of control variables and political context measures.

To conclude this chapter, a brief summary of findings of multilevel analysis is in order. Findings are partially supportive of the utilitarian hypothesis, underclass hypothesis, citizen ideology hypothesis, partisan use of incarceration hypothesis, and criminal justice policies hypothesis. Findings fail to support hypothesis suggesting association between gubernatorial election cycle and incarceration. Chapter five will provide further discussion and analysis of the key findings and associations between specific independent variables and incarceration. Chapter five will alo establish links between my findings and previous research on incarceration, and synthesize fragmented findings into a more unified narrative.

CHAPTER 5 DISCUSSION

The purpose of this chapter is to translate my findings into a sociological narrative. In this chapter, I will draw conclusions in regard to empirical validity of the six major theoretical accounts of incarceration change in the U.S. between 1980 and 2005, and I also will go beyond interpretation of statistical significance of my findings to establish links between my results and the existing body of literature covering the relationships between the social processes and the criminal justice outcomes. I will also discuss limitations of the current project and potential directions for future research, especially in regard to the need for sensitivity to potential intersectionality of race, class, and political processes, and the need to bring more specific measures of context into the research on incarceration.

As Table 22 below indicates, multiple factors are associated with state-level fluctuation in incarceration in the U.S. between 1980 and 2005, and any monocausal explanation would be insufficient. Out of six tested hypothesis all receive a degree of support for at least one variable, and findings fail to support gubernatorial electoral cycle hypothesis only as no significant association between governors' elections and incarceration was found. Violent and property crime, percent of state residents that are African American, population conservative ideology, percent of Democratic seats in both chambers of state legislature, probation rates, and presence of three-strikes laws establishing increased penalties for repeat offenders are associated with incarceration rates net of control variables. Unemployment, poverty, income inequality, percent of state residents that are Hispanic, governor's party, gubernatorial elections, determinate sentencing, and marijuana decriminalization are not associated with incarceration.

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Table 22. Summary of Hypotheses Testing Results					
Hypotheses			Support		Fail to Support
H 1: Utilitarian Hypothesis					
Violent crime is positively associated with incarceration			X		
Property crime is positively associated with incarceration					X
H 2: Underclass Hypothesis					
Unemployment is positively associated with incarceration					X
Income inequality is positively associated with incarceration					X
Poverty is positively associated with incarceration					X
Percent of Black state residents is positively associated with incarceration			X		
Percent of Hispanic state residents is positively associated with incarceration					X
H 3: Citizen Ideology Hypothesis					
Population conservatism is positively associated with incarceration			X		
H 4: Partisan Use of Incarceration Hypothesis					
Democratic control of state legislature is negatively associated with incarceration			X		
Democratic control of state governor's office is negatively associated with incarceration					X
H 5: Gubernatorial Election Cycle Hypothesis					
Gubernatorial election year is positively associated with incarceration					X
H 6: Criminal Justice Policies Hypothesis					
Probation rate is positively associated with incarceration			X		
Habitual offender law is positively associated with incarceration			X		
Determinate sentencing law is negatively associated with incarceration					X
Marijuana decriminalization law is negatively associated with incarceration					X

Discussion of the Utilitarian Hypothesis Results

Absence of crime and incarceration link was once a part of American criminological orthodoxy, as Blumstein and Cohen (1973) argued that a stability of punishment exists in the U.S. using national aggregate data for a period between 1930

and 1970 to support their claim. Since then, much attention has been paid to establishing the link between crime and incarceration, and many researchers assert that the abovementioned relationship exists (Michalowski and Pearson, 1990; Taggard and Winn, 1993; McGarrell, 1993; Jacobs and Helms, 1996; Arvanites and Asher, 1998; Raphael, 2000; Greenberg and West, 2001; Sorensen and Stemen, 2002; Listokin, 2003; Yates and Fording, 2005; Spelman, 2009; Stemen and Rengifo, 2011) while some researchers deny existence of crime – incarceration link (Blumstein and Moitra, 1979; Lessan, 1991; Zimring and Hawkins, 1991; Blumstein and Beck, 1999; Smith, 2004; Zimring, 2010).

My findings are partially supportive of the utilitarian hypothesis, as I have found consistent and robust positive association between state-level violent crime rates and incarceration rates net of control variables, which fits the logic of the hypothesis whereby incarceration is conceptualized as an instrumental response to violent crime, an attempt to protect the social contract and prevent the Hobbesian war of all against all scenario. My findings are in line with literature establishing the link between violent crime and incarceration rates (Michalowski and Pearson, 1990; McGarrell, 1993; Greenberg and West, 2001; Spelman, 2009; Stemen and Rengifo, 2011) or prison admissions racial disparity (Keen and Jacobs, 2009) and contradict the literature denying violent crime and incarceration link (Stucky, Heimer, and Lang, 2005; Schneider, 2006). I can speculate that perhaps a consensus about unacceptability of violent crime exists and the criminal justice system treats violent crime as serious enough to merit incarceration.

Contrary to the utilitarian hypothesis, I found a consistent and robust negative association between state-level property crime rates and incarceration rates net of control variables, which does not fit the logic of incarceration as a response to property crime.

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That contradicts much of the previous literature which found property crime rates to be nonsignificant (Taggart and Winn, 1993; Greenberg and West, 2001; Stemen and Rengifo, 2011) or positively related to incarceration (Stucky, Heimer, and Lang, 2005), but concurs with projects which found similar negative relationship (Raphael, 2000; Spelman, 2009).

I have three speculative explanations of the anomalous negative relationship between property crime and incarceration rates. First, maybe there is some validity to classic Durkheimian stability of punishment argument restated by Blumstein and Cohen (1973), and once the crime rate increases so does the seriousness threshold established by society in order to designate an offense as worthy of incarceration. Therefore, in the context of the increasing violent crime rate between the early 1980s and early 1990s, the property crimes might have been designated as not serious enough to merit incarceration. Second, perhaps mass-incarceration had a deterrent effect on property offenders leading them to reassess the benefits derived from property crime against increasing odds of incarceration. Third, given that some scholars argue that offenders are non-specialized and versatile (Gottfredson, 2006), committing various offenses, it may be that mass-incarceration scooped up the versatile offenders due to their involvement in violent crime which resulted in incapacitation and prevented them from committing property crimes.

But is the crime-incarceration link an example of a billiard-ball positivist relationship? Listokin (2003) who found a strong crime-incarceration link whereby 1 percent increase in index violent and property crime led to 1 percent increase in incarceration himself admitted that if crime was the only factor of incarceration, the latter would have grown by 80 percent while in reality it was a growth in excess of 400 percent.

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Ouimet and Tremblay (1996) made an interesting attempt to introduce qualitative context, claiming that 14 out of 16 states that increased their incarceration by a 100 percent by 1992 were underpunitive in 1982, i.e. had relatively low incarceration rates. My analysis contradicts Ouimet and Tremblay's (1996) account as hierarchical linear models show that correlation between random intercept and random slope is positive suggesting that states with higher incarceration rates had steeper growth trajectory over time compared to states which were low-incarcerating at the beginning of the time-series (see Table 5). Importantly, the Ranney index, a measure of partisan control of the state government, suggests that Democratic partisan strength is negatively associated with incarceration net of control variables, thereby highlighting a potential political mechanism mediating the link between violent crime and incarceration (see Table 7). My finding of negative association of Democratic partisan control of the state government fits the findings suggesting that increased spending on corrections was the mechanism enabling the incarceration growth and linking Republican partisan control of state legislatures with increased correctional spending (Spelman, 2009, p.53).

I conclude that the utilitarian hypothesis conceptualizing incarceration as a response to crime is partially supported in my analysis. Violent crime is positively associated with incarceration at high level of significance net of control variables suggesting that the criminal justice system does consider violent crime a serious issue, perhaps reflecting the social consensus, and incarcerates violent offenders to protect the social order. Property crime is negatively associated with incarceration at a high level of significance, contrary to the utilitarian hypothesis, and I speculate that either property crime was not seen as dangerous in the context of violent crime growth, or mass-

incarceration had a deterrent effect on property offenders or an incapacitating effect on versatile offenders. Importantly, context matters, and these were the high-incarcerating states which experienced steeper growth in imprisonment, and the Democratic partisan control of the state government is the political context negatively associated with incarceration.

Discussion of the Underclass Hypothesis Results

The link between socioeconomic variables suggested by Rusche and Kirchheimer ([1939] 1968) and incarceration has been considered "elusive" and contingent upon model specification, while the link between minority presence and incarceration is seen as much stronger (Pfaff, 2007). Yet some research supports the existence of the link between unemployment and incarceration (Chiricos and Bales, 1991; Lessan, 1991; Chiricos and Delone, 1992; Hochstetler and Shover, 1997; Grimes and Rogers, 1999; Greenberg and West, 2001; D'Alessio and Stolzenberg, 2002; Zhang, Maxwell, Vaughn, 2009), income inequality and incarceration (Jacobs and Helms, 1996; Arvanites and Asher, 1998), and poverty and incarceration (Beckett and Western, 2001; Yates and Fording, 2005). Similarly, no concordance exists in regard to the positive link between minority presence and incarceration, with some studies providing support (McGarrel, 1993; Arvanites and Asher, 1995; Greenberg and West, 2001; Jacobs and Carmichael, 2001; Sorensen and Stemen, 2002; Smith, 2004; Stemen and Rengifo, 2011) and some studies discovering no positive link between minority presence and incarceration (Raphael, 2000; Jacobs and Helms, 2001; Stucky, Heimer, Lang, 2005; Spelman, 2009).

My findings are partially supportive of the underclass hypothesis, but none of the socioeconomic variables were found significantly associated with incarceration rates, and

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only percent African American but not percent Hispanic was positively associated with incarceration rates net of control variables (see Table 9). My findings on nonsignificance of an unemployment-incarceration relationship are concordant with several studies (Smith, 2004; Yates and Fording, 2005; Spelman, 2009). My findings on nonsignificance of income inequality are concordant with several studies (Greenberg and West, 2001; Jacobs and Carmichael, 2001; Smith, 2004), and my findings on the lack of a positive relationship between poverty and incarceration are also analogous to other projects' findings (Taggard and Winn, 1993; Listokin, 2003; Smith, 2004). I have found a significant positive association between percent of African American state residents and incarceration, which fits the literature (Greenberg and West, 2001; Sorensen and Stemen, 2002; Smith, 2004) even though evidence to the contrary exists as well (Stucky, Heimer, Lang, 2005; Spelman, 2009). I found no positive association between percent of state residents that are Hispanic and incarceration, which fits the literature (Greenberg and West, 2001; Spelman, 2009; Stemen and Rengifo, 2011) but contradicts Jacobs and Carmichael's (2001) findings.

Contrary to the underclass hypothesis, I found no association between unemployment, income inequality, poverty and incarceration rates net of control variables. Percent of state residents that are in poverty and percent of unemployed are associated with incarceration in Model 1 but once control variables are introduced, the socioeconomic variables lose significance (see Table 9). Even though there is debate in criminological literature about the unemployment-crime link, and some authors dismiss it (Wilson and Herrstein, 1985), a metaanalysis of 63 studies (Chiricos, 1987) suggests that "unemployment-crime relationship is three times more likely to be positive than negative

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(75/25 percent) and more than 15 times as likely to be significant/positive as significant/negative (31/2 percent)" (p. 192). Harcourt (2006) claims that unemployment and poverty are two of the three most robust structural covariates of homicide, and a seminal review of 21 studies by Land, McCall and Cohen (1990) claims that poverty is the most consistent and strongest structural covariate of homicide. Therefore, I can interpret my findings as indicative that unemployment and poverty impact incarceration indirectly via violent crime rates, but have no independent effect otherwise. The strong conflict or underclass claim that the criminal justice system is responding to the labour surplus or class tensions related to relative or absolute economic deprivation per se is not supported.

However, it is worth noting that there are limitations to the official data as discouraged workers who have been searching for jobs over 27 weeks and those not searching for jobs are excluded from unemployment data, hence some claim that the official measures underreport unemployment by up to 50 percent (Chiricos and Delone, 1992). In addition, incarceration distorts unemployment statistics as inmates are not counted as unemployed (Pfaff, 2007; Pettit, 2012). There may be not only quantitative, but also qualitative problems with unemployment data as some authors are speculating about a qualitative realignment of labour market towards proliferation of low-skill, temporary, micro-employment opportunities offering minimum wage and no prospects of advancement or job security (Wacquant, 2001; Campbell, 2010; Piven, 2010, Mayer, 2010). The poverty measure I use also lacks qualitative dimension as concentrated poverty was not taken into account. A similar critique can be applied to the Gini coefficient as some researchers found that variance of incomes computed on actual IRS

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data is a better measure of income distribution sensitive to the presence of the very affluent individuals, and is positively related to state-level incarceration rates even when the Gini coefficient is not (Jacobs and Helms, 1996).

Providing support for the racialized version of the underclass hypothesis, I found that percent of African American state residents is positively associated with incarceration net of socioeconomic variables, control variables, and crime rates. Minority or racial threat theories suggest that structural, group-level processes rather than individual-level attitudes result in disparate criminal justice outcomes, so that members of the predominate ethnoracial group consider themselves entitled to symbolic and material resources while seeing members of numeric minority groups as potential challengers of the racialized status quo and using punishment against such threats (Blumer, 1958; Blalock, 1967; Bobo and Hutchens, 1996; Jacobs and Carmichael, 2001). Research finds racial typification of violent crime, (i.e. it is associated with dishonorable Black underclass in the perceptions of White respondents)Quillian, and that support for punitive policies is associated with perceptions of crime increase and the latter is associated with contexts with high percentage of Black residents (Quillian and Pager, 2001; Chiricos, Welch, Gertz, 2004). African American presence is associated with hostility to African Americans (Quillan, 1996), fear of crime (Quillian and Pager, 2001), larger police force (Kent and Jacobs, 2005), and higher incarceration (Sorensen and Stemen, 2002; Smith, 2004).

It has been suggested in the literature that African Americans account for higher proportion of homicide, rape, and robbery arrests than Hispanics or Whites, that the relative share of violent crime committed by African Americans has not declined

significantly, and that arrest-incarceration comparison does not support that overincarceration of African Americans has increased recently (Steffensmeier, Feldmeyer, Harris, and Ulmer, 2011). My findings suggest that, true as it may be, percent of African Americans has a positive effect on incarceration independent of crime rates. My findings are in line with a more sophisticated project (Keen and Jacobs, 2009) that found that even controlling for Black and White disparities in property and violent arrests, and murder rates, percent of Black residents is still positively associated with racial disparities in prison admissions in politically conservative areas, particularly in the deep South. Unfortunately I use aggregate, non-race specific incarceration rates so I cannot directly contribute to the literature on incarceration disparities and weigh in on the debate on whether states with small Black population overincarcerate Blacks (Yates and Fording, 2005) or whether states with large Black population incarcerate both Blacks and Whites at higher levels compared to states with small Black population (an interpretation offered by Greenberg and West, 2001). My findings are in line with a generic racial threat argument suggesting that increasing size of the ethnoracial minority group will result in perception of threat by the majority group (net of actual crime) and use of punishment to contain the minority.

My findings of an independent race effect seem to contradict both Wilson's (1980) "declining significance of race" thesis and Wacquant's (2001) assertions about the primacy of class-based targeting of the most dispossessed segments of the urban subproletariat and his statements of fine-tuned targeting of "first and foremost poor people" (2010, p.78) and suggestions that "class disproportionality inside each ethnic category is greater than the racial disproportionality between them" (2010, p.80) in regard

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to the fact that Black men odds of going to prison are eight times higher compared to White men, while odds of prison time for Black men without a college degree are twelve times higher than for Black men with a college degree, and for Whites the odds are sixteen times higher respectively. However, Wacquant's (2010) statements fit with my findings of strong negative association of spending on primary and secondary education and incarceration rates (see Table 9), especially given that lifetime odds of imprisonment for Black male high school dropouts have increased by 300 percent between 1979 and 1999 to 59 percent while odds for Black male college graduates have dropped from 6 to 5 percent (p. 79). Perhaps, state-level education spending serves as a protective mechanism increasing life-course opportunities for potential clients of prisons, or, an alternative explanation may be that given the theoretically limited fiscal resources higher spending on education leads to lower spending on corrections, serving as a natural inhibitor of incarceration growth.

Contrary to underclass hypothesis, percent of Hispanic residents is not significantly associated with incarceration. No consensus on the validity of Hispanic ethnic threat exists in the literature, as some researchers claim nonsignificance of percent Hispanic (Greenberg and West, 2001; Spelman, 2009), some claim it is negatively associated with incarceration (Stemen and Rengifo, 2011), and some claim a positive relationship (Jacobs and Carmichael, 2001). I interpret my findings of the lack of Hispanic ethnic threat in the context of literature stipulating that Hispanics are more integrated into mainstream society given that 30 percent of Hispanic marriages are interracial compared to 10 percent of Black marriages (Cherlin, 2005), that Hispanics seem to grow proportionately in employment sectors with previous strong Black presence

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(Griffith, 2005), and that there is a realignment of ethnoracial relations "from the traditional White/non-White divide to a new Black/non-Black divide" (Steffensmeier et at., 2011, p. 206).

Given that my data show growth of percent Hispanic over time for the sample as a whole but especially in some states, considering Oliver's (2011) claim that Hispanics surpassed Whites as a proportion of prison admissions due to parole revocation since 1998, and Steffensmeier et al. (2011) suggestion that Hispanic levels of violent crime exceed these of Whites but not of Blacks, and that proportion of Hispanic involvement in homicide and robbery grew between 1980 and 2008 in California and New York, as anticipated due to proportion of Hispanic residents' growth (neither UCR nor NCVS have "ethnicity" category so nationwide Hispanics are classified as Whites) I think that Hispanic threat could be found in the time-series focusing on the 1990s and 2000s and at either specific states or at a lower level of aggregation than my data. Some evidence in the literature is supportive of the previous statement as when period-specific measures of Hispanic population are used, percent of Hispanic in 1980 is nonsignificant but positive and significant in 1990 (Jacobs and Carmichael, 2001) and there is some evidence that Hispanic perceived threat is conditioned by context and is contingent on the actual growth of Hispanic population between 1990 and 2000 in a given area (Johnson, Stewart, Pickett, and Gertz, 2011).

I conclude that the underclass hypothesis is partially supported in my analysis. Neither unemployment, nor income inequality, nor poverty are associated with incarceration rates once control variables are taken into account. I interpret these findings in the context of previous research (Chricos, 1987; Land et al., 1990, Harcourt, 2006) and

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speculate that socioeconomic variables do not impact incarceration directly, but their influence is mediated by violent crime rates. I found that percent of state residents that are African American is positively associated with incarceration rates. I interpret that in context of the racial threat literature, as evidence of lingering independent effect of race net of socioeconomic variables or actual crime rates, and supportive of the conflict view of incarceration as contingent not only on utilitarian but also on extrajudicial factors.

Discussion of the Democracy in Action Hypothesis Results

The democracy in action hypothesis suggests that incarceration is not a purely instrumental response to crime rates, but a relatively expressive policy sensitive to population ideological views on crime and crime control. Some studies support the citizen ideology – imprisonment link, whereby population conservatism is positively and liberalism is negatively associated with state-level incarceration (Taggart and Winn, 1993; Greenberg and West, 2001; Jacobs and Carmichael, 2001; Sorensen and Stemen, 2002; Jackson, 2009) while other studies fail to support that link (Smith, 2004; Fording and Yates, 2005; Stucky, Heimer, and Lang, 2005; Schneider, 2006; Spelman, 2009; Stemen and Rengifo, 2011).

My findings are supportive of the democracy in action hypothesis as increasing liberalism among state residents is negatively associated with incarceration (and conservatism is positively associated with incarceration given that it is a scale measure where lower values represent conservatism and high values – liberalism respectively). My findings fit perfectly with Garland's (2001) account whereby he links emergence of a culture of control with both increased exposure of the middle class to crime and ideological and political rightward drift of the population, i.e. he suggests not a billiard-

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ball positivist relationship between crime rates and incarceration but an ideological and cultural reinterpretation of the crime control issues which occurred in the context of exposure to violent crime and ontological anxieties of the late-modern society. As seen in Table 11, both violent crime and ideology matter in explaining incarceration rates.

My findings are consistent with the literature suggesting that since the mid-1960s crime became a subject of heated ideological arguments, and also a metaphor for a variety of social issues, with sharp conflict between narratives of rehabilitation or retribution and personal responsibility and polarization of the social strata across the class, race, and cultural lines (Finckenauer, 1978; Gordon, 1994; Costelloe, Chiricos, Gertz, 2009; Carrier, 2010). Literature suggests that conservative Protestants see all crime as morally wrong without differentiating by seriousness (Curry, 1996), that Blacks are less punitive than Whites (Bobo and Johnson, 2004), and that liberals are less likely to support punitive measures than conservatives (Langworthy and Whitehead, 1986). Conservatism in males is reported to be a stronger predictor of punitiveness than fear of crime, and economic insecurity is associated with punitiveness as well (Costelloe, Chiricos, Gertz, 2009).

Interestingly, neither of my measures of political competition is associated with incarceration in Table 11, suggesting that neither partisan control of the state government nor electoral competition influence incarceration net of citizen ideology and control variables. It may be that it is the direct influence of citizen ideology on decision-makers in the criminal justice system that explains incarceration rather than partisan "top-down" accounts. The American Constitution allows various channels of popular input whereby citizens' ideological views on crime could have entered the justice system, including the

lay partisan elections for judges, prosecutors, and other criminal justice actors (Black, 1988; Tonry, 2009). Literature suggests that population conservatism is positively associated with sentence length in a given jurisdiction (Huang et al., 1996) as well as with higher incarceration rates for African American and Hispanic offenders (Percival, 2010), and also with higher incarceration for White offenders (Oliver, 2011).

The interplay between concrete forms of collective political agency and governmental structure is another mechanism worthy of attention, as suggested by Barker (2009) in a comparative analysis of civic participation in California, New York, and Washington, and its influence on criminal justice policies. Differential access to decision-making could be another issue pertinent to citizens' ideology role. In a study of policy hearings, Miller (2009) found that both at U.S. Congress and Pennsylvania state legislature, law enforcement agency representatives and single-issue advocacy groups channeling law-and-order rhetoric were dominant, and wider-focused citizen groups only had a stronger voice at the local, city-level hearings. This suggests that urban residents, being the recipients of crime control policies, had limited impact on federal and state-level policy formulation compared to not infrequently retributive advocacy groups.

I conclude that the democracy in action hypothesis is supported in the current study providing further evidence of the salience of extrajudicial factors for the criminal justice outcomes. Citizen ideology is associated with incarceration rates in the predicted direction, since increasing state residents' liberalism is associated with lower levels of imprisonment. I interpret my findings as concurring with Garland's (2001) account of the rightward drift and broad ideological reinterpretation of the crime control field. Lack of fine measures of state-level political context is a limitation of the current study, and in the

future I might quantify some of the factors explored by Barker (2009) and Miller (2009) to further specify the mechanisms whereby citizens' ideology influences the criminal justice system. Since it has been claimed that population conservatism can both increase Black or Hispanic incarceration (Percival, 2010) or White incarceration (Oliver, 2011), I might use incarceration rates disaggregated by ethnoracial categories to arrive at finer conclusions about the role of citizen ideology.

Discussion of the Partisan Use of Incarceration Hypothesis Results

The partisan use of incarceration hypothesis sees imprisonment not as a purely instrumental response to crime, but as a policy favoured by the Republican Party, either due to the partisan agenda of individual responsibility and retributive just deserts whereby street crime is seen as a product of individual moral failure amenable by individual-focused punitive response, or due to the fact that crime may be an effective campaigning device and a consensus-producing strategy to solidify electoral support (Finckenauer, 1978; Scheingold, 1991; Costelloe, Chiricos, Gertz, 2004; Jacobs and Jackson, 2010).

My findings of a negative association between percent of Democratic legislators and incarceration (and, by definition, of a positive association between Republican legislators and incarceration) and lack of association between governors' party and incarceration rates fit the general findings of the literature on politics of incarceration (Jacobs and Helms, 1996; Jacobs and Carmichael, 2001; Jacobs and Helms, 2001; Beckett and Western, 2001; Smith, 2004). To be more specific, Republican strength in the state legislature is associated with increased imprisonment (Beckett and Western, 2001; Smith, 2004; Jacobs and Carmichael, 2004; Stucky, Heimer, Lang, 2005), while

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governor's party is not associated with imprisonment (Greenberg and West, 2001; Smith, 2004; Stucky, Heimer, Lang, 2005; Spelman, 2009), even though some researchers do link governor's party and imprisonment (Stemen and Rengifo, 2011).

I interpret my findings as concurring with the literature suggesting that the Republican Party has consistently politicized the issues of crime and crime control and employed a law-and-order rhetoric since the mid-1960s (Finckenauer, 1978; Tonry, 2009). Hofstadter (1965), political consultant for Goldwater's presidential campaign, discussed the salience of absolutist rhetoric of pure evil vs. pure good for gaining political leverage, and acknowledged the Republican abandonment of the Black electorate and reliance on coupling of race, urban unrest, and crime to gain sympathy of the White conservative voters which culminated in Goldwater's programmatic statement that "moderation in pursuit of justice is no virtue" (p. 245). The racialization of crime-control issues seemed to be characteristic of Republican presidential campaigns which led Richard Nixon and George H. W. Bush to success (Phillips, 1968; Jacobs and Jackson, 2010).

National-level Republican strength in the White House, senate and congress, as well as consecutive years of a Republican presidency is associated with increased imprisonment (Jacobs and Helms, 1996; Jacobs and Helms, 2001), and given that a presidential candidate has to secure the nomination of the party, I think that presidential candidates are representative of the larger pool of Republican legislators and a significant difference on crime-control issue seems highly unlikely. Research is supportive of that assumption, and state-level Republican strength is positively associated with imprisonment as well (Beckett and Western, 2001; Smith, 2004; Jacobs and Carmichael,

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2004; Stucky, Heimer, Lang, 2005), which concurs with my findings of association between Republican strength in both chambers of state legislature and increased incarceration.

My findings of nonsignificance of governors' partisan affiliation are not atypical. Stucky, Heimer, and Lang (2005) point out a historically inconsistent effect of Republican governors on incarceration, a positive impact in 1978-1982, and a negative impact in 1989-1996, perhaps, as they suggest, due to the gubernatorial campaigns emphasis on incumbency and personality or due to southern Democratic governors' convergence with Republicans on the issue of imprisonment. Greenberg and West (2001) interpreted nonsignificance of governors' party as suggestive of the Democratic governors' preparedness to use imprisonment so that "states governed by Democrats responded to the crime issue no differently from states governed by Republicans" (p. 638). Marion, Smith, and Oliver's (2009) gubernatorial rhetoric analysis found that "Republican governors did not devote more of their speeches to crime issues" (p. 469) and that Democratic governors did not propose more liberal crime control measures, which fits my findings of a nonsignificant effect of governors' partisan affiliation on incarceration.

Has incarceration been driven by partisan use of the issue rather than by the public concern about crime? In my analysis (see Table 14), the Holbrook Van Dunk measure of electoral competition, which is used by political scientists in a hypothesis linking public pressure and policy outcomes, is nonsignificant (as in any of my models) so I have no evidence to support the citizens' pressure for more incarceration argument. Partisan control of the state government measure is significant and negative, though,

suggesting that Democratic control of the state government is negatively associated with incarceration net of control variables and net of Democratic strength in both chambers of state legislature. My findings fail to support Stucky, Heimer, and Lang's (2005) claims that electoral competition is the factor which mediates the effect of Republican legislators on incarceration, so that Republican legislators are punitive not universally but only in highly-competitive districts, as a comprehensive measure of electoral competition was nonsignificant in my analysis. My findings are better aligned with a top-down partisan use of incarceration interpretation and claims that politicians' crime rhetoric drove citizens' concern about crime, with the latter lagging temporarily behind the former in Gallup poll data (Beckett, 1997).

Lack of measures of specific mechanisms whereby partisan strength is linked with criminal justice outcomes is a limitation of the current study. Several mechanisms have been suggested in the literature, such as the positive association between Republican legislators and correctional spending (Stucky, Heimer, Lang, 2007) which explained 30 percent of variance in incarceration (Spelman, 2009), as well as an effect of Republican-dominated political contexts on prosecutorial plea-bargaining behaviour and judicial sentencing behaviour, with odds of conviction and dismissal, and sentencing harshness related to election proximity and proportion of votes for Republican state attorneys (Huber and Gordon, 2004; Dyke, 2007) and sentence length for regular and juvenile offenders related to vote for Republican presidential candidate or to percentage of Republicans in state legislature (Huang et at., 1996; Carmichael, 2010).

Another limitation of this study is a lack of race-disaggregated incarceration rates as there might be an interaction effect between political variables and race. Republican

strength in a given jurisdiction measured by presidential vote is linked with racial disparities in prison admissions controlling for a variety of factors including racial disparities in arrests, actual crime rates, and population ideological conservatism (Keen and Jacobs, 2009). The additional effect of political variables on Black incarceration rates was reported by Yates and Fording (2005) as presence of Republican governor, percent of Republican seats in state legislature, and judicial conservatism are related with incarceration of Blacks while only Republican governor is associated with White incarceration and the effect is 7 times weaker than for Blacks. Contrary to Yates and Fording (2005), Oliver (2011) argued that Democratic control predicts higher White and lower Black incarceration rates. Thus, in the future, I will employ race-disaggregated measures to arrive at finer conclusions about the relationship between state politics and incarceration.

I conclude that the partisan use of incarceration hypothesis is partially supported in the current study providing further evidence of the salience of extrajudicial factors for the criminal justice outcomes. Percent of Democratic seats in both chambers of state legislature is negatively associated with incarceration as predicted. I interpret my findings as concurring with the body of literature on politicization of issues of crime and crime control championed by the Republican Party since mid-1960s (Finckenauer, 1978; Scheingold, 1991; Jacobs and Jackson, 2010). Contrary to the partisan use of incarceration hypothesis, governors' party was not associated with incarceration. I found no evidence of an association between electoral competition and incarceration, so I fail to support an argument of the citizens' pressure and criminal justice outcomes, while the measure of partisan state government control was significant in the predicted direction,

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with higher Democratic control associated with lower incarceration, so my findings are better aligned with the partisan top-down implementation of pro-incarceration policies. Lack of measures of specific mechanisms whereby partisan control of state government is associated with incarceration and use of racially aggregated incarceration rates are limitations of the current study, and in the future I might quantify some of the factors explored by Spelman (2009) to specify the mechanisms whereby partisan strength influences the criminal justice system and employ incarceration rates disaggregated by ethnoracial categories to identify potential interaction effects between race and political variables.

Discussion of the Gubernatorial Electoral Cycle Hypothesis Results

I have found no association between gubernatorial elections and incarceration, therefore I fail to support the hypothesized relationship between a bipartisan effect of electoral cycle and criminal justice outcomes. It has been suggested in the literature that presidential elections, on the national level, have a non-partisan positive effect on incarceration rates (Jacobs and Helms, 1996; Jacobs and Helms, 2001) and that, on the state level, gubernatorial elections have a positive effect on incarceration (Smith, 2004) especially in states where African Americans' electoral standing is weak (Yates and Fording, 2005), and that close elections and higher competition matter rather than ideology (Oliver, 2011), with highly competitive elections conditioning Republican strength and increasing incarceration (Stucky, Heimer, Lang, 2005). Yet I have found no evidence of the association between gubernatorial election year and incarceration, nor any evidence of the effect of electoral competition, as the Holbrook Van Dunk measure was not associated with incarceration (see Table 16). My findings are consistent with

Spelman (2009), who found neither presidential nor gubernatorial elections to be associated with incarceration, and with Stucky, Heimer, and Lang (2007) who found no effect of state gubernatorial election cycle on correctional spending. I conclude that there is no association between state-level executive branch election cycle and incarceration.

Discussion of the Criminal Justice Policies Hypothesis Results

Providing partial support for the hypothesized relationship between certain policies, institutional parameters, and criminal justice outcomes, I found the expected positive relationship between population under probationary supervision rates, three-strikes laws establishing additional penalties for repeat offenders, and state-level incarceration. Contrary to my expectations, criminal justice policies such as determinate sentencing, introducing fixed sentence length and abolishing parole at the discretion of the review board, and decriminalization of possession of an ounce of marijuana, are not associated with state-level incarceration.

The relationship between probation rates and incarceration has not been closely examined in the reviewed literature. The only study which included both variables found no significant relationship between probation and incarceration (Smith, 2004) which contradicts my findings linking increased population under probation supervision with increased imprisonment in a given state. I expected the positive relationship due to reports that up to 30 percent of new prison admissions are not for new crimes but for probation and parole violation, and up to 30 percent of these are for technical violations such as drug test failure or failure to meet with a probation officer (Vera Institute of Justice, 2010). In addition, the population under probation supervision has grown over time and now is double of the incarcerated population, fluctuating above 4,000,000 and,

based on 1997 estimates (Wacquant, 2010, p. 76), two in five probationers released in 1997 were back in prison within three years. I interpret the positive relationship between probation and incarceration rates as indicative of an additional, less visible but more decentralized strategy of population control which is consistent with Foucault's (1979) account of the diffusion of power in the contemporary society and move beyond retributive spectacles focusing on the body of the offender towards forms of control based on surveillance, and reject Phelps (2011) suggestion that states chose either high probation or high incarceration alternatives since in my analysis high incarcerating states were more likely to have higher probation rates as well.

The relationship between three-strikes laws and incarceration rates has been a subject of much research, but no consensus exists in the field. Sorensen and Stemen (2002) found a positive association between three-strikes laws and new admissions for drug offenders, and Spelman (2009) also found a positive albeit small effect which he explained by the fact that habitual offender laws are applicable, or were applied, to a narrow contingent of offenders. Zhang, Maxwell, and Vaughn (2009) actually suggested that three-strikes laws were associated with a decrease in new commitments, something that has been hypothesized in the literature as out of 26 states with three-strike laws only California, Georgia, and Florida have applied them to any extent (Dickey and Hollerhorst, 1999; Shiraldi, Colburn, Lotke, 2004; Pfaff, 2007). I found a positive link between habitual offender laws and incarceration, concurring with Sorensen and Stemen (2002) and Spelman (2009).

Three-strike laws establishing additional penalties, including increased sentence length for recidivists, are a policy symbolic of the many issues covered in the current

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study, and links the themes of the ontological anxiety and anomie experienced by the middle-class discussed by Garland (2001) with the political mechanisms converting the anxiety into policy outcomes (Barker, 2009). Tyler and Boeckmann (1997) found that support for a three-strike law among Californians was not primarily driven by punitive sentiment towards offenders or concerns about crime per se but by classical Durkheimian themes about the moral cohesion of society, traditional family roles, growing diversity (later factor was equally salient across ethnoracial categories, suggesting perhaps that ethnocentrism is a better explanation rather than racism per se) and a feeling of the weakening of the traditional social order. Barker (2009) studied California's forms of collective political action and governmental structure and found low civic participation, highly polarizing non-dialogical initiative process whereby complex social issues are reduced to dichotomous yes/no propositions which had resulted in an emergence of the retributive regime, consistent use of the three-strikes law, and one of the largest prison populations in the country and in the so-called free world in general.

Contrary to the expectation, neither determinate sentencing nor marijuana decriminalization are associated with incarceration in my analysis. Determinate sentencing has been mostly negatively associated with incarceration in the previous research (Greenberg and West, 2001; Jacobs and Carmichael, 2001; Smith, 2004; Stemen and Rengifo, 2011), even though it has been found that it can be negatively related with White incarceration rate, nonsignificant for Black incarceration rate, and positively related with Black and White disparity in incarceration (Yates and Fording, 2005). My findings of nonsignificance of determinate sentencing concur with Sorensen and Stemen (2004) and Marvel and Moody (1996) who suggested that different states passed

determinate sentencing with different goals, and that the relationship will be contingent on whether prison system capacity is tied to the sentencing structure. My finding of nonsignificance of marijuana decriminalization matches Smith's findings (2004) but contradicts Spelman (2009) who found an immediate negative effect of decriminalization which grew stronger over time.

I conclude that the criminal justice policies hypothesis is partially supported in the current study suggesting that the crime-incarceration link is not purely mechanic but is contingent on institutional parameters and processes. The probation rate is positively associated with incarceration as predicted. I interpret this finding as evidence that high-incarcerating states were also more likely to have a large population under probation supervision, which is contrary to conceptualization of states as committing to one or the other alternative sanction mechanism, and is more aligned with Foucault (1979) thesis of the constant diffusion of power and its evolution beyond carceral institutions towards decentralized surveillance. Three-strikes laws allowing for longer sentences for habitual offenders are also positively associated with incarceration. I interpret this finding within the context of literature suggesting that crime issues became intertwined with themes of Durkheimian anomie and ontological insecurity brought by real or perceived weakening of traditional social arrangements, roles, family statuses, and increasing diversity, and, given the highly polarizing non-dialogical political initiative process in some jurisdictions, led to increased incarceration (Tyler and Boeckmann, 1997; Garland, 2001; Barker, 2009). I found no evidence that policies such as determinate sentencing and marijuana decriminalization are associated with incarceration. Lack of finer measurements of sentencing structure is a limitation of the current project, and addition

of several sentencing policies' specification (i.e. presumptive or voluntary) and prison releases data, as well as racially disaggregated incarceration rates might produce finer conclusions about the role of criminal justice policies.

Conclusions

I have replicated and advanced Smith's (2004) study of the association between socioeconomic, demographic, political, criminal justice factors and incarceration rates. My project went beyond the replicated study and much of the previous research in this area in three important ways. First, I extended the scrutinized historical period by a decade, compared to Smith's (2004) study, by compiling nation-wide state-level time-series for the period between 1980 and 2005. Second, I employed multilevel models with random intercepts, a more sophisticated analytic technique, which allowed me to avoid methodological problems endemic in traditional statistical methods utilized in previous research. Third, I explicitly included measures of political context, the Ranney index and Holbrook Van Dunk measure, which were ignored in the previous research on the topic and which allowed me to move towards a more refined understanding of association between political processes, such as partisan control of the state government and district electoral competition, and criminal justice outcomes.

Violent crime, race, population conservatism, Republican strength in state legislatures, probation rates, and habitual offender laws matter. Socioeconomic variables, partisan affiliation of state governors, and gubernatorial elections are not associated with incarceration in the current analysis. My findings provide support for both consensus and extrajudicial accounts of the incarceration change in the U.S. between 1980 and 2005 suggesting that any monocausal explanation would be insufficient, and calling for further

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research sensitive to, and specifying mechanisms of, potential interaction effects between utilitarian and extrajudicial variables. I have tested six hypotheses, and five of them received a degree of support. An attempt at a theoretic or narrative synthesis is in order.

Violent crime was rising between mid-1980s and mid-1990s, and all my regression models show a robust positive association between violent crime and incarceration. Consistently with a utilitarian, consensus view (Bentham ([1789] 1988; Spelman, 2009), serious violent crimes result in increased incarceration, as society attempts to prevent the Hobbesian war of all against all and protect the social contract. Yet, contrary to the utilitarian view, property crime is negatively associated with incarceration, suggesting validity of Durkheim's (1972) stability of punishment thesis. Some groups, though, were not completely accepted as equals under the terms of social contract, or were seen as threatening the social order, so percent of African Americans is positively associated with incarceration even controlling for actual level of crime and socioeconomic disadvantage, which is consistent with conflict, extrajudicial accounts and suggests not a decline but a lingering independent effect of race (Blalock, 1967; Wilson, 1980; Keen and Jacobs, 2009).

Not just the reality of crime but its ideological perception by citizens mattered as I found that population conservatism is associated with incarceration, and Garland's (2001) account of the salience of both exposure to crime and broad ideological reinterpretation of the crime control issues and rightward drift of the population is consistent with my findings. Partisan politics matter too (Phillips, 1969; Tonry, 2009) but I have not found any evidence of the district-level electoral competition effect while partisan control of the state government is salient, as Republican strength in state legislatures is positively

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associated with incarceration, through spending on corrections (Spelman, 2009) or through habitual offender laws, as my analysis indicates.

Three-strikes laws, retributive populist measures, passed via polarized non-dialogical political process (Barker, 2009), were largely driven not by crime concern per se but by anxieties associated with real or perceived vanishing of the post-World War II social arrangements, family roles, and community cohesion into the thin air (Tyler and Boeckmann, 1997) and, in my interpretation, represented an attempt at Durkheimian mechanic solidarity but also led to increasing incarceration, as my findings indicate. But just as the number of prisoners grew, so did the number of individuals under probation supervision, and, as Foucault (1979) suggested, the power to punish spilled beyond the walls of the carceral institutions into the general population and took a form of a diffuse surveillance engulfing in excess of 4,000,000 individuals.

I conclude that incarceration is influenced by both legal and extrajudicial factors, and both consensus and conflict theoretical accounts receive support. Rusche and Kirchheimer's ([1939] 1968) argument, in its economistic form, was not supported. My major finding is the lingering significance of race which is independent of the violent crime rates and socioeconomic disadvantage, suggesting that after a period of increasing integration and socioeconomic convergence of racial groups' standing in the 1960s the colour line is still not entirely erased, and, perhaps, African Americans are still seen as a group not entirely included into the social contract, and, perhaps, as a group threatening the social order. My research invites further studies to focus on the interplay of utilitarian and extrajudicial factors, especially on the interaction between race, socioeconomic inequality, and political processes. Utilization of racially and, perhaps, gender

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disaggregated incarceration rates, use of more volatile dependent variables such as jail or prison admissions, inclusion of specific mechanisms whereby citizen ideology and partisan strength translate into specific criminal justice outcomes, and finer measures of context including additional measures of electoral competition and vulnerability, as well as specification of electoral standing of Black and White voters and measures of urban and rural location will add further details to the major findings of the current project that both legal and extralegal factors are associated with incarceration.

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PAVEL V. VASILIEV, Ph.D. Candidate

University of Nevada, Las Vegas
Department of Sociology
4505 Maryland Parkway
Las Vegas, NV 89154-5033
Phone: 702-895-0371
vasiliev@unlv.nevada.edu

EDUCATION

May 2013   **Ph. D., Sociology**, University of Nevada, Las Vegas
Dissertation: "Testing Instrumental and Extrajudicial Explanations of
Imprisonment in the U.S. at the State-Level, 1980-2005."

May 2005   **M. S.**, **Criminal Justice**, Eastern Kentucky University, Richmond
Thesis: "The Criminal Justice Containment of Dangerous Classes: A Historical
and Cross-Cultural Perspective."

May 2002   **Bachelor of Law**, International University in Moscow, Russia

RESEARCH AND TEACHING INTERESTS

Criminological Theory	Sociological Theory
Prisons and Corrections	Comparative Perspective on Criminal Justice
Gambling	

PUBLISHED PEER REVIEWED WORK

2011   Vasiliev, Pavel and Bo Bernhard. "Prohibitions and Policy in the Global Gaming
Industry: A Genealogy and Mass Media Content Analysis of Gaming Restrictions in
Contemporary Russia." *UNLV Gaming Research and Review Journal* 15(1), pp.71-86.

WORK IN PROGRESS

Vasiliev, Pavel and Shannon Monnat. "Analyzing Post-Recessionary State-Level
Correctional Policy Adjustments: Potential for Penal Parsimony?"

Vasiliev, Pavel. "Testing the Empirical Validity of Wacquant's Theoretical Account of
Contemporary Changes in Incarceration."

CONFERENCE PAPERS

2012   Vasiliev, Pavel. "Testing Instrumental and Extrajudicial Explanations of Imprisonment in
the U.S. at the State-Level, 1980-2005." Presented at the annual meeting of the American
Society of Criminology, Chicago, IL.

2011   Vasiliev, Pavel and Andrew Spivak. "Less Homicide, More Gender Equality in
Victimization? Homicide Rates and the Victim Gender Ratio." Presented at the annual
meeting of the American Society of Criminology, Washington, DC.

2010   Vasiliev, Pavel, David Dickens and Andrew Spivak. "American and Russian Penology: The Containment of Dangerous Classes in International-Comparative Perspective." Presented at the annual meeting of the American Society of Criminology, San Francisco, CA.

2010   Vasiliev, Pavel. "Genealogy of Gambling Restrictions in Contemporary Russia." Presented at the annual meeting of the American Sociological Association, Las Vegas, NV.

2010   Vasiliev, Pavel. "The Concept of Self in Writings of Mead, Goffman, and Garfinkel." Presented at the annual meeting of the Society for the Study of Symbolic Interaction, Las Vegas, NV.

2010   Vasiliev, Pavel. "Towards a Critical Theory of Crime and Crime Control." Presented at the annual meeting of the Southwestern Sociological Society Association, Las Vegas, NV.

2009   Vasiliev, Pavel. "Re-examination of Biosocial and Sociological Perspectives on Deviance: Potential for Theoretical Convergence." Presented at the annual meeting of the Pacific Sociological Association in San Diego, CA.

2008   Vasiliev, Pavel. "Roller Derby: A Sport, Subculture, or Social Movement Community?" Presented at the annual meeting of the Pacific Sociological Association in Portland, OR.

2007   Vasiliev, Pavel. "Creating and Interpreting the Postmodern Body: Does Female Bodybuilding Blur or Reaffirm the Gender Dichotomies?" Presented at the annual meeting of the Pacific Sociological Association in Oakland, CA.

2006   Vasiliev, Pavel and Daniel Harden. "Languid Multiplicity: A Global Postmodern Condition and its Potential to Dull the Edges of Meaning." Presented at the annual meeting of the Pacific Sociological Association in Los Angeles, CA.

RESEARCH EXPERIENCE

2012   Performed media content analysis and legislation review for the Global Scan report compiled by the UNLV International Gaming Institute

2007   Assisted with data coding and entry for the UNLV Center of Democratic Culture quantitative survey research

2005   Facilitated focus groups with law enforcement officials for the EKU Justice and Safety Center

INDEPENDENT TEACHING EXPERIENCE

2011-present   Contemporary Social Problems (SOC 102), University of Nevada, Las Vegas

2008-2010   Modern Sociological Theory (SOC 422), University of Nevada, Las Vegas

2008-present   Classical Sociological Theory (SOC 421), University of Nevada, Las Vegas

2008-present   Principles of Sociology (SOC 101), University of Nevada, Las Vegas

ACADEMIC SERVICE

2011   Served as an anonymous reviewer for the Problems of Post-Communism journal

2011   Led a Socio-Chat session on crime and deviance at the departmental undergraduate brownbag series directed at undergraduate students' recruitment and awareness raising

2010-present   Advised undergraduate students, including AKD Honor Society members, as an ad hoc mentor

2010   Chaired Incarceration table at the American Sociological Association Annual Meetings, Las Vegas, NV

AWARDS

2011   Graduate and Professional Student Association Travel Grant

2005-2010   Graduate Assistantship, University of Nevada, Las Vegas

RELATED EXPERIENCE

2006-2007   Assisted with teaching a class on Russian society and culture at University of Nevada, Las Vegas (UNLV)
2005   Assisted with teaching a class on Latino culture at UNLV
2004-2005   Analyzed the market of law enforcement technologies at Eastern Kentucky University Justice and Safety Center (EKU JSC)
2004-2005   Contributed to a literature review on the surveillance technologies at EKU JSC
2004-2005   Participated in focus group meetings with law enforcement officials at EKU JSC
2002-2004   Assisted in organizing a conference on policing as a graduate assistant at the Eastern Kentucky University College of Justice and Safety (EKU CJS)
2002-2004   Assisted with research and literature reviews on technology evaluation as a graduate assistant at the EKU CJS
2002   Provided pro bono legal advice at the International University in Moscow Legal Aid Clinic (IU LAC)
2002   Analyzed the legislation on request of legal counselors at the IU LAC

SPECIAL METHODOLOGICAL TRAINING

2012   GIS, Mapping, and Spatial Modeling ASC 2012 Pre-Meeting Workshop

PROFESSIONAL ORGANIZATIONS

- The American Society of Criminology
- The American Sociological Association

ADDITIONAL INFORMATION

- U.S. Permanent Resident

Professional References

Dr. Bo Bernhard
University of Nevada, Las Vegas
International Gaming Institute
Stan Fulton Building Room 345
4505 Maryland Parkway
Las Vegas, NV 89154-6021
Phone 702-895-2935
Fax 702-895-1135
bo.bernhard@unlv.edu

Dr. David Dickens
University of Nevada, Las Vegas
Department of Sociology
4505 Maryland Parkway
Las Vegas, NV 89154-5033
Phone 702-498-8142
Fax 702-895-4800
david.dickens@unlv.edu

Dr. Shannon Monnat
University of Nevada, Las Vegas
Department of Sociology
4505 Maryland Parkway
Las Vegas, NV 89154-5033
Phone 702-895-5807
Fax 702-895-4800
shannon.monnat@unlv.edu

Dr. Andrew Spivak
University of Nevada, Las Vegas
Department of Sociology
4505 Maryland Parkway
Las Vegas, NV 89154-5033
Phone 702-895-0257
Fax 702-895-4800
andrew.spivak@unlv.edu

Dr. Randall Shelden
University of Nevada Las Vegas
Department of Criminal Justice
4505 Maryland Parkway
Las Vegas, NV 89154-5009
Phone 702-895-0251
profrgs@cox.net