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Liberty Deprived: The Social and Political Determinants
of Female Incarceration Rates, 1979-2001

A Dissertation submitted in partial satisfaction
of the requirements for the degree of

Doctor of Philosophy

in

Sociology

by

Linda Rae McAnnally

June 2011

Dissertation Committee:

Dr. Robert Nash Parker, Chairperson

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Dr. Kirk Williams

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The Dissertation of Linda Rae McAnnally is approved:

Committee Chairperson

University of California, Riverside

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ABSTRACT OF THE DISSERTATION

Liberty Deprived: Social and Political Determinants
of Female Incarceration Rates, 1979-2001

by

Linda Rae McAnnally

Doctor of Philosophy, Graduate Program in Sociology
University of California, Riverside, June 2011
Dr. Robert Nash Parker, Chairperson

Rates of female incarceration rose steadily during the last two decades of the twentieth century. The consequences of increased female incarceration are far reaching, not only affecting the women and their families during the period of incarceration, but also resulting in continued collateral consequences after their release. While considerable attention has been paid to the role of the war on drugs as a causal of growth at the national level, there has been scant research that examined other possible causes of variation in female incarceration rates over time at the state level. This research investigates state variation in changes in female incarceration rates between 1979 and 2001, along with changes in potentially important political, social, cultural, and economic factors. This analysis confirms the importance of broadening the scope of variables used when attempting to theorize explanations for female incarceration. It has also highlights the importance of the intersection of gender and race in determining female incarceration rates. Moreover, it has points to the importance of historically sensitive research methods to provide a clearer understanding. Finally, it shows that a combination of

social, political, cultural, and economic factors determine the use of incarceration as a means of formal social control of women in the U.S.

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CHAPTER 1 – INTRODUCTION

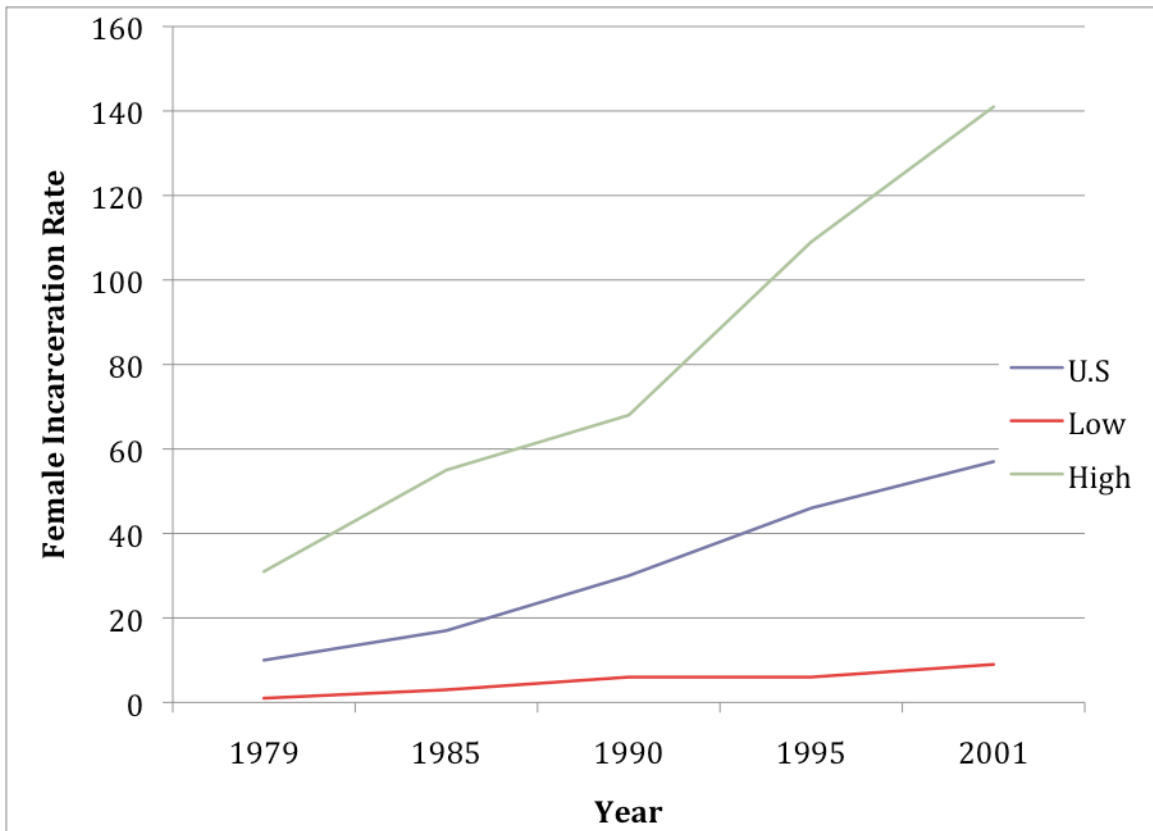
By any measure, the expansion in female incarceration in the U.S. in the late 20th century was dramatic. In 1979 there were 11,390 females in states prisons; by 2001 this number had risen to just over 82,000, an increase of over 600 percent. Women's chances of being in prison at some point in their lives were six times greater in 2001 than in 1974 (U.S. Department of Justice 2003). And the female incarceration rate (the number of female prisoners under the jurisdiction of the state per 100,000 female population) rose over 450 percent, increasing from only 10 per 100,000 in 1979 to 57 per 100,000 in 2001. As striking as these national figures are, examining data for individual states reveals important differences in both the size and pattern of growth. For example, in 1979, 10 out of every 100,000 females was incarcerated in both Maryland and Mississippi; but by 2001 this number had grown by 326 percent in Maryland, while in Mississippi it increased by a remarkable 1,107 percent. There was also substantial variation in the timing of the growth. New Jersey saw its female incarceration rate grow by 430 percent between 1979 and 1990, but only 43 percent from 1990 to 2001. In Texas, on the other hand, the rate grew by just 54 percent from 1989 to 1990, and then increased by 354 percent in the following 12 years. These state differences have not abated over time; quite the contrary, as seen in Figure 1-1, over the 22-year period, the difference between the highest and lowest rate has expanded.

Female incarceration rates also vary according to race. Black females have consistently been incarcerated at higher rates than white females. The national white female incarceration rate rose from 5 per 100,000 in 1979 to 31 in 2001, while for black females the rate was 43 in 1979 and grew to 186 by 2001. Despite the persistently higher rate among black females, growth at the national level has been greater among white females,

Table 1-1. Female Incarceration Rates 1979, 1990, and 2001

	1979	1990	2001	1979-2001 % Change	1979-1990 % Change	1990-2001 % Change
U.S.	10	30	57	467	205	86
Alabama	13	45	72	474	263	58
Alaska	16	49	115	601	199	134
Arizona	12	45	82	607	288	82
Arkansas	10	32	62	547	230	96
California	10	43	57	448	316	32
Colorado	5	26	63	1260	463	142
Connecticut	9	40	82	824	355	103
Delaware	21	66	141	581	217	115
Florida	17	40	51	204	136	29
Georgia	31	36	65	107	16	78
Hawaii	10	31	101	893	208	223
Idaho	7	24	82	1027	224	248
Illinois	6	20	43	604	229	114
Indiana	7	24	49	625	249	108
Iowa	6	15	43	668	167	188
Kansas	7	22	36	432	228	62
Kentucky	8	25	55	624	232	118
Louisiana	11	35	103	826	220	190
Maine	3	7	9	187	124	28
Maryland	10	35	43	326	248	22
Massachusetts	3	19	22	645	544	16
Michigan	13	35	42	218	166	20
Minnesota	4	7	15	307	90	114
Mississippi	10	33	124	1107	226	271
Missouri	8	29	73	817	265	151
Montana	7	19	80	996	158	324
Nebraska	8	18	39	399	128	119
Nevada	25	68	82	230	174	21
New Hampshire	1	8	20	1786	625	160
New Jersey	5	26	37	659	430	43
New Mexico	9	25	56	521	180	122
New York	7	29	32	384	338	10
North Carolina	19	28	49	159	46	77
North Dakota	1	6	35	5489	913	452
Ohio	11	35	48	351	223	40
Oklahoma	12	66	130	1018	469	96
Oregon	9	25	38	338	189	52
Pennsylvania	4	16	27	531	280	66
Rhode Island	3	32	35	933	835	11
South Carolina	20	58	72	262	192	24
South Dakota	7	22	58	738	217	165
Tennessee	12	15	50	313	27	224
Texas	17	25	115	597	54	354
Utah	6	14	28	400	159	93
Vermont	4	12	30	617	194	144
Virginia	11	29	61	452	164	109
Washington	11	18	36	237	66	104
West Virginia	3	8	37	1033	147	359
Wisconsin	6	14	48	730	139	247
Wyoming	14	39	55	305	186	42

Figure 1-1. Female Incarceration Rates, U.S. and Highest and Lowest State



with incarceration rates increasing 502 percent for white females and 331 percent for black females between 1979 and 2001. Once again, however, state differences in both the extent and pattern of growth are noteworthy. During this time period New Mexico saw its black female incarceration rate increase by 604 percent, while the rate for white females grew 129 percent. In contrast, in Missouri the black and white rates increased by 457 and 1,148 percent, respectively. Iowa experienced greater black growth between 1979 and 1990 and a larger white growth in the following 12 years, while Tennessee experienced a bigger increase in both black and white female prison populations from 1990 to 2001 than during the earlier time period, and in California white and black rates grew more between 1979 and 1990.

Table 1-2. Female Incarceration Rates by Race, 1979 and 2001

	White			Black		
	1979	2001	% Change	1979	2001	% Change
Alabama	6	47	665	31	142	364
Alaska	13	80	522	117	441	278
Arizona	9	51	439	94	410	335
Arkansas	6	48	696	27	140	409
California	7	28	276	47	259	456
Colorado	3	33	887	35	425	1099
Connecticut	4	36	860	76	339	344
Delaware	7	81	986	89	406	356
Florida	7	28	276	75	157	108
Georgia	12	44	284	43	114	168
Hawaii	5	118	2291	36	190	421
Idaho	6	71	1155	375	377	0
Illinois	2	15	598	28	176	532
Indiana	4	32	692	40	220	448
Iowa	4	34	705	39	399	915
Kansas	4	23	459	54	229	328
Kentucky	5	42	674	36	217	507
Louisiana	5	40	731	26	230	789
Maine	3	6	115	0	94	
Maryland	3	18	465	35	108	213
Massachusetts	2	14	721	30	58	90
Michigan	3	23	705	56	153	174
Minnesota	2	10	331	76	112	48
Mississippi	7	78	1068	17	200	1093
Missouri	4	55	1148	39	217	457
Montana	7	59	788	149	347	133
Nebraska	5	28	421	82	208	155
Nevada	15	65	325	146	302	107
New Hampshire	1	20	1713	0	105	
New Jersey	2	13	517	24	155	538
New Mexico	8	19	129	44	308	604
New York	3	9	184	26	91	245
North Carolina	10	31	219	49	104	114
North Dakota	0	30	9278	0	60	
Ohio	4	27	566	70	202	188
Oklahoma	8	97	1066	52	500	866
Oregon	6	33	443	197	266	35
Pennsylvania	2	14	524	25	119	372
Rhode Island	2	12	483	44	345	679
South Carolina	13	45	256	36	133	268
South Dakota	6	44	657	0	212	
Tennessee	7	37	393	36	117	221
Texas	9	55	484	68	421	516
Utah	4	22	436	53	239	347
Vermont	4	28	556	0	441	
Virginia	5	34	643	39	177	353
Washington	7	26	284	151	240	59
West Virginia	2	33	1425	32	183	476
Wisconsin	3	26	847	78	378	383
Wyoming	12	47	301	68	171	152

Also notable is the change in the most serious offense for which incarcerated females were sentenced. In 1979 almost half of females held in state prisons in the U.S. were convicted of violent offenses, 37 percent property offenses, and 10.5 percent drug offenses. By 1997 the picture was drastically different. Those sentenced for drug offenses now constituted the largest group of incarcerated females (34.4 percent), while females convicted of violent offenses made up 28.2 percent and property crimes 26.6 percent (Edwards 2000). Additionally, in 1979 only 3.8 percent of females held in state prisons were serving time for “other” offenses, which include public order offenses; by 1997 these accounted for 10.8 percent of the female state prison population.

How do we make sense of these changes? What do we need to know in order to understand the problem? What, in fact, *is* the problem? In 1990, when the prison population (including both men and women) had already doubled since 1980, reporter Peter Jennings stated that, “The problem is an obvious one....where to put everybody” (Yousman 2004: 231). To politicians who want to look “tough on crime,” media outlets looking for a gripping story, and citizens responding to political and media preoccupation with violent crime perhaps this was, and is, the “obvious” problem. It is increasingly clear to those who study crime and imprisonment, however, that the problem is much more complex. Rather than focusing on the simple question of whether or not we have the prison capacity to house a growing population of citizens sentenced to prison, we must ask the pressing question of why this population is growing in the first place. Yates and Fording (2005) argue that a government’s “ability to deprive citizens of liberty stands as one of its most important and intrusive powers” (1099). It is thus imperative to understand who is being incarcerated and under what conditions incarceration rates rise or fall (Yates and Fording 2005).

The women increasingly being incarcerated tend to be young, poor, minorities, and mothers of minor children who lived with them prior to their incarceration. They also tend to have little education, often have suffered physical and/or sexual abuse in their childhoods and immediate past, and frequently have mental health, drug abuse and/or alcohol abuse problems (Greenfield and Snell 1999; Harlow 1999). Research also suggests that most women's crimes are, in fact, a response to their poverty, mental health problems, addiction, or crisis (Singer 1995, in Girschick 1997/1998). The choice being made, then, is to respond to such women not with social assistance or alternatives to incarceration, but with increasing punitiveness. The consequences of increased female incarceration are broad. Inappropriate or inadequate programming in women's prisons means that women often leave prison without sufficient preparation for reentering the community (Mauer, Potler, and Wolf 1999). Women are also often burdened with "collateral sanctions" such as a disenfranchisement, a lifetime ban of welfare benefits, and a ban on federal housing participation and student loans.

Moreover, not only the imprisoned women, but also their families are impacted. their families are impacted, as well. Most incarcerated mothers lived with their children prior to prison (Mauer, Potler, and Wolfe 1999) and in 1991 over half of mothers in state prisons reported that they had not received even one visit from their children while incarcerated (Snell 1994). The resulting separation affects children's psychological health, and their sense of family is damaged (O'brien 1999). Only a little over one-third of state and local child welfare agencies have policies or programs that address the needs of children of incarcerated parents, and even fewer states have programs designed to address the specific needs of incarcerated mothers in pre-release planning (Lapidus et al.). Further disruption in the lives of children can occur when their mother is in prison for longer than the time allowed by the

Adoption and Safe Families Act of 1997 for children to be in foster care before parental rights are terminated. While the majority of children of female prisoners are not in state foster care, this is more likely to occur with female prisoners than males. It is clear that the women being incarcerated at increasing higher rates are some of the most vulnerable members of society, who then, along with their children, suffer the effects of punitive sanctions and further marginalization.

But what are the conditions under which states deprive a greater proportion of their female citizens of their liberty? Is imprisonment simply a response to crime, a necessary step to protect a state's citizens? Are higher female incarceration rates the expected, and necessary, outcome of women's greater involvement in crime that endangers the populace? National data indicates that neither similar increases in women's serious offending nor female offenders having more serious criminal records is the driving force for the increase in female incarceration (Chesney-Lind 1997). Further questions, then, must be asked in order for us to understand this phenomenon.

The Present Research

The objective of the present research is to address the question of what factors contributed to the extraordinary increase in female incarceration rates in the late 20th century, specifically between 1979 and 2001. Jacob and Carmichael argue that the incarceration rate is a "more comprehensive indicator of total punitive responses than admission rates or sentences" (70; see also Greenberg and West 1998; Stemen, Rengifo, and Wilson 2006). They add further that a state's incarceration rate effectively captures the likelihood of imprisonment, as well as time served, early releases, and reimprisonment for parole violations. Based on these arguments, I analyze female incarceration rates (the number of

female prisoners under state jurisdiction per 100,000 female population). Since maintaining social order and regulating behavior have traditionally been the role of local and state governments (Fording, Soss, and Schram 2007) and the majority of prisoners are under the jurisdiction of state criminal justice systems, I analyze incarceration rates at the state level.

It is my hope that examining state variation in changes in female incarceration rates along with changes in potentially important political, social, cultural, and economic factors may help answer this crucial question. I specifically explore the possibility that party affiliation of a state's governor, racial and economic threat, sentencing reform, the war on drugs, a state's economic resources, and cultural factors such as urbanization, citizen political ideology and religious fundamentalism, drive rates of female incarceration. This research also assesses whether the strength of any of these relationships changes over time and what predictors affect unequal rates and growth of incarceration based on race. Practically, this research will show what state-level conditions contribute to higher or lower, stable or changing, and racially alike or disparate rates of women's incarceration. The broader theoretical issue on which it has bearing is how social, political, cultural, and economic factors affect the use of incarceration as a means of formal social control of women in the U.S.

CHAPTER 2 – THEORY

There are a number of theoretical explanations for the state's use of incarceration, both the extent to which it utilized and changes in the level of its use. Normative, or functional, theories propose that incarceration is a governmental response to crime. Other theories propose that rates of incarceration are the result of political processes, which are determined by the interests of those in political power (Beckett 1997; Beckett and Sasson 2000). Still others argue that incarceration is used as a mechanism to control threatening populations, including a growing minority population (Blalock 1967; Blumer 1958; Bobo and Hutchings 1996; Olzak 1992; Quillian 1996; Bridges, Crutchfield, and Simpson 1987), the unemployed (Rusche and Kirchheimer 1939; Greenberg 1977), and the underclass (Garland 1990; Chambliss and Seidman 1980, Chiricos and DeLeon 1992). Other scholars contend that a state's use of punishment has its roots in the cultural environment shaped by urbanization, as well as dominant social attitudes and beliefs among citizens about a variety of issues (Greenberg and West 2001; Garland 1990). Thus, incarceration rates are likely associated with citizen political ideology and religious fundamentalism (Chambliss and Seidman 1980; Greenberg and West 2001; Beckett 1997; Langworthy and Whitehead 1986; Stemen et al. 2006; Jacobs and Carmichael).

Recently, a number of scholars have concluded that state incarceration rates are a response to a variety of conditions in the state. Understanding incarceration rates over time therefore necessitates the consideration of a number of theoretical explanations (Greenberg and West 2001; Stemen et al. 2006). Garland (1990) argues that, "We need to realize that in the penal realm—as in all social experience—specific events or developments usually have a plurality of causes which interact to shape their final form The aim of analysis should

always to be to capture that variety of causes, effects, and meanings and trace their interaction, rather than to reduce them all to a single currency” (280). With this in mind, this chapter will discuss the variety of theoretical perspectives utilized to explain the state’s use of incarceration.

Theoretical Explanations for Incarceration Rates

A Functional Perspective: The Role of Crime Rates

Functional theories propose that punishment is a governmental response to crime. The adoption of policing, sentencing, and corrections policies and practices that result in higher incarceration rates are a reaction to higher crime rates. Thus, the level of incarceration is determined by the amount of crime, and increasing incarceration rates are a legitimate response to growing concern about rising crime rates (Bennett, Dilulio and Walters 1996). However, while the U.S. has a higher and faster-growing incarceration rate than other Western countries, the same cannot be said about crime rates (Tonry 1999). The trend of increasing incarceration rates in the U.S. in the past several decades has been accompanied by a relatively flat national crime rate (Blumstein and Beck 1999). Indeed, even after crime rates stabilized in the late 1980s and then fell in the 1990s, incarceration rates continued to grow steadily and dramatically, until by 2007 the incarceration rate was six times higher than in the early 1970s, while the crime rate was roughly the same.

Scholars still maintain that crime rates do have some influence on a government’s response to crime (Garland 2001; Greenberg and West 2001). While, overall, research suggests that increases in incarceration rates since the 1970s were not caused primarily by growth in crime (Blumstein and Beck 1999; Chaiken 2000; Greenberg and West 2001), there is a correlation between persistent high crime rates, especially violent crime, and the size and

growth of incarceration rates across states (Carroll and Cornell 1985; Greenberg and West 2001; Jacobs and Carmichael 2001; Marvell 1995). In addition to a direct connection between crime rates and incarceration rates, reported crime may create a “violent crime climate,” or a perceived threat of crime (Bridges and Beretta 1994: 169). Thus, changes in incarceration rates may be a societal response not to the actual number of individuals arrested for serious crimes, but to the broader societal condition of a perception of the threat of violent crime (Bridges and Beretta 1994; see also Western 2006). Therefore, while the hypothesis that “institutionalized punishment practices are not entirely determined by the functional necessity of preventing crimes” (Greenberg and West 2001: 638) must be considered (see also Garland 1990 and Rusche and Kirchheimer 1939), the proposition that levels of crime and incarceration are related should also be taken into account.

Group Threat Perspectives

Group threat theories propose that incarceration “can be a response to anxiety-provoking conditions other than crime” (Greenberg and West 2001: 620). Specifically, incarceration may be targeted at the “dangerous classes,” those populations perceived as threatening by the dominant group. Thus, social divisions based on race, ethnicity or economic resources help explain incarceration rates.

Minority Threat. Minority threat theory has its foundation in Blalock’s (1967) power-threat hypothesis. This theory links hostility and discrimination against nonwhite minorities to the group’s relative proportion of the population. The premise is that a larger or growing minority population creates competition for jobs and other economic resources and is a potential source of collective action against the dominant group. Thus, dominant groups are threatened by growth in minority populations because they feel that privileges

believed to belong to the dominant racial group are under threat by a subordinate group.

There is a perception that a large or growing minority population is a threat to their social status, political power, and/or economic wellbeing (Blalock 1957; Blumer 1958; Bridges and Crutchfield 1988; Quillian 1996).

Blumer's (1958) theory of race prejudice as a sense of group position also contributed to this perspective. This theory focuses on the idea that a sense of group position is imperative to understanding relations between racial groups. Race prejudice is a defensive reaction to felt challenges to the sense of dominant group position. Even low-status members of the dominant group feel that members of the subordinate group are inferior and deserving of fewer rights. Also key is the proposal that racial groups are defined not as individuals, but as a whole, that the dominant group is concerned with an "*abstract image* of the subordinate racial group" (6). This collective image does not develop from personal encounters or experiences with subordinate group members, but emerges from definitions and characterizations created in discussions in the public arena. When the public discussion "takes the form of a denunciation of the subordinate racial group, signifying that it is unfit and a threat, the discussion becomes particularly potent in shaping the sense of social position" (3). Central in the formation of the abstract image of the subordinate racial group is public discussion that "touches deep sentiments, that seems to raise fundamental questions about relations, and that awaken strong feelings of identification with one's racial group" (6). Moreover, it is those with authority and prestige who have the most important influence in this process.

Extending racial threat theory to explain the relationship between the size of minority populations and incarceration rates can begin by arguing that incarceration can be seen as one

possible response to racial threat, since incarcerating a large proportion of minorities reduces their potential threat to the social status, political power, and economic wellbeing of the dominant group (Heimer, Stucky, and Lang 1999). However, applying the theory to incarceration rates, as well as other elements of formal government punishment, generally involves extending the concept of threat to include fear of crime and the perception that nonwhite minorities, especially blacks, constitute a criminal and violent threat. This involves the application of Blumer's concept of an *abstract image* of the subordinate group, the proposal that threat does not have to be *real*, but only perceived, and the overall argument of the theory is that the sense of threat is especially likely to emerge when the minority population is large or growing. Additionally, the political processes discussed in the previous section help explain how racial minorities come to be associated with the *crime problem* and how this can translate into higher incarceration rates.

A white American does not have to be a victim of crime perpetrated by a racial minority, or even have any personal encounters or experiences with them, in order to perceive crime as a racial problem. The "collective image" of minorities, especially blacks, as criminal and violent suffices. Crime is racially coded such that "[w]hen people think of criminals . . . African-American faces come to their minds, and this image tends to affect their views on crime" (Barkan and Cohn 2005: 311). Senator Bill Bradley put it bluntly when he stated that "[f]ear of black crime covers the streets like a sheet of ice (Congressional Record, 26 Mar. 1992, p. S4242, cited in Skogan 1995). Additionally, this fear is associated with a group that is seen as inferior. Andrew Hacker argued that,

[t]he dread whites feel of black crime goes beyond actual risks or probabilities. The visage of Willie Horton stirred fears in part of the country where black faces are seldom seen. . . The feeling is not simply that crime is

out of control. Far more troubling is the realization that white citizens can be held in thrall by a race meant to be subservient. (Hacker 1992:188)

How do racial minorities become associated with crime? Blumer (1958) argues that public discussions, especially those involving authority and prestige (e.g. political leaders and media), create definitions and characterizations of subordinate groups. Additionally, when the discussion denounces the subordinate group as unfit and a threat this conversation is especially potent. Moreover, debate that taps into deep feelings is particularly important. Political rhetoric and media representations about crime are presented by those with authority and prestige, denounce racial minorities as unfit and threatening, and evoke the deep sentiment of fear—for one's self and for one's group. Politicians have, since the 1960s, played on white fear by linking crime to blacks in advertising and speeches (Beckett and Sasson 2000; Chambliss 1999), relying on coded language to disguise the underlying racism (Yousman 2004). In political rhetoric, "crime meant urban, urban meant black, and the war on crime meant a bulwark against the increasingly political and vocal racial 'other' by the predominately white state" (Parenti 1999: 7). For example, Nixon Chief of Staff H. R. Haldeman later admitted that Nixon "emphasized that you have to face the fact that the whole problem is really the blacks. The key is to devise a system that recognizes this while not appearing to" (Parenti 1999: 12). This "system" became the "war on crime" (Yousman 2004: 16), disguised through the use of coded language, and was used to court Southern Democrats and other social conservatives (Yates and Fording 2005).

Media representation of crime also contributed to crime being associated with blacks. In 1993 there was a 400 percent increase from the previous year in media coverage of violent crime. The theme of the coverage was that violence was "no longer contained in the urban

ghetto, but was spreading to places previously considered safe and was both everywhere and random” (Chiricos, Hogan, and Gertz 1997: 123). Criminally violent blacks were now threatening not just each other, but suburban whites—everyone was in danger. This media blitz did not go unnoticed by the American public. From 1993 to 1994 the percentage of Americans who ranked crime/violence as the nation’s “foremost problem” rose from 9 percent to 49 percent (Gallop 1994: 6 cited in Chiricos et al. 1997), despite the fact that crime rates were actually decreasing.

A number of scholars argue that our preference for incarcerating at higher and higher rates is directly tied to the fact that crime is characterized as a black phenomenon (Beckett and Sasson 2000; Chiricos et al. 2004; Roberts 1993). Since crime is associated with blacks, white support for more punitive measures means building more prisons to hold more *black* people for longer periods of time. Considerable research supports the argument that blacks are viewed as a criminal threat to whites and authorities (Liska, Lawrence, and Benson 1981; Swigert and Farrell 1976). According to a 1991 national survey, 52 percent of white Americans supported the statement that “blacks are aggressive or violent,” the most frequently selected negative stereotype on a list of five (Sniderman and Piazza: 45).

If whites have a stereotype of blacks as criminal and violent and crime is characterized as a black phenomenon, the percentage of the population that is black may affect their perception of the crime problem and attitudes about punishment and thereby impact incarceration rates. It has been found that negative attitudes about blacks are more likely in communities with more blacks (Bobo and Hutchings 1996; Fossett and Kiecolt 1989). Additionally, prejudice against blacks (Chiricos et al. 2004; Cohn, Barkan, and Haltzman 1991; Peffley, Hurwitz, and Sniderman 1997; Soss, Langbein, and Metelko 2004)

and living in areas with a recent increase in the size of the black population (King and Wheelock 2007) are related with increased support for punitiveness. Finally, fear of crime is positively associated with the proportion of the population that is black (Liska, Lawrence and Sanchirico 1982). Thus, since crime is associated with blacks, large or growing black populations should “increase the likelihood that dominant whites will successfully demand harsh punishments and increased incarceration rates” (Jacobs and Carmichael 2001: 66).

While this theoretical perspective, when utilized in criminological research, has generally focused primarily on the black population, it is also very applicable to the Hispanic population in the U.S. This is especially true in regards to the sense of threat elicited by a minority population that is not just large, but is growing. Historically, Americans have viewed immigrants as being responsible for a large proportion of crime (Martinez, Jr. and Lee 2000). This may be especially pertinent in recent decades. Between 1980 and 1990, the Hispanic population in the U.S. grew by 53 percent. Most white Americans saw these new immigrants as somehow different from previous waves of immigrants. They believed them to be less likely to assimilate and to pose greater danger to the institutions and cultural values of U.S. society (Simon 1993). During the 1990s, when the Hispanic population increased by another almost 58 percent (Guzman 2001), immigration became one of the most hotly debated political issues and many people believed that immigrants, especially undocumented (Hispanic) aliens, were the source of an increase in serious crime. This growth in the Hispanic population did not affect all states uniformly. Between 1990 and 2000, six southern states, which previously had very small numbers of Hispanic residents, experienced an increase in their Hispanic population of over 200 percent. This large and varying increase in the Hispanic population, combined with the belief that they are the cause of increased crime,

may make the minority threat hypothesis especially pertinent to understanding increased incarceration at the state level.

In sum, this perspective maintains that large or growing minority populations lead to a heightened sense of threat among whites, who then demand harsher criminal sanctions, resulting in higher incarceration rates.

Unemployment. Another group threat perspective proposes that threat posed by economic conditions shapes rates of punishment. The basic premise of the Marxist perspective is that deteriorating economic conditions result in a greater need to control a potentially dangerous or “problem population” (Stemen et al. 2006). Economic elites use legal institutions, including the criminal justice system, to manage and control this population. A theoretical link between labor surplus and punishment was proposed by Rusche and Kirchheimer (1939) and has since been developed by a number of scholars. Explaining this relationship, Marxists argue that prisons discourage marginal and unemployed workers from supporting themselves by stealing and from rebelling (Greenberg and West 2001). In addition, potential laborers are valued less and employers are more willing to see them incarcerated in times of high unemployment (Myers and Sabol 1987a, 1987b; Rusche and Kirchheimer 1939; Speiglmann 1977). High rates of unemployment may also cause judges to be concerned about threats from unemployed workers and thus punish them more harshly (Adamson 1984; Greenberg 1997); or judges may believe unemployed defendants have a greater risk of reoffending and hence be more likely to sentence them to prison (Box 1987; Spohn and Holleran 2000). For these reasons, higher unemployment rates may be associated with higher incarceration rates.

Economic Inequality. Some scholars argue that the unemployment rate is not an adequate measure of potential economic threat (Greenberg and West 2001; see also Joachim Savelsberg 1994). The number of officially “unemployed” includes people with job prospects and savings, as well as those who are temporarily and voluntarily unemployed (Greenberg and West 2001). These scholars contend that it is the population of very poor who are detached from the labor market that constitutes a potential economic menace (see also Chambliss and Seidman 1980; Garland 1990). Additionally, contemporary political discourse emphasizes the dangerousness of the economically marginalized and the ensuing need for increased security (Beckett and Western 2001). Thus, the larger underclass, the more likely economic elites will use the criminal justice system for the purpose of controlling what is viewed as a potentially threatening population. However, some scholars claim that the concept of a threatening underclass must be understood as relational. It is not simply the presence of a large poverty class, but increased separation between the classes that is important. As differences in the resources of the most and least affluent increase, the privileged are more likely to feel threatened (Jacobs 1979).

A related hypothesis is that it is “easier to impose pain (or punishment) on those with whom we have little in common or do not know in any personal sense” (Mauer 2001:15). A bigger gap between the rich and the poor results in greater social distance between the classes and may thus be associated with less concern among the economically advantaged about the well being of the poor and subsequent support among the affluent for harsher punishments that will presumably affect primarily low-income communities (Greenberg and West 2001). At the international level, there is a demonstrated correlation between national income disparity and rates of incarceration (Greenberg 1999). Taken together, these perspectives

suggest that as economic inequality increases so will the proportion of the population that is incarcerated.

The Political Perspective

A number of political scientists and sociologists propose that political arrangements and processes, determined by those in political power, often determine public policy outcomes (Evans, Rueschemeyer, and Skocpol 1984; Skocpol and Amenta 1986). According to this perspective, state officials pursue their own interests, and politicians, those in office and those seeking office, focus on issues purposely chosen to garner political support from those otherwise unlikely to support that individual or party (Beckett 1997; Beckett and Sasson 2000). Research suggests that Republicans have historically been more likely to use crime as an issue for this purpose. If this is the case, why is it that Republican officials tend to both focus on crime during elections and enact more punitive criminal justice sanctions when in office? Why use crime, or “law and order,” as an issue to gain public support?

Republican economic policies generally do not benefit those in the middle- and lower-class (Allen and Campbell 1994; Blank and Blinder 1987; Hibbs 1987). Thus, Republican candidates need to attract middle and lower class conservatives who don't benefit from conservative economic policies. Crime is a viable issue to use to bring together more affluent economic conservatives and middle- and lower-class social conservatives for a number of reasons. First, less affluent voters are more likely to live in or near areas with higher rates of crime and to be victims of crime (Jacobs and Carmichael 2001). Additionally, conservatives tend to believe that criminal behavior results from defects in and poor choices by individuals (Burnham 1970; Finkeauer 1978; Scheingold 1984; Thorne 1990). Therefore, those who engage in crime should be held individually accountable for their behavior and the

appropriate governmental response is deterrence, including imprisonment (Finkeauer 1978; Molnar 1976). Thus, if there is a perceived crime problem, a law and order platform promising harsher punishment for offenders can be used to attract social conservatives. Moreover, social activism and disorder in the 1960s led to anxiety among working-class whites and these conditions were linked by conservative politicians to violent crime among blacks in inner cities (Western 2006). Street crime was associated with a non-white, immoral underclass and therefore the crime issue could be used to appeal to anti-minority sentiments (Beckett 1997; Beckett and Sasson 2000; Edsal and Edsal 1991). These things work together to make crime a useful issue with which politicians can gain support from less affluent socially conservative voters.

Historical analysis reveals that Republican presidents have spent more on criminal justice policies than Democrats since 1935 (Caldeira and Coward 1980). However, it was in the 1960s that crime became a political issue. More accurately, as argued by Finkeauer (1978), it was not actually *crime* that became an issue, but *law and order*, a complex issue including “race, lawlessness, civil rights, and other emotional social issues” (Finkeauer 1978: 17). It was at during time that crime became “a set of public attitudes concerning the more personally frightening aspects of disruptive social change” (Finkenauer 1978:17, citing Scammon and Wattenberg 1970). In 1964 Goldwater charged that the Kennedy-Johnson administration’s lax approach to law enforcement had “encouraged rioting and a general rise in crime in the big cities,” (Finkeauer 1978:17), starting the trend of Republican candidates criticizing Democrats for being “soft on crime” and calling for harsher punishment of offenders (Finckenauer 1978). Despite Goldwater’s loss in the election, his focus on street crime and lenient law enforcement as its cause had a lasting effect on the public’s perception

of crime and the “crime problem.” In 1965 crime was viewed as the most important problem facing the nation for the first time, according to a Gallop poll.

The trend continued in 1968 when Nixon campaigned on a promise that those guilty of crime would be appropriately punished (Reiss 1968), and this time the law and order candidate won. His administration then intentionally sought to appeal to anti-minority sentiments of constituents using the law and order issue (Edsal and Edsal 1991). In the following decade, Reagan took one of the most aggressive law and order stances used in a presidential campaign, strongly emphasizing violent crime—meaning street crime that is committed mainly by poor inner city minorities (Finkeauer 1978). The contrast between Republican and Democratic rhetoric about the need for severe punishment for crime increased throughout the 1980s. During this time Republican platforms contained strong anti-crime agendas (Davey 1998) and politicians contended that any growth in crime resulted from lenient judges and soft punishments (Tonry 2004). Furthermore, the Reagan and Bush administrations called for harsher punishments, including more prisons, greater use of capital punishment, and mandatory sentences.

At the state level, Republican strength can be measured in a number of ways. One possibility is that the political party of the governor is most important. Governors appoint parole board members and have considerable control over budget preparation and decisions regarding prison construction (Greenberg and West 2001). There is considerable support for the premise that having Republican officials has been associated with more punitive punishment, including incarceration rates (Davey 1998; Jacobs and Carmichael 2001; Jacobs and Helms 1996; Smith 2004; Western 2006), prison admissions (Stucky et al. 2005), spending on law enforcement and corrections (Caldeira and Coward 1980; Scheingold 1984;

Stucky et al. 2007), and the number of police (Jacobs and Helms 1996; Jacobs 1997).

However, some scholars contend that in the early 1990s, Democrats, too, began to include law and order as part of their platform. Thus, the importance of Republican control in determining a state's use of incarceration as a response to crime may have diminished (Beckett and Sasson 2000; Davey 1998).

Another important question is whether elected officials are simply responding to the wishes of the public when they promise harsher treatment of criminals and prison expansion and then follow through once elected. There is some evidence that politicians actually help shape public opinion about crime. Beckett (1997) found that declarations by national politicians, even when holding crime rates and media coverage constant, amplify public perception about and the salience of street crime. Her findings suggest that politicians use rhetoric to increase public concern and resentment about crime and then propose severe punishments as a solution to the problem to gain public support.

If these two arguments are correct, then the presence of a Republican governor should be associated with more substantial incarceration rates independent of the political ideology of citizens, although the importance of the party affiliation of the governor may have become less important in determining incarceration rates since the early 1990s.

The Cultural Perspective

While it has been demonstrated that incarceration rates may be partially explained by crime rates, a sense of threat among citizens, and the actions of political officials, a number of scholars argue that culture must be considered in order to provide a more complete explanation for variation in incarceration rates (Crutchfield and Pettinicchio 2009; Greenberg and West 2001; Jacobs and Kleban 2003; Sutton 2004 [in Crutchfield and Pettinicchio]).

Although penal policy is enacted by political officials and carried out by criminal justice personnel, these individuals do not act in isolation, but are affected by broad cultural conditions such as the level of urbanization, as well as the dominant values and beliefs of the population (Garland 1990; Greenberg and West 2001; Helms and Jacobs 2002).

Consequently, a number of cultural factors are proposed to influence incarceration rates.

Urbanization. There are two hypotheses regarding the relationship between urbanization and criminal justice outcomes. One argument is that greater urbanization is associated with higher degrees of social disorganization and less informal social control. Consequently, there is necessarily more dependence on formal mechanisms of social control (Black 1976:107; Horwitz 1990; Spitzer and Scull 1997; Rose and Clear 1998).

Furthermore, greater urbanization may be accompanied by minorities being concentrated in central city areas and some research suggests that when this occurs law enforcement officials are more likely to view minorities as a threat to public order and a legitimate target for social control (Bridges, Crutchfield, and Simpson 1987). Thus, the argument is made that greater urbanization contributes to higher incarceration rates, especially among racial minorities.

Others maintain that urbanization is associated with more cultural diversity and subsequently a higher level of tolerance for and less punitive response to deviant behavior. In addition, due to the greater concentration of the population, the criminal justice system in such areas is likely to have higher caseloads, resulting in slower processing and slower prison growth (Stephan and McMullin 1983; Wilson 1985). As with the previous argument, it is recognized that urbanization may be accompanied by greater concentration of minorities in central cities. However, some scholars contend that this results in decreased formal social control. Liska et al. (1981) argue that policing and segregation are alternate approaches to

the control of interracial crime. They found that greater segregation results in less interracial and more intraracial (specifically black-on-black) crime. Since whites care less about black-on-black crime, one effect of greater urbanization may be less policing and subsequently lower rates of incarceration, especially among blacks.

Political Conservatism. Some scholars propose that higher incarceration rates may result from demands by conservative citizens rather than imposition by political leaders (Jacobs and Carmichael 2001). Research suggests that political conservatives are more likely to view crime as a matter of personal choice, focus on individual accountability (Burnham 1970; Scheingold 1984; Thorne 1990) and favor deterrence and incapacitation to prevent crime (Beckett 1997; Langworthy and Whitehead 1986; Rosch 1985; Taylor et al. 1979; Thorne 1990). Liberals, on the other hand, tend to prefer alternatives to imprisonment and rehabilitative programs (Langworthy and Whitehead 1986; Rosche 1985; Taylor et al. 1979). Furthermore, conservatives are more likely than liberals to have negative stereotypes of blacks (Domke 2001; Federico and Sidenius 2002; Gilens 1999; Glaser 1994; Johnson and Marini 1998; Oveiver and Mendelberg 2000), whose presence in large or growing numbers, as discussed earlier, is linked to perceptions and fear of crime. Therefore, it is proposed that a more conservative populace is associated with higher incarceration rates.

Religious Fundamentalism. Religious views have historically played a role in shaping a society's use of formal punishment (Erickson 1966; Garland 1990; Ignatieff 1978; McGowen 1995). A number of scholars propose that it is the religious views of conservative (fundamentalist) Protestant Christians that have had an impact on penal policy in recent decades. After a long period of little involvement in politics, conservative Christians reemerged in the world of politics in the 1960s, becoming a major political power after

Carter's election in 1976 (Guth 1996; Wilcox 1992 [Greenberg and West 2001]). Adherents of fundamentalist Christianity eventually grew to constitute an extensive, well organized network with shared beliefs that encourage unity and action in the political arena (Wald, Owen, and Hill 1988, 1990; Wald 1987).

The relationship between fundamentalist Protestantism and ideas about criminal justice policy derives from their beliefs regarding the cause of crime, the nature of crime, and the appropriate response to crime. Fundamentalist Christians tend to believe that crime results from the flawed, weak nature and free choice of the individual (Grasmick and McGill 1994; Gorsuch and Smith 1983; Grasmick, Davenport, Chamlin, and Bursik 1992; Lupfer and Wald 1985; Warr 1989). Additionally, crime is not just illegal; it is immoral, sinful (Curry 1996). Sinfulness cannot be "corrected" through rehabilitation; therefore criminal acts deserve, even require, punishment (Ellison and Sherkat 1993; Grasmick et al. 1992; Warr 1989; Young 1992). For these reasons, Christian fundamentalists tend to have a punitive orientation toward offenders (Grasmick et al. 1992a; Ellison 1991; Young 1992), believe in punishment as retribution rather than for deterrence or rehabilitation (Grasmick et al. 1992), and support harsh penalties for crime (Grasmick et al. 1992; Grasmick and McGill 1994; Curry 1996). Wald (1987) argues that any increased tendency among the general public to attribute crime to individual factors and support harsher criminal punishments may have been caused by the growth of conservative Protestant Christianity more so than either disillusionment with the rehabilitative ideal or growing fear of crime. The proposed relationship between conservative Protestantism and imprisonment, then, is that more widespread fundamentalist beliefs should lead to greater demands from citizens for more severe criminal punishment and hence higher incarceration rates.

Additional Explanations for Incarceration Rates

The War on Drugs

Many scholars argue that drug policy has played a large role in prison population growth (Zimring and Hawkins 1995; Austin, et al. 2001; Blumstein 1993; Duster 1997; Tonry 1995), as well as the increase in racial disparity in incarceration (Blumstein 1993; Tonry 1995). In the late 1970s the focus of drug policy shifted from demand reduction to interdiction and a reliance on punitive sanctions. By the late 1980s the “War on Drugs” focused on the arrest of low-level dealers and street-level offenses (Tonry 1995). Drugs associated with racial and ethnic minorities have historically been seen as more dangerous (Duster 1997; Lusane 1991; Manderson 1997; Musto 1987) and racial and ethnic minorities have been the targets of the harshest drug laws (Provine 2007). Since the 1980s, crack has been associated with poor, inner-city blacks; and police resources in the War on Drugs thus concentrated on poor minority neighborhoods (Beckett et al. 2006; Blumstein 1993; Davis 2005; Miller 1996; Tonry 1995). Additionally, there have also been substantive changes in sentences for drug offenses, including penalties linked to small amounts of drugs and sanctions for conspiracy, which may contribute to higher rates of incarceration (Lapidus, Luthra, Vermal, Small, Allard, and Levinsgton 2004).

Images of poor, non-white users and dealers and the dangers of crack babies, rhetoric about the drug epidemic from which “no one was safe” (Nancy Reagan 1986, in Gomez 1994), and publicity about drug arrests (Greenberg and West 2001) may have combined to increase public perceptions of the danger of drugs and support for punitive sanctions. Thus, the concentration of police efforts in inner cities, the Drug Acts passed in the mid and late 1980s, media and political messages about the dangers of crack cocaine, and increased public

support for punitive sanctions for drug offenses may have combined to increase the impact of drug arrests on incarceration rates, particularly among blacks, since the War on Drugs intensified in the late 1980s.

Sentencing Reform

Until the mid- to late 1970s, the reigning paradigm in sentencing and corrections policies in the U.S. was the indeterminate system, which was based on the rehabilitative ideal. Under this system there were few restrictions on a judge's choice to impose a prison sentence or probation, or on the length of sentences judges could impose, as offenders' individual characteristics were to be taken into account (Blumstein et. al. 1983).

Additionally, there were few requirements regarding the minimum portion of a sentence offenders had to actually serve and also few standards guiding decisions made by parole boards, who had ultimate control over when offenders were released (Tonry 1996). In the mid 1970s belief in the rehabilitative ideal, and the indeterminate system, began to wane. Corrections policy in the U.S. entered a period that David Garland has called "the culture of control" (Garland 2001). This shift was called for by both sides of the political spectrum, with some arguing that too much judicial and parole board discretion opened the door to abuse and discriminatory treatment of some groups, and others maintaining that judges were too lenient and parole boards allowed released before offenders had served sufficient time in prison (Griset 1991). These concerns led to widespread reforms in many states, which focused on either limiting judicial discretion at sentencing or controlling decision-making by parole boards, or both.

Two of the most commonly adopted types of policies were structured sentencing and determinate sentencing. Structured sentencing focuses on controlling sentencing decisions

and the length of terms imposed by judges. There are several ways to structure sentencing. Presumptive sentencing is a system that provides either a single recommended sentence or a narrow range for each offense or class of offense that is determined exclusively by the severity of the offense. Sentencing guidelines, on the other hand, impose recommended sentences based on the severity of the offense *and* the offender's prior criminal history. Presumptive guidelines require judges to impose a sentence within the guidelines or provide justification if they deviate, and sentences outside the guidelines can be appealed. Voluntary guidelines do not require judges to impose the recommended sentence, may or may not require written justification for deviating, and do not allow appeal for deviation (Stemen et. al. 2006).

Determinate sentencing involves an effort to control release decisions and time served, ensuring that the time offenders serve is determined by the sentence imposed rather than by a parole board decision (Stemen et al. 2006). Sentences imposed by judges are a fixed number of years and offenders are required to serve a minimum portion of the term. To have a completely determinate system in essence means that there is no discretionary parole release (Reitz and Reitz 1993). While determinate sentencing can be seen as method of controlling potential discriminatory treatment of some groups by parole boards operating without public oversight, the explicit intent of adopting determinate sentencing was frequently tied to rejection of rehabilitation as an objective of imprisonment. For example, California's Uniform Determinate Sentencing Act stated, "The Legislature finds and declares that the purpose of imprisonment for crime is punishment" (cited in Kruttschnitt and Gartner 2005).

The overall impact of such policies on incarceration rates is unclear. A number of scholars suggest that determinate sentencing has contributed to growth in prison populations

(Blumstein 1993; Rothman 1993- Greenberg and West). Greenberg and West (2001) argued that, since the adoption of such policies often occurs in conjunction with political rhetoric about getting “tough on crime,” it would be reasonable to expect that states with determinate sentencing would have higher rates of incarceration. However, their analysis concluded that it had the opposite effect. Other scholars have found that determinate sentencing may have no effect on incarceration rates (Carroll and Cornell 1985) or may control or reduce them (Jacobs and Carmichael 2001; Marvell and Moody 1996). While controlling the prison population is often one objective of adopting sentencing guidelines, a clear understanding of their effects also proves to be elusive. Stemen et al. (2006) found that it is a combination of determinate sentencing and presumptive sentencing guidelines that lead to lower incarceration rates.

Economic Resources

Despite the influence of any or all of the factors discussed above, in the end, when a state’s revenues are lower, it may simply be less able to afford to incarcerate a large proportion of its population (Cory and Gettinger 1983; Irwin and Austin 1994; McDonald and Bernstein 1980). Therefore, in addition to theoretical explanations, the war on drugs, and sentencing reform, one must also consider the possibility that incarceration rates are driven, to a certain extent, by a state’s economic resources.

Conclusion

The body of research utilizing multiple theoretical perspectives has contributed substantially to our understanding of incarceration rates. However, it is limited by the assumption that the explanations apply equally to women and men. Because of gender—conceptualized as both a set of values, beliefs, and norms about what it means to be female or male and a social

structure that determines the distribution of power, privilege, and resources in society—it is possible that crime rates, perceived racial and economic threat, political processes, cultural influences, the War on Drugs, and sentencing policies affect women’s incarceration rates differently than men’s. Gender is likely to affect whether, and under what conditions, groups are perceived to be a threat, whether “get tough” policies are aimed at a particular group, beliefs about culpability and appropriate punishment, and the impact of supposedly gender-neutral policies.

Theoretical Explanations for Growth in Female Incarceration

The Social Control of Women

Historically, women, as compared to men, have been subject to greater informal social control through ties to and responsibilities for the family (Hagan and Simpson 1979). Black (1976) proposes that there is an inverse relationship between informal and formal social control. Thus, since women are subject to greater informal social control, they are less subject to formal social control. When utilized, formal mechanisms to control women have often focused on controlling their sexuality. For example, in the late 19th and early 20th centuries, women and girls were often sent to reformatories due to immoral behavior. This was at times at the request of family members (husbands or parents) who felt they could not adequately control the sexuality of their wives or daughters (Rafter 1990). Similarly, some theorists argue that the “child-saving movement” that spurred the creation of the juvenile justice system was actually centered on a desire to control girl’s immoral conduct (Messerschmidt 1987; Schossman and Wallach 1978). More recently, in the 1970s, female status offenders in Delaware were more likely than male status offenders to be sentenced to juvenile facilities (Datesman and Scarpitti 1977).

Formal social control of women has also been influenced by moral panics. In the early 20th century, prostitution was a major social issue. During this time, there was an expansion of surveillance and control of young women that included interrogation about their sex lives, invasive medical examinations, and incarceration for sexual offenses (Gottschalk 2006). This crusade was based on, and reinforced, the Victorian view of a separate domestic sphere for women and women's responsibility for maintaining purity in society. Thus, women became subject to formal social control when they strayed from traditional norms of femininity (Gottschalk 2006). The social control of women, then, has historically relied primarily on informal social control mechanisms operating in the family, with women being subject to more formal social control when informal constraints are inadequate or disrupted (Simpson 1989) or as a reaction to moral panics. Additionally, the use of formal social control has often focused on controlling behavior that was not considered appropriate for women and girls.

Women and the Criminal Justice System

Historically, women have been incarcerated at much lower rates than men. The first possible explanation for this is that women are less involved in behavior labeled as criminal. Women do make up a small share of arrests for major violent and property crimes (Blumstein 1982; Daly and Tonry 1997; Harris and Meidling 1994; Tonry 1995). There is, however, considerable debate about whether women receive more lenient treatment by the criminal justice system and, if so, what determines such treatment. Early debates were organized around leniency and severity models. The leniency model argued that women were treated differently due to sex role stereotypes of emotional, psychological, and/or hormonal conditions (Smart 1977). Simply being female resulted in more lenient treatment regardless

of the type of crime committed. The severity model proposed that when women engage in crime, they violate both conventional norms of behavior in general and expected norms for females (Temin 1980; Chesney-Lind 1977). This model drew considerably from historical studies, noting harsher treatment of women, including more indeterminate sentences and actually serving more time than men, in various periods of U.S. history (Temin 1980; Simon and Landis 1991; Moulds 1980). More recently, scholars have found that women's treatment in the criminal justice system depends on the type of crime they commit and whether they violate socially prescribed roles for women. Women may be treated more harshly when they commit nontraditional female crimes such as assault (S. Nagel and Weitzman 1971) or crimes that violate female sexual norms (Chesney-Lind 1977; Schlossman and Wallach 1978). Additionally, women who behave in a traditional, feminine, and submissive manner during the criminal justice process are more likely to receive more lenient treatment (Chesney-Lind 1977).

McCorkel (1996) argues further that gender influences how various criminal justice agents "judge the character, remorsefulness, dangerousness, and amenability to rehabilitation of certain categories of offenders" (160). Research finds that women's treatment is determined by such things as marital status, children, and appearance (attractiveness) (Daly 1987a, 1987b; Eaton 1986). Additionally, research suggests that criminal justice officials assume that women are both more easily deterred and make more effort to reform themselves (Daly 1987a, 1989a, 1994a). Kruttschnitt (1981-1982) argues that a woman's general respectability, based on such things as her record of alcohol or drug use, the respectability of her associates, and her work history, is also important. She found that women with no criminal record but who could be considered generally disreputable received harsher

treatment than women with a prior criminal record who could be considered generally respectable. Overall, women's treatment by the criminal justice system varies according to the type of crime they commit, their social location, and the gendered expectations of criminal justice system actors about female behavior.

Why the Disproportionate Increase Among Women?

It is possible that the dramatic rise in women's incarceration rates is simply a part of a general trend toward greater punitiveness towards those who violate the law and an increased reliance on incarceration as a response to social problems. Beginning in the 1970s, the rehabilitative ideal was abandoned and replaced with the ideals of punishment, retribution, and incapacitation. Deviant behavior was no longer seen as at least partially the result of poor socialization (Kruttschnitt and Gartner 2005), and crime could not be prevented or reduced by reforming inmates (Western 2006). Rather, recidivism was seen as due to a lack of punishment (Provine 2007), and therefore the public would be safer if offenders were imprisoned for as long as possible (Windlesham 1998). Thus, the appropriate response to crime was not to attempt rehabilitation, but to punish. The new theory of punishment was that harsher sentences would act to deter criminal activity and protect the broader society from the criminal element.

Since the growth in incarceration rates has been greater among women than men, additional factors need to be considered. One question to ask is whether women's behavior has changed—e.g. women have become more violent and more involved in serious criminal activities—or whether women's behavior has become more likely to be labeled as criminally deviant and/or they are being more harshly punished. As noted earlier, national data indicate that neither increases in women's serious offending nor women having more serious criminal

records is the driving force for the increase in incarceration (Chesney-Lind 1997). We must, therefore, consider other causes for the disproportionate increase in incarceration rates among women. One possible explanation is that changes in drug policies and policing practices related to drug offenses resulted in a greater number of women being labeled criminally deviant and more harshly punished.

The War on Drugs

The War on Drugs is frequently proposed as the primary cause of growth in women's incarceration (Bloom 1995; Bush-Baskette 1999, 2000; Chesney-Lind 1995; Fineman 1994). In 1986, drug offenses accounted for 12 percent of the women in state prisons; by 1997 that number had reached 34% (Greenfield and Snell 1999). Nationally, drug offenses account for 49 percent of the rise in the number of women and 32 percent of the rise in the number of men in state prison between 1986 and 1996 (Lapidus et al. 2004). A feminist perspective—especially understanding gender as a social structure—provides an explanation of why the war on drugs would impact women so strongly. Women rarely hold high-level positions in the drug trade; rather, they tend to be less involved in drug trafficking than their male partners (Gaskins 2004). In the mid- to late-1980s drug enforcement policy shifted from concentrating on major dealers to a focus on users, low-level dealers, and sanctions for conspiracy (Bush-Baskette 2000). Thus, women involved in drug use or low level dealing, especially those in inner cities where police efforts were concentrated, were now more likely to be arrested and incarcerated for drug offenses (Van Wormer and Bartollas 2000). Once arrested, women generally have less information to use in negotiation with district attorneys, who, because of mandatory sentencing laws, have much greater power in determining

sentence length (Gaskins 2004; Lapidus et al. 2004; Raeder 1993; Covington and Bloom 2003).

Women may also be dependent on those they would implicate for economic survival and thus be reluctant to provide information (Lapidus et al. 2004). Additionally, policies enacted as part of the war on drugs, including conspiracy provisions, accomplice liability, and constructive possession doctrines, resulted in the same penalty for perpetrators of substantive drug offenses and for conspiracy to commit a drug crime. Thus, these policies can result in substantially and marginally involved offenders receiving equal treatment in sentencing. It appears then, that women's lack of power and dependence on boyfriends or husbands involved in the drug trade may make them especially vulnerable to the impact of the war on drugs.

The focus on the war on drugs does have an important limitation—using national data obscures state variation. For example, drug offenses accounted for 91% of the increase in the number of women sentenced to prison in New York, 55% in California, and 26% in Minnesota from 1986 to 1995 (Mauer, Potler, and Wolfe 1999). It is thus apparent that, while the war on drugs may be an important factor, it cannot completely explain the growth in women's incarceration rates. Sentencing reform more broadly may offer additional insight.

Sentencing reform

Gender was not considered in the debates surrounding sentencing reform beginning in the 1970s; the focus was on reducing race, and to a lesser degree, class disparities in sentencing (Daly and Tonry 1997). However, the reform may have contributed to harsher sentences for women and thus rising rates of female incarceration (Chesney-Lind 1978;

Datesman and Scarpitti 1980; Steffensmeier 1980; Schleslinger 2008). Presumptive sentencing and sentencing guidelines limit judicial discretion, meaning that gendered socially relevant characteristics, such as childcare responsibilities and a greater likelihood of reform, can no longer be taken into consideration (Bloom, Owen, & Covington 2004; Covington & Bloom 2003).

Determinate sentencing, which some research finds has a moderating effect on aggregate (male and female combined) levels of incarceration, does away with discretionary release decisions made by parole boards. Since women are generally perceived as more responsive to rehabilitation efforts, have lower rates of recidivism, and exhibit greater compliance with conditions of release while on parole (Koons, Burrow, Morash, and Bynum 1997), determinate sentencing systems may work to women's disadvantage and result in higher female incarceration rates. Additionally, under a determinate sentence, good time credits can be taken away for misconduct. This can be especially problematic for female prisoners as they tend to be seen as more troublesome than male prisoners (McClellan 1994; Britton 2003). Kruttschnitt and Gartner (2005) found that determinate sentencing in California increased both the likelihood of being sentenced to prison and time served among women. Overall it appears that the adoption of determinate sentencing, presumptive sentencing, and sentencing guidelines may be associated with higher rates of female incarceration. One important caveat, however, is how the intersection of gender and race may influence the effect of both sentencing policies and the war on drugs, as well as other explanatory variables.

Race, gender and the criminal justice system

Examination of race differences in criminal justice outcomes generally focuses on black-white variation due to the lack of consistently accurate data regarding Hispanics and other ethnic groups. Therefore, black and white differences will be the focus of this discussion. When investigating the current increases in women's incarceration rates, one must consider historical variation in treatment of women by the criminal justice system based on race. As early as the mid 19th century, the number of black women in prison was greatly disproportionate to their proportion in the general population. And while the number of black women incarcerated has historically been lower than the number of black men, black women have tended to constitute a larger proportion of the female prison population than black men make up of the male prisoner population. During the reformatory movement, the tendency was to send white working-class women to reformatories, while black women were more likely to be placed in prisons and treated more like male prisoners (Rafter 1990). White women were more likely to be seen as "fallen women"—not a danger to society, but in need of guidance. Such women were sent to reformatories where they could be trained to be to "proper" women, that is, good wives or servants (Rafter 1990). Black women who offended were more likely to be seen as inherently evil and immoral, more masculine and dangerous. Such women were sent to custodial prisons, often with few women among many men, where they were subject to violent treatment by male offenders. Overall, any partiality afforded to females during this time was extended primarily to whites, who were seen as more worthy of redemptive efforts (Rafter 1990).

White and black females have continued to be treated differently at all stages of the criminal justice system (Daly 1987b, 1989; Kruttschnitt 1980-1981; Mauer and Huling

1995). Harsher treatment of black women has been found in police encounters (Simpson 1989), the decision to prosecute, conviction, sentencing, and time served (Fienman 1994; Foley and Rasche 1979; Kruttschnitt 1980-1981). And, although the racial gap in black and white female incarceration rates has declined somewhat at the national level and in most states, the black female incarceration rate was still higher in every state and black women were still substantially more likely than white women to be in prison at some point in their lives at the end of the period of analysis (Department of Justice 1997). A number of factors may contribute to the size and pattern of racial disparity.

The War on Drugs

Research has focused on the impact of the war on drugs as a causal factor of this racial disparity. The war on drugs has contributed to certain women being increasingly labeled as deviant and in need of formal social control. Political rhetoric and media coverage in the 1980s increasingly painted female drug users as poor women of color giving birth to “crack babies” that would themselves become criminals or, at the very least, be dependent on public support through welfare because of to their extraordinary needs. The women themselves would then continue to collect government benefits for additional pregnancies (Beckett and Sasson 1998; Levy-Pounds 2006). Women of color who used crack-cocaine, called “crack heads” or “crack whores,” were labeled as undeserving of sympathy, and certainly not deserving of any leniency in the criminal justice system based on their status as caretakers of children. Research by Bontrager (2006) found that blacks in Florida face greater social control than whites, in that they are less likely to have adjudication withheld, when convicted of drug offenses, providing some support for the argument that the war on drugs has disproportionately affected black females. Black women are also more likely to

reside in inner city areas where police efforts in drug enforcement were concentrated. The effect of the war on drugs may, then, be especially pertinent to black women.

Sentencing Reform

In a previous section, it was hypothesized that adopting determinate sentencing, which abolishes discretionary parole release for most offenses, may result in higher female incarceration rates since women would no longer benefit from the perception that they are more responsive to rehabilitation efforts and less likely to recidivate. However, it is possible that this effect is only true for white women, who have historically been seen as less dangerous and more amenable to rehabilitation. Black female offenders, on the other hand, have been more likely to be seen as inherently immoral and dangerous and therefore less worthy of redemptive efforts. At the same time, parole boards grant release with very little oversight and out of the public eye, which leads many to believe that discriminatory treatment of some groups, including racial minorities, occurs under this system. Together, these circumstances would mean that black females would not benefit from indeterminate sentencing, and hence the adoption of determinate sentencing would either not affect their incarceration rate or possibly result in a decrease, as black females would be released after serving a determined number of years rather than have their release based on the judgment of a parole board.

Presumptive sentencing and sentencing guidelines, which limit judicial discretion, have also been argued to be associated with higher female incarceration rates. However, black females may not benefit from that judicial discretion. Research findings suggest that black females are not typically afforded lenient treatment based on their roles as childcare providers, feminine qualities, and perceived propensity for reformation (Daly 1989; Mauer

and Huling 1995; Visser 1983). Moreover, judicial discretion also makes discriminatory treatment possible. Thus, without presumptive sentencing and sentencing guidelines, black females may be sentenced more harshly than their offense warrants. It is therefore possible that presumptive sentencing and sentencing guidelines have no effect or correlate with a lower black female incarceration rate.

Other Factors

Increased urbanization may also contribute to higher levels of black female incarceration. Large metropolitan areas are more likely to include areas of concentrated disadvantage—neighborhoods with high concentrations of poverty, female-headed households, joblessness, residential instability, and households on public assistance. Bontrager (2006) found that blacks are subject to greater sentencing disparity in such areas. Therefore, increased urbanization may increase the percentage of black females subject to incarceration more so than whites.

Finally, cultural values and beliefs may also have a greater affect on the black female incarceration rate than on the rate among whites. Conservatives are more likely than liberals to have negative stereotypes of blacks (Domke 2001; Federico and Sidenius 2002; Gilens 1999; Glaser 1994; Johnson and Marini 1998p; Oveiver and Mendelberg 2000), thus more widespread conservative ideology may be more likely to impact levels of black female incarceration.

Black women are incarcerated at a substantially higher rate than white women and are much more likely than white women to be in prison at some point in their lives. At the same time, at the national level the racial gap in female incarceration has decreased somewhat in the period of analysis due to greater growth of the white female incarceration

rate. Analysis at the state level should reveal whether the proposed state-level conditions have similar or disparate effects on the level of incarceration of white and black females.

Summary

The foregoing discussion suggests that a number of factors likely contribute to increased female incarceration. Higher rates of violent crime, combined with political rhetoric and media focus on street crime may lead to increased fear of crime and a call for imprisonment as a first-order response to crime and harsher punishment for all types of offenders, including nonviolent females. Incarceration may also be targeted at the “dangerous classes.” This may include racial or ethnic minorities, the unemployed, or the underclass, especially if there is greater economic inequality. When these groups are larger, women may be impacted by the more severe criminal punishments that stem from the desire to control these potentially threatening populations. Theory also suggests that higher rates of female incarceration may result from the use of crime as a political issue by state politicians, especially Republicans. At the same time, politicians, as well as actors in the criminal justice system function within a cultural environment that is shaped by urbanization, as well as dominant political and religious attitudes and values.

Cultural theories point to the possibility that urbanization may lead to less informal social control, and thus more formal social control, including incarceration of women. This may be especially important for black women, as they are more likely to be concentrated in highly urbanized areas. This perspective also highlights the importance of political ideology and religious beliefs. Political conservatives are more likely to view crime as a matter of personal choice, focus on individual accountability and favor deterrence and incapacitation to prevent crime. Thus, more conservative citizens will likely be associated with higher levels

of female incarceration. This, too, may have a stronger effect on black female incarceration rates, as conservatives are also more likely to have stereotypical views of blacks, including associating blacks with crime. A cultural perspective also suggests that when a greater proportion of the population adheres to fundamentalist Christian beliefs, harsh punitive punishment of offenders is more likely. Conservative Protestant Christians view crime as an individual choice to engage in behavior that is not only illegal, but also sinful, and thus requires punishment. In light of the Christian story of original sin, which is believed to be literal by fundamentalist Protestants and includes a woman first succumbing to temptation and then inviting her male partner to join her, it is not likely that female offenders would be exempt from the call for severe punishment.

The war on drugs is also posited to have played a major role in higher rates of female incarceration. The mid- to late-1980s saw dramatic changes in both drug enforcement practices and sentencing laws. The focus on users, low-level dealers, and sanctions for conspiracy, combined with women's lack of information to use in negotiation and economic dependence on their male partners involved in the drug trade may have made them especially vulnerable to the impact of the war on drugs. Black women were portrayed by political rhetoric and media coverage in the 1980s as "crack whores" who used government benefits to support their habit and gave birth to numerous "crack babies" who, at the very least, drained taxpayer money and who likely became criminals themselves. Such women were seen as undeserving of any leniency that might be afforded to women due to their status as mothers and also were more likely to reside in inner city areas where police efforts in drug enforcement were concentrated. Thus, the war on drugs may have especially resulted in higher incarceration rates among black females.

The effect of sentencing reform likely varies depending on the type of policy adopted and by race. The elimination of discretionary parole release may result in higher rates of white female incarceration, as they can no longer benefit from the perception that they are more likely than men to be responsive to rehabilitation efforts and less likely to recidivate. Black women, historically seen as more masculine and dangerous and less worthy of redemptive efforts, and still treated more harshly in the criminal justice system, may have been less likely to benefit from discretionary parole and thus also less likely to be negatively affected by its removal. Presumptive sentencing and presumptive guidelines may increase female incarceration rates because they reduce judicial discretion, which can take into account gendered socially relevant characteristics, such as childcare responsibilities and a greater likelihood of reform in sentencing decisions. However, this too may have a weaker effect on black female incarceration rates, as they were less likely to benefit from such discretion in the first place. Finally, a state's economic resources may moderate the effects of all of these factors. Despite fear of crime, a sense of threat, politics, culture, drug enforcement, and sentencing policies, a state may have to limit the number of women they incarcerate based on the money available to do so. The following chapter will review findings from previous research that has measured the effects of some of these proposed predictors of female incarceration.

CHAPTER 3 – REVIEW OF PREVIOUS RESEARCH FINDINGS

There is a substantial body of literature that examines how crime rates, political leadership, racial and economic threat, political and religious ideology of citizens, sentencing reform, the war on drugs, and state wealth impact the size and growth of prison populations. The bulk of this research looks at the effect these factors have on national or state-level prison admissions or incarceration rates of the total population (all men and women). An increasing number of studies measure the influence of various state-level conditions on incarceration rates or prison admissions over time. The preceding chapter discussed the findings of this research as it informs the theoretical explanations for the use of incarceration. The focus of this chapter is previous literature that examines how such factors affect female incarceration at the state level. This body of literature is very limited. There are no studies that evaluate female incarceration rates in all 50 states using cross-sectional time-series analysis. Bridges and Baretta (1994) measured the effects of mandatory sentencing and a number of state-level conditions on black and white men's and women's incarceration rates in all 50 states in the U.S. in 1982. Mauer, Potler, and Wolf (1999) examined how the female prison population in three states was impacted by arrests, convictions, and prison sentences for drug offenses. Finally, Schlesinger (2008) measured the effects of mandatory terms and sentencing enhancement on white and black men and women's state-level prison admission rates in five states.

Bridges and Baretta (1994)

Bridges and Baretta (1994) examined the effect on men's and women's incarceration rates of mandatory and determinate sentencing laws, men's and women's rate of arrest for serious crime (UCR Part 1 Index) the violent crime rate, the percentage of men and women

in the labor force, the percentage of the population under age six, the proportion of the state's population that is black, and the degree of black and white representation among the urban population of a state. Their analysis was cross-sectional, measuring independent variables in 1980 and imprisonment rates in 1982. The authors found that, while arrest rates had almost no influence on the level of imprisonment, a high rate of violent crime was associated with a high female incarceration rate. This suggests that harsher punishment for female offenders is, in part, a reaction to the social climate created by high rates of violent crime, as opposed to the actual violent criminal behavior of women. Higher than average female incarceration rates were also found in states with relatively high levels of female labor force participation, suggesting that greater female labor force participation may contribute to increased formal social control of women. A comparatively high concentration of blacks in the population was also associated with a higher than average female incarceration rate. The presence of determinate sentencing laws, on the other hand, had no effect, suggesting that structural relationships operate independently of this particular sentencing policy.

Bridges and Baretta also analyzed the data separately for black and white women. The results of this analysis indicated that a proportionally larger black population was associated with a comparatively lower black female incarceration rate but higher incarceration rate among white women. The combination of these effects results in relatively equal rates of imprisonment of white and black women in these states. All of these variables had a stronger impact on female incarceration rates than on men's. The results of this study point to the importance of examining female incarceration rates separately, as well as disaggregating the data by race in order to gain a more complete understanding of the role of

structural relations in determining the use of incarceration as a means of formal social control of women.

Mauer, Potler, and Wolf (1999)

This study analyzed the relationship between drug arrests, drug sentences, and drug policies on white, black, and Hispanic female prison populations in New York, Minnesota, and California between 1986 and 1995. They found that in 1995, drug offenses accounted for 67 percent of females sentenced to prison in New York, 43 percent in California, and 19 percent in Minnesota. Drug offenses also drove the increase in the female prison population to different degrees in the three states. In 1986, one of every five women arrested for a drug offense in New York was convicted and one of every four women convicted was sentenced to prison. In total, then, one in every twenty arrested for a drug offense was sentenced to prison. In 1995 the ratio was one in seven. Moreover, drug offenses accounted for 91 percent of the increase in New York's female prison population from 1986 to 1995. The authors contribute this to the harsh drug laws in that state that impose long mandatory sentences for first-time offenders, regardless of their role in the drug trade or extenuating circumstances. Additionally, a greater percentage of black and Hispanic women sentenced to prison, compared to white women, were convicted of drug charges. By 1997, 61 percent of female prisoners in New York were serving sentence for drug offenses. Drug convictions accounted for 77 percent of Hispanic women, 59 percent of black women, and 34 percent of white women in New York's prisons.

The picture in California was somewhat different, although drug offenses were still important. In 1986, one out of every 33 women arrested for a drug offense received a prison sentence. By 1995, the ratio was one in 10. Additionally, while the number of women

sentenced for drug offenses rose by 316 percent between 1986 and 1995, the total number of women sentenced to prison increased by only 149 percent. Compared to New York's 91 percent, in California drug offenses accounted for 55 percent of the increase in the number of women sentenced to prison. By 1995, 47 percent of Hispanic women, 46 percent of white women, and 39 percent of black women sentenced to prison in California were convicted of drug offenses. Because the increase in the number of women sentenced to prison for drug offenses (316 percent) is 10 times higher than the increase in the number arrested for drug offenses (31 percent), it is evident that increases in offending do not explain the increased number of women imprisoned for drug offenses. The authors suggest that the adoption of determinate sentencing played a key role in the dramatic increase in female incarceration rates in California during this time period.

Minnesota represents a state in which drug offenses account for a much smaller percentage of the female prison population. In 1985 one in 73 women arrested for drug offenses received a prison sentence. In 1995 the ratio was one in 55, a much smaller proportion than in either New York or California. In Minnesota, drug offenses accounted for 26 percent of the increase in the number of women sentenced to prison, and by 1995, 19 percent of women who received prison terms were convicted of drug charges. The authors propose that the state has fewer incarcerated drug offenders due to the sentencing guidelines that were instituted with the purpose of using alternatives to prison for many non-violent offenders so that prison space can be used for violent offenders and to limit the growth of the prison population. At the same time, prison sentences for female drug offenders increased 400 percent between 1986 and 1995, while female arrests for drug offenses increased only 279 percent, thus indicating a smaller, but similar trend as in the other states.

The fact that there was, in all three states, a greater increase in the number of women sentenced to prison for drug offenses than the number arrested for these offenses suggests that more punitive responses to drug offenses are key to explaining growth in female incarceration rates. Additionally, when sentencing policy reduces judicial discretion and mandates lengthy minimum terms for drug convictions, offenders can try to avoid these long sentences through plea agreements. This, however, as discussed in the theory chapter, is likely difficult for women. Moreover, such a system places the prosecutor, rather than the judge, in the position of determining an offenders prison term.

Schlesinger (2008)

Schlesinger used cross-sectional time-series analysis to examine the effects of mandatory terms and sentencing enhancements on black and white men's and women's state prison admissions in Alabama, California, Illinois, New Jersey, and Texas. Results indicated that sentencing enhancements and mandatory terms are correlated with increased prison admissions and that such policies disproportionately affect women. Additionally, the disparate effects are most pronounced among black women. The effects are most consistently associated with increases in prison admissions for violent offenses, but also associated with substantial increases in admissions for drug offenses. Overall, the findings suggest that sentencing policies are an important contributor to the disproportionate increase in female incarceration rates.

Summary

This literature review, although limited in the number of studies addressed, highlights important findings and study designs that will, combined with theory, inform my research. There is reason to believe that women's increased offending has not been the primary driving

force of variation in female incarceration rates over time. On the other hand, there is strong evidence that the war on drugs is an important factor. Support for the importance of sentencing policies is mixed, depending on whether analysis is cross-sectional or measures change over time and also the specific policies included. There is considerable evidence that race matters, and thus data should be disaggregated to provide a more clear understanding of the determinants of female incarceration rates.

The foregoing review of literature, combined with the examination of theoretical explanations for the use of incarceration and for growth in women's incarceration in the previous chapter, suggests a number of social, political, cultural, and economic factors bearing on the use of incarceration and highlights the need for further research integrating these factors and exploring their influence on state variation over time in trajectories of female incarceration rates. To address this need, this research will (1) expand the time span studied (1979-2001), (2) broaden the scope of explanatory variables, (3) disaggregate incarceration data by race, and (4) use an analytical technique in which results indicate how a change in any particular explanatory variable is related to a change in female incarceration rates at the state level.

CHAPTER 4 – RESEARCH DESIGN

This study is an investigation into whether social, political, and cultural forces, in conjunction with crime rates, sentencing policies and a state's financial resources determine the trajectory of a state's female incarceration rate. The choice of what predictors to include in the analysis is based on theory and previous research. The theory chapter highlighted potential relationships between a state's female incarceration rate and crime rates, the presence of threatening populations, the party affiliation of a state's governor, urbanization, dominant political ideology and religious beliefs, the war on drugs, sentencing reform, and state revenues. Additionally, I consider the potential influence of national trends in female incarceration. Prior research provides guidance on how best to investigate the relationships between the selected predictors and female incarceration rates. Most previous research on female incarceration has focused on prison admissions at the national level or a small number of states, included a limited number of variables, or used cross-sectional data. Based on research examining aggregate (male and female) incarceration rates at the state level over time, I am convinced that understanding growth in female incarceration requires analysis over an extended period of time and the consideration of a variety of causes, as well as recognition that the importance of some predictors may vary over time and that national trends must be considered in addition to causes at the state level. This chapter will present the hypotheses that will be tested, describe the data, and explain the methods of analysis.

Hypotheses

The following hypotheses address the proposed relationships between crime and social, political, cultural, and economic measures and female incarceration rates.

- Hypothesis 1: A higher violent crime rate will be associated with a higher female incarceration rate.
- Hypothesis 2: A higher property crime rate will be associated with a higher female incarceration rate.
- Hypothesis 3: The female arrest rate for violent crimes will have no effect on the female incarceration rate.
- Hypothesis 4: When blacks constitute a greater percentage of the population, there will be a higher female incarceration rate.
- 4a: The effect of percentage black will increase over time.
- Hypothesis 5: When Hispanics constitute a greater percentage of the population, there will be a higher female incarceration rate.
- 5a: The effect of percentage Hispanic will increase over time.
- Hypothesis 6: A higher unemployment rate will be associated with a higher female incarceration rate.
- Hypothesis 7: Greater economic inequality will be associated with a higher female incarceration rate.
- Hypothesis 8: The presence of a Republican governor will be associated with a higher female incarceration rate.
- 8a: The effect of having a Republican governor will decrease over time.
- Hypothesis 9: Greater urbanization will affect the female incarceration rate (either positively or negatively).
- 9a. Greater urbanization will have a positive effect on the black female incarceration rate.

Hypothesis 10: A higher level of citizen conservatism will be associated with a higher female incarceration rate.

10a: The strength of this relationship will increase over time.

10b: Citizen conservatism will have a stronger effect on the black female incarceration rate than on the white female incarceration rate.

Hypothesis 11: Greater fundamentalism among the population will be associated with a higher female incarceration rate.

10a: The strength of this relationship will increase over time.

Hypothesis 12: The drug arrest rate will be associated with a higher female incarceration rate.

12a: The effect of the drug arrest rate will be stronger in 1989.

12b: The increase in the effect of the drug arrest rate in 2001 will be smaller than in 1989.

12c: The increased effect of drug arrest rates in 1989 will be greater for black female incarceration rates than for white female incarceration rates.

Hypothesis 13: The presence of determinate sentencing will be associated with a higher female incarceration rate.

13a: Determinate sentencing will be associated with a higher white female incarceration rate.

13b: Determinate sentencing will be associated with a lower black female incarceration rate.

Hypothesis 14: The presence of presumptive sentencing will be associated with a higher female incarceration rate.

14a. Presumptive sentencing will be associated with a higher white female incarceration rate.

14b. Presumptive sentencing will be associated with a lower black female incarceration rate.

Hypothesis 15: The presence of presumptive sentencing *guidelines* will be associated with a higher female incarceration rate.

15a. Presumptive sentencing guidelines will be associated with a higher white female incarceration rate.

15b. Presumptive sentencing guidelines will be associated with a lower black female incarceration rate.

Hypothesis 16: The presence of voluntary sentencing guidelines will have no effect on the female incarceration rate.

Hypothesis 17: Higher per capita income will be associated with a higher female incarceration rate.

Hypothesis 18: Greater state revenues will be associated with a higher female incarceration rate.

Data

Data was collected from a variety of sources, including research articles, a database constructed by researchers at the Vera Institute, printed Bureau of Justice Statistics documents, the U.S. Census Bureau website, the Bureau of Justice Statistics website, ICPRS, and the FBI. Data was transferred from online files or inputted by hand into Excel files and

then transferred to both SPSS and STATA. Although most data was available from 1979 to 2004, I end the time period analyzed in 2001. Two variables (the GINI index and the measure of fundamentalism) are available only for census years and had to be interpolated for years where no information was produced. As I did not have access to this data for 2010, I had no reference point to use in interpolation for years after 2000. This did, however, allow including 2001, as independent variables are lagged one year behind the outcome variables.

Data was available for every year in the period 1979-2001. However, according to data from the National Corrections Reporting Program, female sentenced to state prisons serve an average of 18 to 24 months. Therefore, rather than including data for every year in the time period of interest, I selected data points for incarceration rates at two year intervals from 1979 to 2001 in order to ensure that observations in each data point are mostly independent of one another (an assumption of pooled time-series analysis). The information contained in the independent variables was lagged one year behind the outcome variable in order to make certain that conditions represented by these variables were in full effect when the dependent variable was measured (Greenberg and West 2001; Marvell and Moody 1996; Stemen, Rengifo, and Wilson 2006). The one exception to this is the measure of state revenues, which was lagged two years to allow time for the budget process (Greenberg and West 2001; Stemen et al. 2006). In the end, there are 50 states and 12 data points for a total of 600 observations.

Outcome Variables

Female incarceration rate. The female incarceration rate is measured as the number of female prisoners under the jurisdiction of the state per 100,000 female residents. Data for the number of females under state jurisdiction was obtained from the Correctional Populations in the United States for 1979-1993 and from the Prisoners in [year] series downloaded from the Bureau of Justice Statistics website for 1994-2001. The prison population data was used in combination with female population data obtained from the U.S. Census Bureau Population Estimates Archives to compute the female incarceration rate.

White female incarceration rate. The same data and process described above was used to determine the white female incarceration rate.

Black female incarceration rate. The same data and process described above was used to determine the black female incarceration rate.

Predictors

Crime rates. Crime rates are the number of violent and property crimes reported to the police per 100,000 residents. According to FBI classification, violent offenses include homicide, forcible rape, aggravated assault, and robbery. Property crimes are defined as burglary, larceny-theft, and motor vehicle theft. Rates were provided by Stemen, Don, Andres Rengifo, and James Wilson (2006). "Of fragmentation and ferment: The impact of state sentencing policies on incarceration rates, 1975-2002." Report to the National Institute of Justice, Grant No.: NKJ 2002-IJ-CS-0027. Stemen et al. collected the data from the Uniform Crime Reports as compiled by the Bureau of Justice Statistics (1979-1998) and the "Crime in the United States" series published by the Federal Bureau of Investigation (1999-2001).

Female violent crime arrest rate. The female violent crime arrest rate is the number of females age 18 and over arrested for violent crime offenses per 100,000 female residents. Data for the number of females arrested was sent directly by the FBI-UCR division. Population data obtained from the Census Bureau Population Estimates Archives was then used to calculate arrest rates.

Drug arrest rate. The drug arrest rate refers to the number of drug arrests as a percentage of total arrests. The data was provided by Stemen, et al. (2006). They obtained data to calculate the ratio from the National Archive of Criminal Justice Data (1985-2001) and data sent by the FBI-UCR division (1978-1985).

Percent population black. Data was provided by Stemen et al. (2006), who collected the data from the Census Bureau.

Percent population of Hispanic origin. Data was provided by Stemen et al. (2006). For the period 1980-2000, data was originally gathered from the Census Bureau website. For the years 1978 and 1979, the authors conducted data interpolations using data reported by the Census in 1976 based on the Census Bureau's Current Population Survey data.

Unemployment rate. This variable refers to the number of individuals unemployed per 100,000 residents. Data was provided by Stemen, et al. (2006), originally collected from the Bureau of Labor Statistics website.

Economic inequality. This variable refers to the GINI index, a measure of income inequality available only for Census years. Galbraith and Hale (2006) used a panel series of inequality measures based on pay statistics to interpolate data for the inter-census years. I use the interpolations provided in their analysis, but express the coefficient in percentage form.

Governor's party affiliation. The party of the Governor was classified as Republican (coded 1) or Democrat (coded 0). Stemen et al. (2006) collected the information from the National Governors Association website, replacing missing cases by looking at the necessary governor's office, and provided the data for this dissertation.

Urbanization. Urbanization refers to the percentage of the population living in Standard Metropolitan Statistical Areas and was collected from the Statistical Abstracts available online at U.S. Census website.

Citizen political ideology. This refers to the "conservativeness" of the population as reflected in citizens' voting patterns. The scale ranges from 0 (most liberal) to 100 (most conservative). The scale was created by Berry, W.D., E.J. Ringquist, R.C. Fording, and R.L. Hanson (1998). "Measuring citizen and government ideology in the American states, 1963-1993." *American Journal of Political Science* 41:327-348. Data updated annually and downloaded from the ISPCR website. In the original scale 0 represents the most conservative values and 100 the most liberal. This was reversed for the purposes of this dissertation as the variable is "political conservatism" and the question is whether a higher level of conservative values is related to higher rates of incarceration.

Religious fundamentalism. This variable refers to the level of religious fundamentalism among the population. The scale ranges from 0 (a completely secular population) to 7 (a completely fundamentalist population). Scores are derived from the Index of Religious Orthodoxy, created by Camobreco, John F. (2008). "Religion and Political Beliefs in the American States." Paper presented at the annual State Politics and Policy Conference, May 30-31, 2008, Philadelphia, PA. The index was created by calculating the percentage of each state's residents who were adherents of each major Judeo-Christian

denomination. Percentages were multiplied by each denomination's value on a scale of denominational orthodoxy (Green, John C. and James L. Guth. 1991. Religion, Representatives, and Roll Calls. *Legislative Studies Quarterly* 16571-84) and summed for each state. Data was available for 1970, 1980, 1990, and 2000 and was interpolated for the years where no data was produced.

Determinate sentencing. Presence of a sentencing scheme without discretionary parole release. Coded "1" if a state has abolished discretionary parole release for most offenses and "0" if a state has not abolished discretionary parole for most offenses. Data provided by Stemen et al. (2006).

Presumptive sentencing. Presence of a structured sentencing system of "legally enforceable recommended sentences based solely on the severity of the offense committed" (Stemen et al. 2006: 164). Judges *must* impose the "recommended sentence or one within a recommended range" or provide justification for not doing so. Coded "1" if a state has presumptive recommended sentences for most offenses and "0" if a state has no presumptive recommended sentences for most offenses. Data provided by Stemen et al. 2006.

Presumptive guidelines. A type of structured sentencing. A sentencing system that guides sentencing decisions and legally enforceable multiple recommended sentences based on the severity of the offense and the offender's criminal history. Judges *must* impose the "recommended sentence or one within a recommended range, or provide justification for imposing a different sentence" (Stemen et al. 2006:164). Coded "1" if a state has presumptive guidelines for most offenses and "0" if a state has no presumptive guidelines for most offenses. Data provided by Stemen et al. 2006.

Voluntary guidelines. Presence of a “system of non-legally enforceable multiple, recommended sentences” based on the severity of the offense and the offender’s criminal history. The guidelines “may require a judge to provide justification for imposing a sentence different from the guidelines” (Stemen et al. 2006: 164). Coded “1” if a state has voluntary guidelines for most offenses and “0” if a state has no voluntary guidelines for most offenses. Data provided by Stemen et al. 2006.

Income per capita. Data derived from the Statistical Abstract series, and adjusted to 2002 constant dollars using the Consumer Production Index. Provided by Stemen et al. 2006.

State revenue per 100,000. State revenue is calculated as state revenue per 100,000 residents. Data was provided by Stemen, et al. (2006), originally collected from the Statistical Abstracts and adjusted to 2002 constant dollars using the Consumer Production Index.

Time Trend. This variable is coded “0” for 1979 (the base year), “1” for 1981, “2” for 1983 . . . and “11” for 2001.

Methods of Analysis

This section will describe two of the common methods used to analyze panel data, explain the tests performed to determine which method to use, discuss additional diagnostic tests that informed the final decision about the specific analytical technique used, discuss the inclusion of interaction terms, and describe the models used to analyze the data.

The data utilized for this dissertation are panel, or cross-sectional and time-series. There are multiple entities (states) that have repeated measurements of both the dependent and independent variables at different time periods (every two years between 1979 and

2001). Both cross-sectional analysis of variation between states in a given year and time-series analysis of variation within each state over time suffer from the problem of too few observations (either 50 states or 12 time points) in relation to the number of explanatory variables (25 in all, including 17 individual variables, a time trend variable to control for year effects, and seven interaction variables). One method of dealing with the problem is to pool the data, combining data for all states and all years into a single data set. The information from a given state in a given year is then treated as a separate observation. This effectively creates 600 (50 states * 12 years) observations, providing more degrees of freedom and greater precision of estimate. It also allows me to test the impact of a large number of predictors on the level of incarceration rates, capturing variation across time and space simultaneously. Another advantage of a cross-sectional time-series design is that it can assess the changing importance of a predictor over time; there may be conditions that have a stronger influence on incarceration rates in some time periods than others.

Once the decision is made to pool the data and perform cross-sectional time-series analysis, the next step is to decide which technique to use and which explanatory variables should be allowed to interact with time.

Fixed effects and random effects

Two common methods of analysis of cross-sectional times-series data are fixed effects (FE) and random effects (RE). I will begin by describing these two techniques.

Fixed-effects. Fixed-effects regression makes the following assumptions:

1. Each state has unique time-invariant characteristics that may influence the predictor variables

2. Each state's error term may be correlated with the predictor variables but not correlated with the error terms of the other states

3. State-specific intercepts vary across states but not over time

4. Slopes for each predictor are the same in all the states

When analyzing cross-sectional time-series data for female incarceration rates, there are two types of variation. There is between-state variation (variation in the average female incarceration rate and the average level of predictors from one state to the next) and within-state variation (variation in female incarceration rates and predictors within each state over time). A single cross-sectional analysis measures only one type of variation. Regressions relying on only between-state variation are problematic due to potential omitted variable bias. To understand the relationship between predictors and female incarceration rates, then, it may be best to focus on within-state variation. Fixed-effects regression assumes that each state has unique characteristics that are invariant over time that are not measured by the variables in the model. These characteristics may influence or bias the predictors or the incarceration rate. Fixed effects regression controls for the effects of the unique state characteristics by using within-state variation over time to estimate regression coefficients. And, importantly, statistical programs available allow it to be done without having to include state dummies in the model (which would add 49 variables). The coefficients obtained measure the effect of the predictors on a state's incarceration rate net of any influence of the unmeasured characteristics. While intercepts are assumed to vary across states but not over time, slopes for each predictor are assumed to be the same in all states. Additionally, fixed-effects allows for there to be a correlation between states' error terms and the predictors.

Fixed-effects regression recognizes that there are multiple “before and after” experiments and answers the question of what effect x has on y when x is different (changes) over time within a state. There are predictors and female incarceration rate data for each successive time period, and both the level of predictors and the female incarceration rate change in each state in each time period. The regression measures the effect of each predictor on the female incarceration rate in each state in each year. Fixed-effects regression assumes that the relationship between the predictors and the female incarceration rate is the same in each state. Thus, to obtain coefficients, rather than measure how much observations in each year differ from the prior year for each state, it measures how much each observation differs from the average. The question, then, is how much variation in predictors around their means is related to variation in female incarceration rates around their means. Fixed-effects regresses $x - \text{mean of } x$ on $y_1 - \text{mean of } y_1, y_2 - \text{mean of } y_2, \dots y_k - \text{mean of } y_k$. The coefficient for each predictor expresses the average effect of that predictor. Including fixed effects for states controls for the unobserved unique characteristics of each state, so what is left is the variation within each state, thus providing an explanation for why female incarceration rates vary over time in any state.

Including year dummies or a time trend variable in the FE model controls for events or conditions that vary over time but not between states. Fixed-effects regression utilizing the `xtreg` command in Stata (which is equivalent to including state dummies) and also including a time trend variable excludes the effects of changes that are strictly between states and controls for changes over time that do not vary between states. Thus, coefficients provide an explanation for why female incarceration rates vary over time in any state. Since year and

state dummies control for unobserved patterns in the data, strong claims can be made regarding the unbiased nature of the results (Jacobs and Carmichael 2001).

Fixed effects regression also assumes that the relationships between predictors and female incarceration rates are the same in all states. For example, controlling for the effect of all other independent variables, state revenues has the same effect on the female incarceration rate in every state. While the slopes for each predictor are assumed to be constant, intercepts are allowed to vary (due to the unobserved variables that are unique to each state).

Additionally, states' error terms are allowed to correlate with the predictors. One limitation to fixed effects regression is that it cannot be used to investigate time-invariant causes of the dependent variable, as they are perfectly collinear with the state dummies. Random effects regression can be used if one thinks, contrary to the assumptions of fixed effects regression, that time-invariant differences between states are important predictors of the outcome variable.

Random effects. Random effects regression makes the following assumptions:

1. Variation across states is random
2. Each state's error term is not correlated with the explanatory variables
3. Intercepts and slopes are the same in all states

Random effects models answer two questions: what is the effect of x when x is different (changes) over time within a state; and what is the effect of x when x is different between states? (Alsenbrey). Random effects regression assumes that variation across states is random and uncorrelated with the predictors. Since a state's error term is not correlated with the predictors, time-invariant characteristics of each state, such as region of the country, may be included as an explanatory variable. Random effects regression, then, uses information

from both within and between states to produce estimates. Random effects regression also assumes constant intercepts and slopes. Additionally, random-effects regression allows generalization beyond the sample used.

Selecting Fixed or Random Effects

Whether to use the FE or RE estimator is a key question when analyzing panel data. On the one hand, the more conservative approach is to assume that the unobserved effects are correlated with the explanatory variables and use FE. However, the RE estimator is more efficient so it is advisable to see if using this technique is acceptable for this analysis. This is generally done by performing the Hausman test. The null hypothesis is that random effects would be efficient and consistent (i.e. the unobserved effect is uncorrelated with the explanatory variables). If the null hypothesis is not rejected, one can use random effects. If the null hypothesis is rejected, fixed-effects should be used. Following are the steps taken and test outcomes.

- 1) Run a fixed-effects model using all explanatory variables except sentencing policies and time interaction terms and save the estimates.
- 2) Run a random-effects model using all explanatory variables except sentencing policies and interaction terms and save the estimates.
- 3) Perform the Hausman test. Results: reject the null hypothesis (Prob > chi2 = .0000).
- 4) Repeat steps 1 and 2 using all explanatory variables except time interaction terms.
Perform the Hausman test. Results: reject the null hypothesis (Prob > chi2 = .0000).
- 5) Repeat steps 1 and 2 using all explanatory variable, including time interaction terms.
Perform the Hausman test. Results: reject the null hypothesis (Prob > chi2 = .0001).

Results of the Hausman tests indicate the need to use fixed-effects. While using FE discards between-state variation in determining coefficients, this loss can be accepted since such variation is likely confounded with the unobserved characteristics of each state that need to be controlled (Allison 2006). Fixed effects estimates also may have larger errors and thus higher p -values and wider confidence intervals than random effects (Allison 2006). Using fixed effects, as noted by Allison (2006), may sacrifice efficiency, but reduces bias. Since my research question focuses on change in female incarceration rates over time and I am not interested in generalizing findings beyond my sample (the 50 states in the U.S.), fixed effects regression appears to be not only indicated by the Hausman test, but desirable based on its ability to provide unbiased results that explain variation in female incarceration rates over time.

I next tested to see if fixed effects were needed by using the *test* command in Stata. The null hypothesis is that all state coefficients are jointly equal to zero. If they are, then no fixed effects are needed. After regressing the female incarceration rate on the independent variables and dummies for the state, I used the *test* command. The null hypothesis was rejected (Prob > F = .0000); therefore fixed effects are needed.

To see if time fixed effects were needed, the *testparm* command in Stata was used. This is a joint test to see if the dummies for all years are equal to zero. If they are, then no time fixed effects are needed. The null hypothesis that all year coefficients are jointly equal to zero was rejected (Prob > F = .000), indicating that time fixed effects are needed.

Based on the results of the above tests, analysis was run using fixed-effects (state) controlling for time effects using a time trend variable. The basic equation for the fixed effects model is:

$$Y_{it} = \alpha_i + \beta_1 X_{1,it} + \dots + \beta_k X_{k,it} + u_{it} \quad [\text{eq. 1}]$$

Where

Y_{it} is the dependent variable and i = state and t = time.

α_i ($i=1 \dots n$) is the unknown intercept for each state (n state-specific intercepts).

$X_{k,it}$ represents the independent variables.

β_k is the coefficient for the independent variables.

u_{it} is the error term.

Since the unobserved variable (error term) is assumed to remain constant over time, then “any changes in the dependent variable must be due to influences other than these fixed characteristics” (Stock and Watson 2003: 289-290, cited in Torres-Reyna 2009).

Interpretation of beta coefficients is that “. . . for a given [state], as X varies across time by one unit, Y increases or decreases by β units” (Bartels 2008: 6). The inclusion of a time trend variable to control for unmeasured effects that vary over time but not between states means that I am actually using a two-factor fixed-effects estimation. The basic equation for this model is:

$$Y_{it} = \alpha_i + \beta_1 X_{1,it} + \dots + \beta_k X_{k,it} + u_{it} + \beta T \quad [\text{eq. 2}]$$

Where

Y_{it} is the dependent variable and i = state and t = time.

α_i ($i=1 \dots n$) is the unknown intercept for each state (n state-specific intercepts).

$X_{k,it}$ represents the independent variables.

β_k is the coefficient for the independent variables.

u_{it} is the error term.

T is the time trend variable

Diagnostics

Having established that fixed-effects regression would be used, I then proceeded to test for heteroskedasticity, serial correlation, and cross-sectional dependence. Following are the tests performed and results.

- 1) Modified Wald test for groupwise heteroskedasticity in fixed-effects regression.
 - Null hypothesis is homoskedasticity (constant variance)
 - Results: $\chi^2 = 5956.93$, $\text{Prob} > \chi^2 = .0000$
 - Reject the null and conclude heteroskedasticity
- 2) Wooldridge test for autocorrelation in panel data
 - Null hypothesis: no first-order autocorrelation
 - Results: $F(1, 49) = 49.359$, $\text{Prob} > F = .0000$
 - Reject the null and conclude autocorrelation
- 3) Pesaran cross-sectional dependence test
 - Null hypothesis: residuals are not correlated

- Results: Pesaran's test of cross sectional dependence = 7.493, Prob = .0000.
Absolute value of the off-diagonal elements = .452.
- Reject null hypothesis and conclude cross-sectional dependence

The results of the diagnostic tests indicate the need for appropriate measures to be taken to ensure accurate estimates. Therefore, models will estimate fixed-effects regression with Driscoll and Kraay standard errors, which are heteroskedasticity consistent and robust to temporal and cross-sectional dependence (Hoyos and Sarafidis 2006; Hoechle). In Stata this is accomplished by using the *xtscc, fe* command.

The Interaction Between Time and Predictors

Fixed-effects regression assumes that relationships between predictors and the dependent variable are consistent over time; that is, that the strength of the influence of each independent variable is the same for all time periods. It is plausible to make this assumption for most of the variables in the model. However, there is reason to believe that this is not the case with a number of predictors. Therefore, I include interactions with time and some of the main effects in the model—drug offense arrests as a percentage of total arrests, the percentage of the population that is black, the percentage of the population that is Hispanic, political affiliation of the governor, political conservatism, and citizen fundamentalism—to assess how these relationships shift over time. In the following paragraphs I explain the reasons for doing so.

Drug arrest rate. National legislation combined with political rhetoric and media coverage, as discussed in theory chapter, may have resulted in an increased importance of the rate of narcotic arrests in determining women's incarceration rates. Based on passage of Drug Acts in the mid- and late-1980s, I include an interaction of drug arrest rate and the year

1989. During the second half of the 1990s there was, in many states, an increase in support for diverting drug offenders to treatment rather than prison (Stemen et al. 2006). Therefore, I include an interaction of drug arrest rate and the year 2001 to see if the strength of increase declined by this year. Other variables cannot be tied to specific years, but nonetheless can be expected to become more or less important over time in general; these variables are discussed in the following paragraphs.

Racial threat. As discussed in the theory chapter, scholars who have traced the use of political rhetoric that equates crime with blackness and defines crime as a black problem provide persuasive evidence that such rhetoric, as well as media coverage of crime, has increased over time. Since theory suggests that these things contribute to a sense of racial threat, which in turn should be associated with higher female incarceration rates, it is plausible to believe that the relationship between the percentage of the population that is black and female incarceration rates became stronger during the period of analysis. The racial threat hypothesis argues that growing minority populations create the greatest sense of threat among the dominant group. Therefore, it is possible that, due to the substantial increase in the Hispanic population during the analysis period, the relationship between Hispanic presence and female incarceration also became stronger over time. Hence, I test for interactions between time and the percentage of the population made up by each of these minority groups.

Governor's Party Affiliation. While there is, as discussed in the theory chapter, considerable support for the argument that having Republican officials is associated with more punitive punishment, several scholars propose that the stark difference between parties decreased starting in the early 1990s as Democrats began to include law and order as part of

their platform (Davey 1998). Therefore, I test for a changing relationship between the Governor's party affiliation and female incarceration during the analysis period.

Political Ideology. Stemen et al. (2006), whose analysis period was from 1978 to 2002, found that the relationship between politically conservative citizens and aggregate incarceration rates was important only beginning in the 1990s. They suggested that it is possible that in earlier years punitive measures were supported by both conservatives and liberals, but that in more recent years it is primarily more conservative citizens who support harsher punishment. I therefore address the question of whether the effect of political ideology among citizens varies over time.

Fundamentalism. Theory suggests that the prevalence of fundamentalist Christian beliefs is associated with increased public demand for more severe punishment for crime, and thus greater pressure on public officials to enact punitive policies, sentence convicted offenders to longer prison terms, and make sure terms are served; however, there is also reason to believe that the strength of this relationship increased during the analysis period. The level of influence of Christian fundamentalists should be, in part, determined by the political strength of the religious right. The strength of the religious right movement that emerged in the 1970s declined substantially in the mid- to late-1980s. In the 1990s the Christian right reemerged as a more sophisticated political movement and had a growing influence on both national and local elections (Green and Silk 2005; Hicks 2003; Layman and Green 2006). Hence, I test for changing strength in this relationship over time.

Creating Variable-Time Interaction Terms. Changes in the strength of these relationships were estimated by creating time interaction terms, which involves multiplying the independent variable by the time trend variable or by the dummies for 1989 and 2001

(drugs). These interacted variables and all main effects are included in the models (Hsiao 1986; McDowell, Singell and Zilliak 1999). If, after holding all other effects constant, an interaction term between a particular variable and the time trend variable is significant, it can be concluded that the effect of that variable on female incarceration rates changed over time. If the interaction terms between the drug arrest rate and year dummies for 1989 or 2001 are significant, this indicates that the drug arrest rate had a different relationship with female incarceration rates in those years.

Model Construction and Specification

Three basic models were constructed to analyze the data. Each uses fixed-effects regression with Driscoll and Kraay standard errors as described in the diagnostics section on page _____. The first model measures the effects of crime rates, a state's economic resources, and social and political forces on the female incarceration rate. These social and political forces fall into several categories.

- *Social divisions and threatening populations*: minority presence, unemployment, and economic inequality
- *Politics*: party affiliation of the governor
- *Culture*: urbanization, political ideology of citizens, religious fundamentalism among citizens

The specification of this model is:

$$\begin{aligned} \text{Female incarceration rate} = & \alpha + \beta_1 \text{Violent crime rate} + \beta_2 \text{Female violent crime} \\ & \text{arrest rate} + \beta_3 \text{Property crime rate} + \beta_4 \text{Drug Arrest Rate} + \beta_5 \text{Percent black} + \beta_6 \\ & \text{Percent Hispanic} + \beta_7 + \text{Unemployment rate} + \beta_8 \text{Economic inequality} + \beta_9 \end{aligned}$$

$$\begin{aligned}
& \text{Governor's party affiliation} + \beta_{10} \text{Urbanization} + \beta_{11} \text{Political ideology} + \beta_{12} \\
& \text{Religious Fundamentalism} + \beta_{13} \text{Income per capita} + \beta_{14} \text{State revenues} + \beta_{15} \\
& \text{Time Trend} + \mu
\end{aligned}
\tag{Eq. 3}$$

The second model adds sentencing policies, including

- Determinate sentencing
- Presumptive sentencing
- Presumptive sentencing guidelines
- Voluntary sentencing guidelines

The specification of this model is:

$$\begin{aligned}
& \text{Female incarceration rate} = \alpha + \beta_1 \text{Violent crime rate} + \beta_2 \text{Female violent crime} \\
& \text{arrest rate} + \beta_3 \text{Property crime rate} + \beta_4 \text{Drug Arrest Rate} + \beta_5 \text{Percent black} + \\
& \beta_6 \text{Percent Hispanic} + \beta_7 + \text{Unemployment rate} + \beta_8 \text{Economic inequality} + \beta_9 \\
& \text{Governor's party affiliation} + \beta_{10} \text{Urbanization} + \beta_{11} \text{Political ideology} + \beta_{12} \\
& \text{Religious Fundamentalism} + \beta_{13} \text{Income per capita} + \beta_{14} \text{State revenues} + \beta_{15} \\
& \text{Time Trend} + \beta_{16} \text{Determinate Sentencing} + \beta_{17} \text{Presumptive Sentencing} + \beta_{18} \\
& \text{Presumptive Sentencing Guidelines} + \beta_{19} \text{Voluntary Sentencing Guidelines} + \mu
\end{aligned}
\tag{Eq. 4}$$

The third model adds the variable-time interaction terms. These include:

- Drug arrest rate * 1989
- Drug arrest rate * 2001
- Percentage of the population that is black * time trend variable

- Percentage of the population that is Hispanic * time trend variable
- Party affiliation of the governor * time trend variable
- Political ideology of citizens * time trend variable
- Religious fundamentalism of citizens * time trend variable

The specification of this model is:

$$\begin{aligned}
 \text{Female incarceration rate} = & \alpha + \beta_1 \text{ Violent crime rate} + \beta_2 \text{ Female violent crime} \\
 & \text{arrest rate} + \beta_3 \text{ Property crime rate} + \beta_4 \text{ Drug Arrest Rate} + \beta_5 \text{ Percent black} + \beta_6 \\
 & \text{Percent Hispanic} + \beta_7 + \text{Unemployment rate} + \beta_8 \text{ Economic inequality} + \beta_9 \\
 & \text{Governor's party affiliation} + \beta_{10} \text{ Urbanization} + \beta_{11} \text{ Political ideology} + \beta_{12} \\
 & \text{Fundamentalism} + \beta_{13} \text{ Income per capita} + \beta_{14} \text{ State revenues} + \beta_{15} \text{ Time trend} + \\
 & \beta_{16} \text{ Determinate sentencing} + \beta_{17} \text{ Presumptive sentencing} + \beta_{18} \text{ Presumptive} \\
 & \text{sentencing guidelines} + \beta_{19} \text{ Voluntary sentencing guidelines} + \beta_{20} (\text{Drug arrest} \\
 & \text{rate} * 1989) + \beta_{21} (\text{Drug arrest rate 2001}) + \beta_{22} (\text{Percent black} * \text{time}) + \beta_{23} \\
 & (\text{Percent Hispanic} * \text{time}) + \beta_{24} (\text{Governor's party affiliation} * \text{time}) + \beta_{25} \\
 & (\text{Political ideology} * \text{time}) + \beta_{26} (\text{Religious fundamentalism} * \text{time}) + \mu \quad (\text{Eq. 5})
 \end{aligned}$$

All models include the uninteracted time trend variable to control for nationwide expansion in female incarceration.

After running the regressions with female incarceration rate as the dependent variable, the same models were used to regress the black female incarceration rate and the white female incarceration on the same sets of explanatory variables. The estimates obtained from the series of models are used to address the hypotheses listed above. The following chapter will discuss the information obtained regarding the relationships between crime,

social forces, sentencing policies, and a state's economic resources and female incarceration, as well as how black and white rates are differentially impacted.

CHAPTER 5 - RESULTS

There are 34 hypotheses to be addressed in the analysis. They propose relationships between crime rates, racial and economic threat, the party affiliation of the governor, urbanization, conservatism and religious fundamentalism among citizens, the war on drugs, specific sentencing policies, and a state's economic resources and female incarceration rates. They also propose that some of these relationships change over time and that they differ for white and black female incarceration rates. Estimates obtained from each model designed to test the hypotheses are shown in tables below and results for each are summarized.

Regression Results

Regression results are presented in Tables 5-2 through 5-4. Table 5-2 shows results for Models 1, 2, and 3 using the total female incarceration rate as the dependent variable. Model 1 includes variables measuring crime, racial and economic threat, the presence of a Republican governor, urbanization, political ideology, and fundamentalism, as well as controls for states' economic resources and national trends. Model 2 adds sentencing policies, and Model 3 incorporates the time-variable interaction terms. Table 5-3 presents results for Models 1a and 2a, which use the same explanatory variables as Models 1 and 2, but have the white female and black female incarceration rates as dependent variables. Table 5-4 show results for Model 3a, which adds the time-variable interaction terms and also uses white female and black female incarceration rates as the dependent variable. It is by examining these results that one can determine the significance of the effect of each covariate, net of the effects of all other covariates, on total, white, and black female incarceration rates. The statistical significance ($\rho \leq 0.05$, $\rho \leq 0.01$, $\rho \leq 0.001$) of each

coefficient is provided. Significance levels were obtained using one-tailed tests based upon expected direction of effects suggested by theory and previous findings.

Fixed-effects analysis controls for unchanging attributes of individual states and ignores between-state changes, so coefficients represent the effects of changes in independent variables within a state. Coefficients are unstandardized and indicate the amount by which the incarceration rate per 100,000 changes when the predictor changes by one unit. In other words, in any given state in any given year, the female incarceration rate will be higher (or lower) than it would be otherwise as a result of the influence of the variables in the models. Since they are unstandardized, coefficients do not indicate the strength of each predictor in relation to all others; however, comparisons can be made regarding the power of individual predictors across models, as well as between predictors that use the same unit of measurement (e.g. the percentage of the population that is black and the percentage of the population that is Hispanic).

The Determinants of Female Incarceration Rates

The Role of Social Forces

Model 1, which omits sentencing policies and time interactions, explains 82.6 percent of the variance, indicating the model is quite successful in explaining variation over time in female incarceration rates, even when forcing coefficients to be equal across time periods. The estimates indicate that crime rates do impact female incarceration rates. This relationship is not, however as straightforward as functional theory would suggest. Net of the effects of female arrests for violent crime, as well as the rest of the variables, an increase in the violent crime rate of one per 100,000 population increases the female incarceration rate by 2.4 per 100,000 female population ($\beta=2.405, \leq .001$); yet female arrests for violent crime

Table 5-1. Fixed Effects Estimates of the Determinants of Female Incarceration Rates in the U.S. 1979-2001

	Model 1	Model 2	Model 3
Violent crime rate	2.4055***	2.4728***	2.5423***
Female violent crime arrest rate	.0347	.0323	0.0286
Property crime rate	-.2412*	-.1960*	-0.6491***
Drug arrest rate	1.0789***	.9332**	0.1607
Drug arrest rate*1989			.7274***
Drug arrest rate*2001			.0070
% population black	1.4562*	1.5692*	1.3747**
% population black*time			.0936***
% population Hispanic	1.3544**	1.4009***	.3646
% population Hispanic*time			.0707***
Unemployment rate	-1.0613**	-1.0786**	-.3475
Economic inequality	-.2747	-.0411	-1.7074*
Republican governor	.5565	.0653	1.4480*
Republican governor*time			-.2881*
Urbanization	.3515*	.1953*	-.1115
Citizen conservatism	.1189*	.1506*	.1137
Citizen conservatism*time			.0329***
Religious fundamentalism	19.4987*	11.7661	-1.3664
Religious fundamentalism*time			4.4013**
Determinate sentencing		5.1365 *	4.2728*
Presumptive sentencing		-8.8437**	-7.2096***
Presumptive guidelines		-15.0523***	-13.1736***
Voluntary guidelines		.5759	-1.5443
Income per capita	-.2671***	-.2698***	.2140***
State revenue	7.6630	8.7831*	6.5976
Time trend	5.0550***	5.3082***	2.2206**
R2	.8265	.8344	.8547

* $\rho \leq .05$ ** $\rho \leq .01$ *** $\rho \leq .001$ One-tailed tests except for urbanization

do not have a significant influence on the level of female incarceration. Drug arrests are also important. A one percent increase in the rate of drug arrests (measured as the percent of total arrests that are for drug offenses) results in an increase of 1.08 per 100,000 in the female incarceration rate ($\beta = 1.079$, $\rho \leq .001$). This finding provides initial support for the impact of drug enforcement policy. Property crime rates, on the other hand, have an unexpected very small negative effect ($\beta = -.241$, $\rho \leq .05$) on female incarceration rates.

The magnitude of the minority population also influences the size of the female prison population. Net of all other effects, a one percent increase in the proportion of the population that is black is associated with a 1.46 per 100,000 increase in the female incarceration rate ($\beta = 1.456$, $\rho \leq .05$), while a one percent increase in the Hispanic population increases the female prison population by 1.34 per 100,000 ($\beta = 1.354$, $\rho \leq .001$). The findings in this model regarding economic threat are less clear. Contrary to expectations, both unemployment rates ($\beta = -1.061$, $\rho \leq .01$) and economic inequality are associated with decreased female incarceration, although the relationship with economic inequality is not statistically significant.

The presence of a Republican governor, when requiring this relationship to be stable over time, does not have a significant effect on female incarceration rates. Cultural conditions, however, do have a significant impact on the level of female incarceration. When a greater percentage of a state's population lives in metropolitan areas, there is a higher level of female incarceration ($\beta = .351$, $\rho \leq .05$, two-tailed test), suggesting that greater urbanization results in more dependence on formal mechanisms of social control of women. The values and beliefs of citizens are also important. This initial analysis indicates that more

conservative views ($\beta = .119, \rho \leq .05$) and religious fundamentalism ($\beta = 19.499, \rho \leq .05$) produce larger female prison populations.

One measure of a state's economic resources—per capita income—was found to be important. Higher income per capita is associated with a slightly lower female incarceration rate ($\beta = -.267, \rho \leq .001$). However, state revenue per 100,000 residents does not have a significant relationship to the level of female incarceration. Finally, the coefficient for the time trend variable ($\beta = 5.055, \rho \leq .001$) indicates that each two-year time period from 1979-2001 saw the female incarceration rate increase, on average, by 5 per 100,000 female population independent of individual state conditions, indicating considerable nation-wide growth not explained by the variables in the model.

The Role of Sentencing Policies

Model 2 introduces sentencing policies to assess the degree to which such policies influence levels of female incarceration independent of the crime rates and social, political, cultural, and economic forces included in Model 1. Additionally, it is important to know whether a state's implementation of specific sentencing policies attenuates the impact of forces outside the direct control of the state. Contrary to findings of recent research across states using aggregated incarceration rates (Greenberg and West 2001; Jacobs and Carmichael 2001), the adoption of determinate sentencing, net of effects of social forces and controls, results in increased levels of female incarceration ($\beta = 5.136, \rho \leq .05$). Consistent with previous findings on aggregated incarceration rates (Marvell 1995; Nicholson-Crotty 2004) presumptive sentencing ($\beta = -8.844, \rho \leq .01$) and presumptive guidelines ($\beta = -15.052, \rho \leq .001$) are associated with lower levels of female incarceration. All else being equal, the

presence of presumptive sentencing guidelines corresponds to a female incarceration rate that is lower by about 15 per 100,000. As expected, voluntary sentencing guidelines have no impact.

The inclusion of sentencing policies does not increase the strength of the model ($R^2 = .834$); Model 1, without the sentencing policies, had an R^2 of .826. Additionally, most of the relationships found in Model 1 are quite consistent. There are, however, some exceptions. Accounting for the impact of sentencing policies decreases the importance of urbanization to hardly relevant ($\beta = .195, \rho \leq .05$). The coefficient for fundamentalism, while still positive, is weaker and becomes insignificant, and state revenue per 100,000 now has a significant positive effect on the size of the female incarceration rate ($\beta = 8.781, \rho \leq .05$). Finally, the time trend variable still has a significant positive effect ($\beta = 5.308, \rho \leq .001$), once again indicating a considerable national upward trend in female incarceration rates not explained by the model. Overall, even as sentencing policies impact levels of female incarceration, the influence of crime rates, minority population, unemployment, and political ideology are also quite stable, indicating that female incarceration rates are driven by a combination of social and cultural forces, a state's economic resources, and specific sentencing policies, as well as unmeasured conditions that are constant across states but vary across time.

While the results of these analyses provide important information regarding the predictors of female incarceration rates, because coefficients are forced to remain constant over time, they do not take into account the possibility of historically contingent relationships. Model 3 addresses this issue.

Estimating Time Varying Relationships

As discussed in the previous chapter, there is reason to believe that some relationships may either weaken or become stronger during the time period of the study. Not only might the importance of these variables change over time, but allowing their relationships to become stronger or weaker over time might also change the effects of other variables. Moreover, the significant positive coefficient for the time trend variable indicates growth in female incarceration rates across all states that are not explained by the variables. Including interaction with time and selected main effects allows estimation of changes in the strength of relationships over time. In addition to providing a clearer understanding of the impact of individual predictors, if the changes in these relationships are significant, they may also partially account for the positive coefficient on the time trend variable. Furthermore, the explanatory power of the model should be increased when coefficients are allowed to vary over time (Jacobs and Carmichael 2001).

Model 3 tests the percentage of blacks and Hispanics, presence of a Republican governor, political ideology, and fundamentalism for interactions with time. Additionally, there are interaction terms allowing the coefficient for the drug arrest rate to differ in 1989 and in 2001 to test for the impact of the War on Drugs that began in the mid 1980s and the possible decline in its importance by the year 2001. The interaction terms are created by multiplying the independent variable with either the time trend variable or with year dummies coded for 1989 or 2001. These interacted variables and all main effects are included in the model. If, after holding all other effects constant, an interaction term between a particular variable and the time trend variable is significant, it can be concluded that the effect of that variable on female incarceration rates changed over time. Likewise, if the

interaction terms between the drug arrest rate and year dummies for 1989 or 2001 are significant, this indicates that the drug arrest rate had a different relationship with female incarceration rates in those years.

There are a number of interesting findings in this model. First, all but one of the interaction terms is significant, highlighting the changing importance of these variables over time. While the time invariant effect of the percentage of blacks is still significant ($\beta = 1.375, \rho \leq .05$), the relationship between this variable and female incarceration rates became somewhat stronger with the passage of time (interaction term: $\beta = .094, \rho \leq .001$). The main effect for the percentage of Hispanics is no longer significant; however, its interaction with the time trend variable is ($\beta = .071, \rho \leq .001$), indicating that a larger percentage of the population being Hispanic became slightly more important in determining female incarceration rates later in the period of the study. There are similar results for the effect of political ideology; its main effect becomes insignificant, but the interaction term is significant ($\beta = .033, \rho \leq .001$). Fundamentalism, which was not significant in model 2, still has a nonsignificant coefficient for its main effect, but the coefficient for interaction term is positive and significant ($\beta = 4.273, \rho \leq .01$), indicating the relationship between female incarceration and the level of fundamentalism in a state becomes considerably stronger over the years of the study.

Having a Republican governor has, up to this point, not appeared to contribute to higher levels of female incarceration than having a Democratic governor. The results in this model provide further insight into this relationship. While the main effect for Republican governor is positive ($\beta = 1.448, \rho \leq .05$), the interaction with the time trend variable is

negative ($\beta = -.288, \rho \leq .05$). Thus, while early in the study period having a Republican governor was associated with higher female incarceration rates, the strength of this relationship decreased over time.

Results of this analysis also provide evidence for the importance of the War on Drugs in driving female incarceration rates. There is a significant interaction between the drug arrest rate and the dummy variable ($\beta = .727, \rho \leq .001$) for 1989, after the War on Drugs intensified. The interaction term for the drug arrest rate and 2001 is both negligible in size and not significant. This was the expected result, since by this time a growing number of states had begun to use alternatives to imprisonment for low-level drug offender and thus the impact of this variable should have decreased.

The influence of some of the predictors that were not interacted with time remains constant in this model, while others change. The results for crime rates are consistent with previous models. The coefficient for violent crime rates, but not the female arrest rate for violent crimes, is still significant and is also slightly stronger ($\beta = 2.542, \rho \leq .001$), suggesting that a greater use of incarceration as a response to fears about violent crime does not affect only those convicted of violent crimes. Property crime rates, on the other hand, continue to have an unexpected small negative effect ($\beta = -.649, \rho \leq .001$). Still contrary to expectations, both unemployment rates and economic inequality are associated with decreased female incarceration rates, although now the relationship with economic inequality is stronger and significant ($\beta = -1.707, \rho \leq .01$), and the coefficient for unemployment, while still negative, is no longer significant. Urbanization also no longer has a significant impact.

Controlling for some historically contingent relationships has only a small effect on the strength of relationships between female incarceration and sentencing policies. The

presence of determinate sentencing is still associated with higher levels of female incarceration, although the effect is slightly weaker ($\beta = 4.273$, $\rho \leq .05$), while presumptive sentencing and presumptive guidelines still have negative, but slightly weaker effects ($\beta = -7.21$, $\rho \leq .001$ and $\beta = -13.174$, $\rho \leq .001$). This attests to the importance of such policies in affecting female incarceration. Controls for a state's financial resources are mixed. Higher income per capita is still associated with lower female incarceration rates ($\beta = -.214$, $\rho \leq .001$). However, state revenue per 100,000 residents once again does not have a significant relationship with the level of female incarceration. The coefficient for the time trend variable ($\beta = 2.221$, $\rho \leq .01$) is less than half the size of the coefficient in the first two models; thus the time interactions explain much of the growth over time that was not accounted for in the previous models. Finally, this model explains 85.5 percent of the variance, as opposed to 82.6 and 83.4 percent by Models 1 and 2, respectively.

Overall, the results in this model indicate that female incarceration rates are driven by a combination of state-level conditions. Additionally, they confirm the importance of allowing relationships between female incarceration rates and some of the explanatory variables to vary over time in order to assess the changing impact of certain predictors. Minority presence and citizen ideology became more important over time, while having a Republican governor became less important, and the drug arrest rate was a stronger predictor in 1989. Including time interactions also decreases the amount of unexplained growth over time common to all states, as well as increasing the strength of the model. However, analysis has not yet addressed the question of whether any of the predictors affect white female and black female incarceration rates differently. Tables 5-3 and 5-4 present the results of

separate fixed-effects regression analyses using the white female incarceration rate and the black female incarceration rate as the dependent variable.

Female Incarceration Rates in Black and White

White Female and Black Female Incarceration Rates: The Role of Social Forces

Model 1a, which omits sentencing policies and the interaction terms, explains 77 percent of the variance in white female incarceration rates. While the explanatory power is not as great as when total female incarceration rate is the dependent variable, this is substantially better than the 50 percent of variance explained by this model for black female incarceration rates. At the same time, aside from the time trend variable and the controls for economic resources, only three explanatory variables have significant coefficients. Greater citizen conservatism is associated with a slightly higher level of white female incarceration ($\beta = .130, \rho \leq .05$), while the unemployment rate and economic inequality both have an unexpected small negative impact ($\beta = -.624, \rho \leq .01$; and $\beta = -1.09, \rho \leq .05$). The violent crime rate, which was consistently associated with higher levels of female incarceration in the first three models, is unrelated to white women's incarceration rates, and the property crime rate also has no effect. Higher state revenues, however, are associated with higher levels of white female incarceration ($\beta = 8.9627, \rho \leq .05$).

While the explanatory power of the model overall is weak for the black female incarceration rate ($R\text{-squared} = .5043$), there are noticeable differences in which coefficients are significant. All other things being equal, an increase in the violent crime rate of 1 per 100,000 is associated with an increase of almost 13 per 100,000 in the black female incarceration rate ($\beta = 12.776, \rho \leq .05$). Recall that this variable had a much smaller effect in Model 1 ($\beta = 2.405, \rho \leq .000$) when the total female incarceration rate was the dependent

Table 5-2. Fixed Effects Estimates of the Determinants of White and Black Female Incarceration Rates in the U.S., 1979-2001

	White		Black	
	Model 1a	Model 2a	Model 1a	Model 2a
Violent crime rate	.1932	.2397	12.7764*	12.4798**
Female violent crime arrest rate	.0032	.0026	.0303	-.0405
Property crime rate	-.1172	-.0878	-2.7660***	-2.4432***
Drug arrest rate	.3432	.2521	-.2038	-.4327
Percent black	-.5712	-.5024	.3112	3.3026
Percent Hispanic	.3870	.3829	5.024**	5.8105***
Unemployment rate	-.6245**	-.6456**	-2.7801	-3.6746
Economic inequality	-1.0903*	-.9306*	-7.3432	-7.4558
Republican governor	.1009	-.2393	9.8693**	7.3523*
Urbanization	.0772	-.0325	3.0749*	3.2953**
Citizen conservatism	.1302*	.1516*	.5692*	.5195*
Religious fundamentalism	11.1841	6.7477	45.9344	20.3526
Determinate sentencing		3.9474*		-20.3458*
Presumptive sentencing		-4.5930		-4.9067
Presumptive guidelines		-9.7743***		35.8261***
Voluntary guidelines		-.2849		-15.6262
Income per capita	-.1754***	-.1763***	-1.1897***	-1.2625***
State revenue	8.9627*	9.7033**	-56.5801	-47.6556
Time trend	4.4034***	4.5937***	22.5193***	23.5489***
R2	.7704	.7771	.5043	.5052

* $\rho \leq .05$ ** $\rho \leq .01$ *** $\rho \leq .001$ One-tailed tests

variable and has no significant effect on the level of white female incarceration. In contrast to the effects on white female incarceration found in this model, the presence of a Republican governor ($\beta = 9.869$, $\rho \leq .01$) and having a higher percentage of the population living in metropolitan areas ($\beta = 3.075$, $\rho \leq .05$) both contribute to higher black female incarceration

rates. Additionally, a one percent increase in the percentage of the population that is Hispanic corresponds to a black female incarceration rate that is higher by about 5 per 100,000 ($\beta = 5.024$, $\rho \leq .01$).

There are three predictors that affect both white and black female incarceration rates. Greater political conservatism among citizens is associated with slightly higher levels of incarceration for both groups, although the relationship is stronger for the black female rate (White: $\beta = .130$, $\rho \leq .05$ and Black: $\beta = .569$, $\rho \leq .05$). Higher income per capita, on the other hand, is associated with somewhat smaller incarcerated populations for both groups. Finally, the time trend variable is positive for both white and black rates. The substantial difference in the size of the coefficient (White: $\beta = 4.403$, $\rho \leq .000$ and Black: $\beta = 22.519$, $\rho \leq .000$), however, indicates that there was a much greater national trend in increased incarceration rates among black females that is unaccounted for the variables in the model.

White and Black Female Incarceration Rates: The Role of Sentencing Policies

Model 2a, which adds the variables for sentencing policies, does not increase the strength of the model for either group (the R^2 for each is virtually unchanged). Additionally, the same explanatory variables are associated with higher or lower rates of black and white female incarceration as in the previous model. The only change in the effect of predictors also included in Model 1a is that having a Republican rather than a Democrat in the governor's office now increases the black female incarceration rate by about 7 per 100,000 ($\beta = 7.352$, $\rho \leq .05$), as opposed to almost 10 per 100,000 when sentencing policies were not accounted for. There are, however, striking differences in impact of sentencing policies.

When states abolish discretionary release for most offenses, this is correlated with a decrease in the black female incarceration rate of 20 per 100,000 ($\beta = -20.346$, $\rho \leq .05$), but an *increase* in the white female incarceration of approximately 4 per 100,000 ($\beta = 3.947$, $\rho \leq .05$). The adoption of presumptive sentencing correlates with a white female incarceration that is lower by over 4 per 100,000 ($\beta = -4.593$, $\rho = .054$), but is not significantly associated with the black female incarceration rate. Presumptive guidelines are correlated with lower rates of incarceration for both groups, although the effect is considerably stronger for the black female rate (Black: $\beta = -35.826$, $\rho \leq .001$) and White: $\beta = -9.774$, $\rho \leq .001$). Voluntary sentencing guidelines do not have a significant effect on either female incarceration rates. These two models reveal important differences in the correlates of female incarceration rates based on race; I next add interaction terms to the model to see if the effects hold when the relationship between black and white female incarceration rates and some of the explanatory variables are allowed to vary over time.

White and Black Female Incarceration Rates: Estimating Time Varying Relationships

Allowing selected relationships to vary over time increases the number of explanatory variables that are significantly associated with white female incarceration rates. While the coefficient for main effect of the drug arrest rate is not significant, both time interactions are. The effect of the drug arrest was slightly stronger in both 1989 ($\beta = .474$, $\rho \leq .001$) and 2001 ($\beta = .409$, $\rho \leq .001$), while a higher rate of property crime now has a very small negative effect ($\beta = -.333$, $\rho \leq .05$). Minority presence is also now significant. A one percent increase in the percentage of the population that is Hispanic now corresponds to an increase in the white female incarceration rate of almost one per 100,000 ($\beta = .822$, $\rho \leq .01$), while the

strength of the relationship between white female incarceration and the percentage of the population that is black increased very slightly over time ($\beta = .031, \rho \leq .01$). The effect of one measure of economic threat, unemployment, is now no longer significant, but the negative effect of economic inequality is now somewhat stronger ($\beta = -1.832, \rho \leq .001$).

Including time-variable interaction terms also reveals significant relationships between white female incarceration and several measures of a state's political and cultural conditions. We now see that the time invariant coefficient for having a Republican rather than a Democratic governor is positive ($\beta = 3.601, \rho \leq .01$), but that the strength of this relationship decreased over time (interaction term: $\beta = -.617, \rho \leq .001$). Political conservatism among citizens, on the other hand, has a nonsignificant main effect, but became more slightly important as time passed (interaction term: $\beta = .026, \rho \leq .01$). Having a higher percentage of the population living in metropolitan areas is now associated with a white female incarceration rate that is slightly smaller ($\beta = -.105, \rho \leq .01$). The level of fundamentalism among citizens is still irrelevant.

Sentencing policies and controls are still important predictors of white female incarceration rates. All else being equal, establishing presumptive sentencing ($\beta = -3.307, \rho \leq .05$) or presumptive guidelines ($\beta = -9.99, \rho \leq .001$) corresponds to a smaller percentage of white females being incarcerated, while adopting determinate sentencing is associated with a higher rate ($\beta = 2.969, \rho = .05$). Estimates for income per capita, state revenues per 100,000, and the time trend variable are similar to those in Model 1a, although the influence of state revenues is slightly smaller and the coefficient for the time trend is reduced from 4.594 to 3.037, indicating that the nationwide trend in higher white female incarceration rates

Table 5-3. Fixed Effects of the Determinants of White and Black Female Incarceration Rates in the U.S., 1979-2001, Testing for Time Interactions

	Model 3a	
	White	Black
Violent crime rate	.6811	10.9163**
Female violent crime arrest rate	.0078	-.0416
Property crime rate	-.3330*	-3.3434***
Drug arrest rate	-.1522	-1.2865
Drug arrest rate*1989	.4745***	5.8397***
Drug arrest rate*2001	.4086***	-2.4468**
Percent black	.1025	11.0046**
Percent black*time	.0315**	-.0334
Percent Hispanic	.8219**	-3.8882
Percent Hispanic*time	-.0163	.5164***
Unemployment rate	-.4163	-1.053
Economic inequality	-1.8320***	-8.0562
Republican governor	3.6011**	7.8670
Republican governor*time	-.6175***	-.9600
Urbanization	-.1051**	2.6181*
Citizen conservatism	.0520	1.0825**
Citizen conservatism*time	.0264**	.0844**
Religious fundamentalism	.5305	-24.6457
Religious fundamentalism*time	.0691	2.2842**
Determinate sentencing	2.9695*	-14.5062
Presumptive sentencing	-3.3067*	-15.2598
Presumptive guidelines	-9.9901***	-29.5602***
Voluntary guidelines	-1.3396	-15.6332
Income per capita	-.1682***	-1.0101***
State revenue	7.7764*	-58.9923
Time trend	3.0368***	13.0389***
R2	.7934	.5121

* $\rho \leq .05$ ** $\rho \leq .01$ $\rho \leq .001$ One-tailed tests

is less important. Finally, this model explains 79.3 percent of the variance in the white female incarceration rate, a small improvement over the 77.7 percent explained in the model with time interactions.

As with the previous models, the explanatory power of the model is considerably lower when the black female incarceration rate is the dependent variable ($R^2 = .505$); however, there are notable differences in which explanatory variables are significant. The violent crime rate is still important. Controlling for the female arrest rate for violent crime, which has no effect, a one percent increase in the violent crime rate is associated with an increase of almost 11 per 100,000 in the black female incarceration rate. This variable has no significant effect on the level of white female incarceration. The first drug arrest interaction term ($\beta = 5.84, \rho \leq .001$) indicates that by 1989 the drug arrest had a stronger impact on black female incarceration rates; additionally, this coefficient is over 12 times larger than the coefficient for white females. However, in 2001, the strength of this relationship was weaker ($\beta = -2.447, \rho \leq .01$), indicating that the drug arrest rate was a less important predictor than in previous years. Recall that for the white female incarceration rate, the drug arrest rate interaction term with 2001 is small, but positive. So while the effect of drug arrests on black female incarceration diminished by 2001, for the white female rate it was still somewhat more important than in previous years. The property crime rate still has a surprising negative effect ($\beta = -3.343, \rho \leq .001$) that is also stronger than for the white rate.

Allowing for time specific variations also changes the influence of minority populations. When blacks are a larger percentage of the population, black females are incarcerated at a higher rate ($\beta = 11.005, \rho \leq .01$) during the entire analysis period. The percentage of the population that is Hispanic has a different relationship with black female incarceration; its main effect is not significant, but the significant time interaction coefficient ($\beta = .5164, \rho \leq .001$) indicates that this relationship grew stronger over time. Cultural

conditions are also significant predictors. Both greater urbanization ($\beta = 2.618, \rho \leq .05$) and more conservative citizens ($\beta = 1.082, \rho \leq .01$) contribute to a higher black female incarceration rate, and the effect of citizen conservatism gradually increased over time. Fundamentalism, up to this point, has not appeared to affect black female incarceration. Allowing its effect to vary over time provides further understanding of its influence. While the coefficient for its main effect is not significant, the coefficient for the interaction term ($\beta = 2.284, \rho \leq .01$) indicates that more religious fundamentalism in a state become more important in determining black female incarceration over the years.

Unlike the white female incarceration rate, when variable-time interactions are included, the percentage of black females in a state that are incarcerated is no longer influenced by the party affiliation of the governor. Additionally, the only sentencing policy that is significant is presumptive guidelines. The adoption of presumptive guidelines is associated with a black female incarceration rate that is lower by about 29 per 100,000, a much stronger effect than on the white female rate. Also in contrast to levels of white female incarceration, state revenues are still not a significant predictor of black female incarceration. Finally, there is a reduction in the strength of the time trend variable from Model 2a ($\beta = 23.549, \rho \leq .001$) to Model 3a ($\beta = 13.039, \rho \leq .001$); thus, time interactions are explaining some of the national trend in black female incarceration impacting all states.

Summary

There are 34 hypotheses of how crime rates, minority and economic threat, the party affiliation of the governor, urbanization, political ideology, fundamentalism, specific sentencing policies, the war on drugs, and a state's economic resources impact female

incarceration rates, how these vary over time, and how they differ for the rate of white female incarceration and black female incarceration. The estimates reveal significant effects of the explanatory variables, variation across time in the strength of the relationships, and differential effects based on race. Additionally, they confirm the importance of allowing relationships between female incarceration rates and some of the explanatory variables to vary over time in order to assess the changing impact of certain predictors. The following chapter will discuss these findings.

CHAPTER 6 - DISCUSSION AND CONCLUSION

In this study, I tested a number of theoretically motivated hypotheses of the determinants of variation in female incarceration rates. I also examined the changing nature of these relationships over time, as well as disparate effects based on race. Many of the hypotheses were supported by the fixed-effects regression analysis controlling for state and time effects. In addition, there were several unexpected findings. In this chapter I will first summarize the findings in relation to each hypotheses, then discuss the implications of the results. As they provide the clearest explanation of the relationships between female incarceration and the explanatory variables, the focus will be on the findings from the models that include time interactions.

Remember that analysis was conducted using fixed-effects regression with controls for unchanging individual state conditions and nation-wide conditions that changed over time but were constant across states. The coefficients represent the amount by which the female incarceration rate per 100,000 changes when each predictor changes by one unit. While the results do not explain why the female incarceration rate is higher in one state than another in any given year or throughout the time period (because fixed-effects regression assumes a unique intercept for each state), they do tell us how variation in any state is affected by the explanatory variables included in the model.

Findings

Crime and Female Incarceration Rates

Hypothesis 1: A higher violent crime rate will be associated with a higher female incarceration rate.

Finding: When a state's violent crime rate is higher, a greater proportion of the female population is incarcerated, despite the absence of a relationship between female arrests for violent crime and female incarceration. However, a higher violent crime rate influences only a state's black females, having no significant effect on the level of white female incarceration.

Hypothesis 2: A higher property crime rate will be associated with a higher female incarceration rate.

Finding: When a state's property crime rate is higher, there is a very small decrease in the female incarceration rate (less than 1 more per 100,000 for every 1 percent increase in the unemployment rate). This effect is stronger for the black female rate than the white female rate.

Hypothesis 3: The female arrest rate for violent crimes will have no effect on the female incarceration rate.

Finding: A higher female arrest rate for violent crimes does not increase or decrease the female incarceration rate.

Social and Political Forces and Female Incarceration Rates

Hypothesis 4: When blacks constitute a greater percentage of the population, there will be a higher female incarceration rate.

Finding: When a higher percentage of a state's population is black, a greater proportion of the female population is incarcerated.

Hypothesis 4a: The effect of percentage black will increase over time.

Finding: Between 1979 and 2001, the positive effect of a proportionally larger black population on the female incarceration rate became stronger. However, this variable affects

white and black rates differently. When the strength of the relationship is allowed to vary over time, percent black did not affect white female incarceration overall, but did become more slightly important over time. The opposite is true for black female incarceration. A proportionally larger black population correlates with a greater proportion of black females being incarcerated over the entire time period, but the strength of the relationship did not become stronger over time.

Hypothesis 5: When Hispanics constitute a greater percentage of the population, there will be a higher female incarceration rate.

Finding: When Hispanics constitute a greater percentage of a state's population there is an increase in the female incarceration.

Hypothesis 5a: The effect of percentage Hispanic will increase over time.

Finding: The strength of this relationship became gradually stronger between 1979 and 2001. White and black females are affected differently by this variable, however. The effect of percent Hispanic on the white female incarceration rate is small (less than 1 per 100,000 for a 1 percent increase in the percentage of the population that is Hispanic) and constant throughout the time period. Its main affect on the black female incarceration rate, when all other variables are controlled and time interactions are included, becomes insignificant; but the relationship becomes increasingly positive over time.

Hypothesis 6: A higher unemployment rate will be associated with a higher female incarceration rate.

Finding: When all other variables, including time interactions, are taken into account, a higher unemployment rate has no effect on the female incarceration rate.

Hypothesis 7: Greater economic inequality will be associated with a higher female incarceration rate.

Finding: Net of the effects of all other variables, including time interactions, when there is greater economic inequality, a state incarcerates a smaller proportion of its female population. However, this effect only operates for white females. Variation in the level of economic inequality is not associated with variation in the black female incarceration rate.

Hypothesis 8: The presence of a Republican governor will be associated with a higher female incarceration rate.

Finding: When the strength of this relationship is forced to remain constant over time, the presence of a Republican governor does not influence a state's female incarceration rate.

Hypothesis 8a: The effect of having a Republican governor will decrease over time.

Finding: When the strength of this relationship is allowed to vary over time, the presence of a Republican governor is associated with a higher female incarceration rate throughout the time period, but between 1979 and 2001 the strength of this relationship diminished.

However, this is only true for the white female incarceration rate. When all other variables, including time interactions are controlled, having a Republican governor does not increase or decrease the proportion of black females incarcerated.

Hypothesis 9: Greater urbanization will affect the female incarceration rate (either positively or negatively).

Finding: When the effects of all other variables, including time interactions, are taken into account, greater urbanization does not increase or decrease female incarceration rates.

Hypothesis 9a. Greater urbanization will have a positive effect on the black female incarceration rate.

Finding: Net of the effects of all other variables, including time interactions, when a greater percentage of a state's population resides in metropolitan areas there is a higher rate of black female incarceration and a lower rate of white female incarceration.

Hypothesis 10: A higher level of citizen conservatism will be associated with a higher female incarceration rate.

Finding: Greater conservatism among citizens is associated with a slightly higher (less than 1 per 100,000 for every one unit change in level of conservatism) female incarceration rate.

Hypothesis 10a: The strength of this relationship will increase over time.

Finding: While greater conservatism predicts slightly higher female incarceration rates throughout the time period, between 1979 and 2001 the relationship between conservatism and female incarceration rates intensified.

Hypothesis 10b: Citizen conservatism will have a stronger effect on the black female incarceration rate than the white female incarceration rate.

Finding: More politically conservative citizens have a stronger influence on a state's black female incarceration rate throughout the time period. Additionally, the increase in the strength of the effect on the black female incarceration was larger.

Hypothesis 11: Greater fundamentalism among the population will be associated with a higher female incarceration rate.

Finding: When the strength of this relationship is forced to be constant over time, greater fundamentalism does not influence a state's level of female incarceration.

Hypothesis 10a: The strength of this relationship will increase over time.

Finding: While the level of fundamentalism is not a significant predictor for the entire time period, its positive influence on the female incarceration rate became gradually stronger

between 1979 and 2001. This is true only for black females, however. The degree of fundamentalism in a state does not increase or decrease the white female incarceration rate.

The War on Drugs and Female Incarceration Rates

Hypothesis 12: The drug arrest rate will be associated with a higher female incarceration rate.

Finding: When a state's drug arrest rate is higher, it incarcerates a higher proportion of its female population.

Hypothesis 12a: The effect of the drug arrest rate will be stronger in 1989.

Finding: A higher drug arrest rate had a somewhat stronger influence on the female incarceration rate in 1989 than the rest of the time period.

Hypothesis 12b: The increase in the effect of the drug arrest rate in 2001 will be smaller than in 1989.

Finding: There is no significant difference in the effect of the drug arrest rate on the female incarceration in 2001 than in the rest of the time period. This finding varied depending on race, however. In 2001, a higher drug arrest rate had a slightly stronger influence on the white female incarceration rate than in other years. The effect on the black female incarceration rate, on the other hand, was weaker than in previous years.

Hypothesis 12: The increased effect of the drug arrest rate in 1989 will be greater for the black female incarceration rates than for the white female incarceration rate.

Finding: The increased positive effect of a higher drug arrest rate in 1989 was substantially stronger for the black female incarceration rate than the white female incarceration rate.

Sentencing Policies and Female Incarceration Rates

Hypothesis 13: The presence of determinate sentencing will be associated with a higher female incarceration rate.

Finding: When a state adopts determinate sentencing there is a higher female incarceration rate.

Hypothesis 13a: Determinate sentencing will be associated with a higher white female incarceration rate.

Finding: Determinate sentencing is associated with a higher white female incarceration rate.

Hypothesis 13b: Determinate sentencing will be associated with a lower black female incarceration rate.

Finding: When all other variables, including time interactions, are held constant, the adoption of determinate sentencing does not have a significant effect on a state's black female incarceration rate.

Hypothesis 14: The presence of presumptive sentencing will be associated with a higher female incarceration rate.

Finding: When a state adopts presumptive sentencing, it has a lower female incarceration rate.

Hypothesis 14a: Presumptive sentencing will be associated with a higher white female incarceration rate.

Finding: Presumptive sentencing is associated with a lower white female incarceration rate.

Hypothesis 14b: Presumptive sentencing will be associated with a lower black female incarceration rate.

Finding: There is no significant relationship between presumptive sentencing and the black female incarceration rate.

Hypothesis 15: The presence of presumptive sentencing guidelines will be associated with a higher female incarceration rate.

Finding: Presumptive sentencing guidelines are associated with a lower female incarceration rate.

Hypothesis 15a: Presumptive sentencing guidelines will be associated with a higher white female incarceration rate.

Finding: Presumptive sentencing guidelines are associated with a lower white female incarceration rate.

Hypothesis 15b: Presumptive sentencing guidelines will be associated with a lower black female incarceration rate.

Finding: Presumptive sentencing guidelines are associated with a lower black female incarceration rate. This effect is substantially stronger than the effect on white the female incarceration rate.

Hypothesis 16: The presence of voluntary sentencing guidelines will have no affect on the female incarceration rate.

Finding: Voluntary sentencing guidelines have no affect on the female incarceration rate.

Economic Resources and Female Incarceration Rates

Hypothesis 17: Higher per capita income will be associated with a higher female incarceration rate.

Finding: Higher per capita income has a small negative impact on the female incarceration rate (less than 1 per 100,000 fewer for every 1 unit change in income per capita).

Hypothesis 18: Greater state revenues will be associated with a higher female incarceration rate.

Finding: When the effects of all other variables are accounted for, a state's revenue per 100,000 population does not impact the total female incarceration rate. This relationship, however, is conditioned by race. Higher state revenues are associated with a higher white female incarceration rate, but have no impact on the proportion of black females incarcerated.

Discussion

Under what conditions do states deprive a greater proportion of their female population of their liberty? Is imprisonment simply a response to crime, a necessary step to protect a state's citizens? Are higher incarceration female incarceration rates the expected, and necessary outcome of women's greater involvement in crime that endangers the populace? The results of this analysis indicate that, while crime rates are a factor, female incarceration rates are influenced, in distinctive ways, by the presence of racial and ethnic minorities, economic inequality, a state's political leadership, urbanization, the political ideology and religious beliefs of citizens, the war on drugs, sentencing policies, and a state's economic resources. Moreover, a number of these variables influence the level of incarceration of black females differently than that of white females. These findings have a number of important practical and social implications, as well as theoretical relevance.

Crime

The results of this analysis indicate that a higher violent crime rate, but not the arrest rate of females for violent crimes, contributes to a state incarcerating a larger proportion of their female population. A number of scholars contend that, while incarceration is used in

response to the threat of violent crime, the rate of incarceration is not necessarily a direct result of the volume of individuals arrested for such crimes. High rates of reported violent crime rates stir up fear in white voters and create an increased sense of threat; incarceration rates increase in response to this violent crime “climate” (Bridges and Baretta 1994; Western 2006). This analysis supports this hypothesis in relation to women. Women, who are far less likely than men to engage in violent crime, are nonetheless affected by a climate of fear and resultant harsher criminal punishments. Additionally, in line with the historical view of black female offenders as more dangerous and even inherently immoral, it is black women who are strongly affected by the social response to a higher rate of violent crime. Analysis of white and black female incarceration rates separately indicates that when higher violent crime rates result in harsher criminal sanctions, it is black women who are seen as part of this menace and subjected to more severe punishment. White women, as a group, are able to avoid the results of this societal reaction.

Threatening Populations

The previous paragraph focused on how race interacts with fear produced by higher crime rates to produce more punitive treatment of females. It also appears that the very presence of more minorities, especially blacks, evokes fear of crime and the call for and/or enactment of harsher punishment of female offenders. It is black women who suffer the consequences of this fear most strongly, as well. The presence of a large Hispanic population is also important. Interestingly, Hispanic threat had a small impact on white female incarceration over the entire time period; when a larger percentage of the population is Hispanic, white females are treated more punitively. For black females, this relationship only gradually became positive over time. This was the expected relationship, as the

Hispanic population grew substantially in a number of states between 1979 and 2001. Perhaps because the black population already has such a strong effect on black female incarceration, the Hispanic population has to become considerably larger before the sense of threat from this population has a further influence. Overall, this analysis suggests that, despite efforts to decrease the effects of overt discrimination in the criminal justice system, social divisions based on race and ethnicity still influence a state's use of incarceration to punish female offenders.

Recent studies of total incarceration rates across states and over time have found no relationship between economic inequality and incarceration rates (see Stemen et al. 2006; Jacobs and Carmichael 2001). This analysis finds, unexpectedly, that economic inequality has a negative effect on the female incarceration rate. Further analysis using data disaggregated by race indicates that this relationship holds only for white females. The group threat perspective hypothesizes that as the gap between the most and least affluent increases the privileged are likely to feel threatened by the underclass. Additionally, it is posited that a bigger gap between the rich and poor results in greater social distance and thus a greater willingness among the more affluent to support harsh punishment that will presumably affect primarily low-income communities (Greenberg and West 2001). Why, then might greater economic inequality have a negative impact on the white female incarceration rate?

Perhaps it is related to whites' attitudes towards the poor. Research suggests that whites feel a greater affinity towards the poor when they, too, are white. Whites are much more likely to support welfare programs when they believe the primary recipients are white (Gilens 1995; Kinder and Sanders 1996); states in which a larger percentage of those

receiving benefits are white have less punitive welfare policies (Gais and Weaver 2002); and states with the largest black populations have the least generous welfare benefits (Fording 2001; Howard 1999). There is also a documented relationship between higher welfare benefits and lower total incarceration rates (Beckett and Western 2001; Stemen et al. 2006). Based upon these findings, it is plausible that affluent whites do not feel the same sense of threat from poor whites as from poor minorities, and even believe they deserve less harsh treatment due to their unfortunate circumstances.

Politics

As suggested by a number of scholars, politics are also important. It is important, however, to consider the changing nature of relationships over time to more fully understand the role of politics in determining variation in a state's use of incarceration. Stemen et al. (2006) found that the presence of a Republican governor was associated with higher total (male and female combined) incarceration rates throughout the 1980s and 1990s. Jacobs and Carmichael (2001) tested for a historically changing influence of Republican strength at the state level and discovered that it was progressively more important in determining total incarceration rates in 1980 and 1990 (there was no significant relationship in the time invariant model or in 1970), supporting the hypothesis that law and order appeals by the Republican party during that time played an important role in rising incarceration. This analysis, unlike those studies, measures the influence on female incarceration rates specifically and also extends beyond the time period studied by Jacobs and Carmichael (2001). Findings show that the presence of Republican governor became a somewhat less important predictor of female incarceration rates between 1979 and 2001.

White women appear to have been, at one time, advantaged in states that had Democratic governors, as evidenced by their higher incarceration rate when a Republican governor was in power, even when controlling for the political ideology and religious beliefs of citizens. This benefit, however, began to gradually disappear as Democrats also began to see the political value of a “tough on crime” stance in the early 1990s. It appears that at one time it was only Republican governors that used their position to support policies that would result in harsher punishment for white female offenders. As time passed, however, white female incarceration rates continued to rise regardless of which party was in the governor’s office. Black women, on the other hand, never had such an advantage. Once all other variables were controlled and allowed to have different effects during the period of the study, the party of the governor did not affect black female incarceration rates. This could partially explain why the majority of states saw greater growth in white female incarceration rates than black in the 1990s. The “protection” afforded them by the presence of a Democratic governor was waning.

Culture

Unlike the party affiliation of the governor, both a broad measure of culture (urbanization), as well as the political ideology and religious beliefs of a state’s populace have no impact or only a negligible effect on white female incarceration. They all, however, influence the proportion of black females who are incarcerated. When a state becomes more urbanized, there is a higher rate of black female incarceration. This lends support to the hypothesis that when blacks are concentrated in central city areas, law enforcement personnel and other criminal justice officials are more likely to view them as a threat to the social order and thus engage in more forceful social control through policing and harsher punishment.

Additionally, large metropolitan areas are more likely to include areas of concentrated disadvantage, and thus have a greater proportion of black female-headed households and black women receiving public assistance, both characteristics that contribute to being considered generally disreputable and make women susceptible to harsher treatment by criminal justice officials, regardless of the seriousness of their crimes (Kruttschnitt 1981). In addition to urbanization, the political beliefs of residents and a state's religious composition also influence black female incarceration rates.

While the party affiliation of a state's governor appeared to influence black female incarceration in the first two models, once the strength of a number of relationships were allowed to vary over time, having a Republican governor was no longer associated with a higher rate. Greater politically conservative ideology among citizens, however, is associated with higher black female incarceration rates. Results when periodized variables are included support the hypothesis that higher incarceration rates, at least for black females, may result more from demands by conservative citizens than imposition by political leaders.

Additionally, the magnitude of this relationship intensified over time. This is not surprising when one considers the sharp increase in political rhetoric and media representations that focused on the dangers of violent crime and associated this danger with blacks.

Conservatives might be more apt to respond to such representations with demands for harsher punishment, as they are more likely have negative stereotypes of blacks and also tend to favor deterrence and incapacitation to prevent crime.

It was hypothesized that, because of their beliefs about the cause, nature, and appropriate response to crime, fundamentalist Christians are likely to support punitive criminal justice policies and place demands on public officials to punish all offenders more

severely, resulting in a higher female incarceration rate. This analysis indicates that it was only over time that the level of fundamentalism in a state became important. This may be due to the increased level of influence of the religious right movement in the 1990s (Green and Silk 2005; Hicks, Layman and Green 2006). It appears that the presence of a large number of religious fundamentalists is not sufficient to impact criminal justice outcomes; there needs to be a unified political movement that draws on their beliefs.

An important caveat to this finding is that there is no such relationship between the degree of Christian fundamentalism and the level of white female incarceration. A greater prevalence of fundamentalist Christian beliefs does, however, increase the proportion of black females incarcerated. The main effect was not significant; however, as time passed this became an important predictor. The racial difference was not anticipated. However, there is some evidence that Christian fundamentalism is associated with racism, despite the fact that racism conflicts with Christian teachings of humanitarian values (see Hall, Matz, and Weed, 2010 for a meta-analysis). Thus, it is possible that, in contrast to what I proposed, some women might be exempt from the call by Christian fundamentalists for severe punishment of offenders, but that this is conditioned by race.

Most recent research about fundamentalist beliefs and attitudes toward crime and punishment is micro-level research (see Curry 1996; Grasmick et al. 1992; and Grasmick and McGill 1994). However, this analysis points to the importance of understanding the role of religious beliefs, especially when adherents are unified by strong political leadership, in shaping a state's response to deviant behavior by certain segments of its population.

The War on Drugs

Formal social control of women has sometimes been influenced by moral panics. The War on Drugs can certainly be seen as a response to a moral panic of the 1980s. It is evident that this “war” played a role in the escalation of female incarceration rates in the late 1980s. The degree to which the drug arrest rate contributed to higher female incarceration rates was stronger in 1989 than in other years of the analysis. This likely is a result of the combined effects of an increased probability of arrest, greater likelihood of receiving a prison sentence for a drug offense, and increased sentence length following the adoption of numerous policing and sentencing policies enacted as part of the War on Drugs in the mid- to late-1980s.

The effect in 1989 was slightly stronger for white females and considerably stronger for black females. The racial disparity can be explained by a number of factors. First, although white and black women use drugs at roughly equal rates, black women tend to be subject to greater government surveillance. For example, race is often used as a basis for more intrusive police stops and searches (Lapidus et al. 2005) and for screening of pregnant women in hospitals (Siegel 1994). Moreover, police resources at that time concentrated on poor minority neighborhoods (Beckett et al. 2006; Blumstein 1993; Miller 1996; Tonry 1995; Blakeslee 2005). This is not surprising considering Blalock’s (1967) suggestion that the mobilization of social control is more prominent when deviance makes a potentially threatening group more visible. The political rhetoric and media coverage of the drug crisis painted female drugs users as poor black women who preyed on the welfare system and gave birth to crack addicted babies; these women were not just drug abusers, but unfit mothers who deserved harsh treatment for their criminal and gender deviance (Levy-Pounds 2006;

Beckett and Sasson 1998). It cannot be ruled out that prosecutors and judges may be influenced by such images when offenders are charged and sentenced. Although limited to a sample in one state, Bontrager (2006) found that black defendants were less likely than white defendants to have adjudication withheld when convicted of drug offenses.

A diminishing emphasis on punishing drug offenders may be helping reduce the growth in female incarceration rates. A number of states have already adopted mandatory treatment for individuals arrested for drug possession, and there is increasing public support for alternative sanctions for those arrested for not only possession, but also for drug sales (Stemen et al. 2006). Already, in 2001, the drug arrest rate was a less important determinant of female incarceration rates than in 1989, most notably for the black rate. If states provided both sentencing options and more funding for drug treatment for women, this could help further slow the expansion in female incarceration rates. Treatment options must, however, be informed by the gendered needs of women seeking treatment. For example, a 2003 report by the Substance Abuse and Mental Health Services Administration indicated that while women make up 30 percent of those addicted to drugs in the U.S., only eight percent of available drug treatment programs offered childcare (Lapidus et al. 2005).

Sentencing Reform

As stated by Stemen et al. (2006), prison populations are affected by choices made by policy makers. It is equally true, as evidenced by the results of this analysis, that the affects of those choices are not uniform for all segments of the population. It is important that policy makers carefully consider the desired goals of sentencing reform before policies are enacted, as well as measuring the effect of such policies once in place. While the adoption of voluntary sentencing guidelines had no effect on either white or black female incarceration

rates, the affects of the other three policies included in the analysis differ for black and white female incarceration rates either in significance or in degree. When policy makers attempt to control the release decisions and time served by adopting determinate sentencing for most offenses, it contributes to a higher white female incarceration rate. This may be due to white women no longer benefiting from parole boards' knowledge that women are less likely to recidivate and more likely to comply with condition of conditional release. These gendered characteristics are no longer taken into account, and these women must instead serve the legally prescribed minimum portion of an imposed sentence. The black female incarceration rate is not affected by determinate sentencing, suggesting that they did not benefit from the possibility of discretionary release.

Neither presumptive sentencing nor presumptive guidelines had the expected effect of a higher white female incarceration rate. Despite the limitation on judges' discretion, net of the effects of the other variables included in this analysis, both of these policies were associated with a lower white female incarceration rate. Presumptive guidelines, under which recommended sentences are based on the severity of the offense *and* the offender's prior criminal history, had a stronger effect. Analysis by Stemen et al. (2006) found that combinations of various sentencing policies impacted total incarceration rates. It might be that considering such combinations, along with additional sentencing policies, will more clearly explain the impact of sentencing policies on white female incarceration rates. Research that examines the impact of sentencing policies on outcomes for different classes of offenses and different stages of the criminal justice process might also provide additional insight.

Only presumptive guidelines affect the black female incarceration rate, being associated with a lower rate; and the effect is considerably stronger than on the white rate. This finding lends some support for the premise that judicial discretion may result in discriminatory treatment of black females, possibly based on the assumptions that they are more dangerous and less amenable to reform even if they do not have a criminal history. Thus, providing guidelines that base their sentence on the severity of the offense and their criminal background may result in less severe sentences for black females.

Economic Resources

It has been suggested that, ultimately, a state must limit its incarcerated population based upon its financial constraints and, as such, greater state revenues should be associated with a higher female incarceration rate. This analysis shows that this is only true for the level of white female incarceration. For white females, net of the effects of other variables, higher state revenues result in greater use of incarceration; thus, if there is not enough money, states tend to send and/or keep fewer white females in prison. It does not appear that states allow reduced revenues to limit the use of prisons to punish deviant black females.

Higher income per capita, on the other hand, has a small negative impact on the female incarceration rate. This was a surprising finding, as income per capita was included as an additional measure of a state's economic resources. It is perhaps better understood as a cultural measure; maybe higher income individuals tend to prefer alternatives to imprisonment and rehabilitative programs over deterrence and incapacitation to prevent crime. State revenues may be a better measure of a state's economic resources available to spend on incarceration.

Conclusion

This dissertation was a first step in addressing the question of whether theories of incarceration based on research using aggregate samples—which are dominated by male prison populations—explain female incarceration rates and, more broadly, the use of incarceration as a means of formal social control of women in the U.S. Theories that attribute incarceration rates to violent crime rates, large or growing minority populations, political conservatism and religious fundamentalism among citizens, and the war on drugs appear to similarly explain both total and female incarceration rates. Variables based on other theories do not have the same effect on total and female incarceration rates. Political theories suggest that having a Republican governor, or Republican strength in the state government, contributes to higher incarceration rates. A number of scholars examining total male and female combined) incarceration rates (Jacobs and Carmichael 2001; Stemen et al. 2006; Yates and Fording 2005) have found support for this hypothesis; and Jacobs and Carmichael (2001) found that the relationship became stronger between 1970 and 1990. This analysis finds that the presence of a Republican governor has an effect on female incarceration rates only when the relationship is allowed to vary over time, and that the strength of the effect decreased between 1979 and 2001.

Economic inequality has consistently been found to have no effect on aggregate total state incarceration rates (Arvanites and Ashwer 1995, 1998; Greenberg and West 2001; Stemen et al. 2006), but this analysis found that it has a negative effect on the proportion of females incarcerated by a state. State revenues, on the other hand, have been found to be positively associated with total incarceration rates (Michalowski and Pearson 1990; Greenberg and West 2001), but findings in this study show it does not affect female

incarceration rates. Finally, the models used in this analysis do not explain as much of the variance in female incarceration rates as do most of the studies using total incarceration rates, suggesting that additional state-level conditions need to be considered to explain female incarceration. Further differences in the ability of existing theories to explain female incarceration rates appear when the data is further disaggregated by race.

The proportion of a state's black female population that is incarcerated is driven, to a great extent, by social forces such as the presence of a large minority population, as well as fear of crime and moral panics such as a perceived drug crisis, which are associated with the minority population. This supports the theoretical connection between race and the state's use of incarceration to control marginalized populations. Tittle and Curran (1988) argue that it is the combined threat of crime and minority status that causes greater resentment and anger from whites and sparks increased social control efforts. Other important social forces are the concentration of minorities in central cities and more citizens who adhere to Christian fundamentalist beliefs or conservative political ideology. It does not matter which political party the governor is affiliated with or the level of a state's revenues. Political officials and criminal justice personnel appear to be affected by broad cultural conditions and the dominant values and beliefs of the population when making decisions that affect the incarceration of black women.

White female incarceration rates, while influenced to a degree by social forces, are more directly influenced by political factors such as the party affiliation of the governor and sentencing policies. However, the importance of the governor's party is diminishing and citizen political ideology is gradually becoming significant. This, combined with the effect of determinate sentencing could partially explain why more states saw more growth in the

white female incarceration rate than black in the 1990s. While black females are still incarcerated at much higher rates than white females, this racial gap diminished between 1979 and 2001. However, this reduction was achieved not through affording less harsh treatment to black females, but through more severe penalties upon white females. The differences in the relationship between female incarceration rates and the predictors based on race might lead one to argue that it is not, in fact, about gender at all; it is about race. However, while there is limited research that examines total (male and female combined) white and black state incarceration rates separately, there are important differences in those findings and the results of this analysis that suggest that gender is, indeed, important.

The theoretical perspective that suggests that incarceration rates increase as a result of high rates of reported violent crime is supported by analysis of total (male and female combined) incarceration rates for both whites and blacks (Bridges and Crutchfield 1988). However, this analysis indicates that only black female incarceration rates are influenced by the violent crime rate; there is no such relationship between levels of white female incarceration and violent crime rates. Racial differences in support for political theories also varies depending on whether one uses total or female incarceration rates as the dependent variable. Yates and Fording (2005) found that having a Republican governor has a stronger impact on total black incarceration rates. The findings of this study indicate that, allowing for time contingent relationships, only white female incarceration rates are influenced by the presence of Republican governor.

Support for theories of minority and economic threat is also affected by the intersection of gender and race. Bridges and Crutchfield (1988) found that the percentage of the population that is black impacts only total white incarceration rates, whereas this analysis

shows that it is black female incarceration rates that are affected by the size of the minority population. And, using poverty as a measure of economic threat, Yates and Fording (2005) found that the level of poverty has the same positive effect on black and white total incarceration rates. This analysis, using economic inequality (GINI index) as a measure of economic threat, indicates that greater economic inequality in a state is associated with lower white female incarceration rates and that black female incarceration rates are not affected. Together, these findings suggest that existing theories of punishment only partially explain female incarceration rates, and that scholars must consider the intersection of gender and race when developing theories to explain a state's use of incarceration.

This analysis has confirmed the importance of broadening the scope of variables used when attempting to theorize explanations for female incarceration. It has also highlighted the importance of the intersection of gender and race in determining female incarceration rates. Moreover, it has pointed to the importance of historically sensitive research methods to provide a clearer understanding. Finally, it has shown that a combination of social, political, cultural, and economic factors determine the use of incarceration as a means of formal social control of women in the U.S.

The rise in the proportion of females incarcerated in the U.S. continued in the 21st century. By 2009, the female incarceration rate was 60 per 100,000 (up from 57 in 2001). While the smaller growth, as compared to the previous two decades, is somewhat encouraging, the persistent high rate of female incarceration and continued racial disparity demand further research to more fully explain their causes.

Future Research

There are a number of limitations to this work, questions left unanswered that need to be addressed in future research. First, the finding that a higher property crime rate is associated with a smaller female incarceration rate is difficult to explain. In addition, this analysis did not determine how the different stages of the criminal justice process contribute to higher or lower, or racially alike or disparate female incarceration rates. It also did not measure a number of potentially important interactions, such as whether minority threat is a more important influence in some regions of the country, or whether the party affiliation of the governor is more or less significant depending on the religious culture or size of the minority population. Moreover, a considerable portion of the increase in black female incarceration rates is unexplained by the models; thus, there are obviously other important variables that need to be considered. One set of variables that might provide additional insight is sentencing policies directly associated with drug offenses. Finally, due to the lack of data, I was unable to measure the impact of the independent variables on rates of incarceration among Hispanic women. Since this is a growing population in the U.S. it will be important that researchers find ways to use current data to the fullest extent possible to analyze Hispanic female incarceration.

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