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CRIMINAL JUSTICE SENTENCING IN CONTEXT: THE EFFECT OF SOCIAL ENVIRONMENT ON COURTROOM DECISION-MAKING

By

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ABSTRACT

This dissertation contributes to an emerging literature in criminology on sentencing and contextual effects, first by unpacking the direct and conditioning effects of social context on sentencing decisions, and then by examining whether changes in social context, as well as state-level social context, influence sentencing. To this end, I draw on the minority threat perspective to develop hypotheses about contextual effects. Specifically, I use the minority threat perspective to develop hypotheses about how different dimensions of county-level minority threat affect courtroom decision-making differently, as well as interactively with individual offenders' race and ethnicity. I also use this perspective to develop hypotheses about the ways in which changes in social context may affect sentencing decisions. In theorizing how changes may affect sentencing severity, I also draw on the social threat perspective. Finally, I examine state-level social context and its effect, directly and interactively with county-level social context and individual offenders' race and ethnicity, on sentencing severity.

Data for this dissertation come from the State Court Processing Statistics for 1998, 2000, and 2002, which include 17,440 convicted felons in 60 urban counties across 23 states. The data are unique in that they include cases from a range of counties and states, offer extensive information on the processing of defendants, provide important demographic information—especially race and ethnicity—and information about defendants' previous contact with the criminal justice system. In addition, because the counties sampled represent courts that process a large proportion of arrestees in the U.S., findings from this dissertation should have a greater generalizability than prior studies that only focus on one state.

To develop various measures of social context at county and state levels, I extract data from the U.S. Census of Bureau, the Bureau of Justice Statistics, and the National Center for State Courts. Given the nature of the research questions and data, I use multilevel modeling techniques to test the hypotheses. Ultimately, the goal of this dissertation is to contribute to criminological and criminal justice research, as well as to policy discussions, by examining

whether the influence of social context on criminal sentencing is more nuanced than what prior research has established and by advancing the development of theoretical accounts of sentencing.

The findings highlight the significance of social context—racial and ethnic context in particular—and its nuanced effect on sentencing severity. I conclude this dissertation by discussing the implications of the findings for theory, research, and policy. I also discuss future lines of research that I intend to pursue.

CHAPTER 1

INTRODUCTION

Sentencing decisions stand at the heart of the criminal justice system and for that reason have garnered considerable attention from researchers. Overall, prior studies have focused almost exclusively on individual-level factors. These studies document that those who have committed serious crimes and have prior offenses are more likely to receive more severe punishment (e.g., Britt, 2000; Spohn, 2000; Steffensmeier and Demuth, 2000, 2001; Steffensmeier, Kramer, and Streifel, 1993; Steffensmeier, Kramer, and Ulmer, 1995; Steffensmeier, Ulmer, and Kramer, 1998; Ulmer and Johnson, 2004). A number of studies have also examined extra-legal factors and their effects on sentencing decisions. By and large, these studies show that men, minorities, and younger offenders are sentenced more harshly, even after controlling for legally relevant variables, such as crime type and prior criminal record (e.g., Steffensmeier and Demuth, 2000, 2001; Steffensmeier et al., 1998; Ulmer and Johnson, 2004).

Notably absent from sentencing research are studies that examine the social context in which offenders are sentenced (see, however, Fearn, 2005; Johnson, 2003, 2006; Ulmer and Johnson, 2004; Ulmer and Bradley, 2006). Indeed, individual-level studies typically treat social context as irrelevant for understanding courtroom decision-making. This gap merits attention from researchers for a number of reasons. First, social context may influence sentencing decisions. Research on courtroom contexts suggests that is the case (Eisenstein and Jacob, 1977; Eisenstein, Flemming, and Nardulli, 1988). Second, more broadly, social context influences a variety of social outcomes (Sampson, Morenoff, and Gannon-Rowley, 2002), and so can be expected to influence sentencing. Third, social context varies considerably along a number of dimensions (e.g., economic, social, political, and cultural) that, I argue, are likely to influence courtroom decision-making.

The lack of attention to social context may be due in part to the idea that sentencing outcomes should be determined solely by legally relevant variables. Although offender- and case-level factors do play an important role in predicting who will go to prison and who will not, and who will be in prison for a longer time period, one's immediate environment may also influence courtroom decision-making. An example illustrates this point. Consider two offenders convicted

of first-degree murder but sentenced in two courthouses located in distinctively different counties. One defendant is sentenced in a county that is crime-ridden and has a relatively high homicide rate, but the other is sentenced in a county that has a low homicide rate. Is it possible that different sanctions will be imposed on these two defendants, even though the two offenders share the same characteristics? The convicted murderer in the crime-ridden county may receive the most severe sanction (e.g., the death penalty or life imprisonment) because the courtroom actors may view crime, especially violent crime, as a far more serious social problem. I argue that this example is plausible. The theoretical arguments and empirical research that I present in chapters 2 and 3 support the contention that social environment in fact may exert an influence on sentencing decisions.

A broader literature in criminology underscores the importance of assessing contextual effects. Since the mid-1990s, there has been a significant increase in the number of empirical studies examining the effects of social context (Sampson, Morenoff, and Gannon-Rowley, 2002: 443). Studies have investigated how community characteristics influence a range of individual-level outcomes, including health (Barret et al., 2008; Morenoff, 2003), victimization (Miethe and McDowall, 1993; Rountree, Land, and Miethe, 1994; Velez, 2001), delinquency (Peeples and Loeber, 1994), violence (Sampson, Raudenbush, and Earls, 1997; Morenoff, Sampson, and Raudenbush, 2001), policing (Mastrofski, Resig, and McClusky, 2002; Terrill and Reisig, 2003), and recidivism (Kubrin and Stewart, 2006; Reisig et al., 2007). This body of work has established a strong connection between social context and a number of individual-level social outcomes. Although social context has become a prominent focus in criminological research, far less attention has been paid to examining contextual influences on sentencing.

Below, I discuss the background that motivated this dissertation, research gaps I aim to fill, and the proposed study. I then discuss the structure of this dissertation.

Background: Social Context in Prior Sentencing Research

In recent years, a growing number of studies have examined how social context affects sentencing outcomes. Fearn (2005) identified three approaches used in research that examines social context and its effects on individual-level sentencing decisions. The first is the "cross-jurisdictional" approach, wherein researchers study sentencing decisions across a small number of jurisdictions (Eisenstein, Flemming, and Nardulli, 1988; Eisenstein and Jacob, 1977; Kupchik,

2006; Spohn and Holleran, 2000; Ulmer, 1997; Ulmer and Kramer, 1996). These studies have provided a number of very useful and informative accounts of criminal justice decision-making. For example, Eisenstein and his colleagues have mostly relied on this cross-jurisdictional approach in developing the court community perspective (Eisenstein et al., 1988; Eisenstein and Jacob, 1977). However, this cross-jurisdictional approach has two main weaknesses (see Ulmer and Johnson, 2004). First, it precludes large-scale comparisons across more than a few jurisdictions because this approach is limited by the small number of jurisdictions compared. For instance, Eisenstein and Jacob (1977) studied criminal case processing in only three cities, namely, Chicago, Detroit, and Baltimore. Likewise, Ulmer (1997) compared sentencing outcomes in "Metro", "Rich", and "Southwest" counties. Second, this approach does not provide an insight about the specific contextual factors that may influence courtroom decision-making. For example, Eisenstein and Jacob (1977: 205) concluded that "where defendants were processed was clearly more important than who they were or what they did" after comparing the courtroom decision-making in Baltimore, Chicago, and Detroit, but it remains unknown what characteristics of these cities may affect their different sentencing practices.

The second approach is "macro-level." This approach focuses on social context and aggregate sentencing outcome measures, especially imprisonment rates (e.g., Bridges and Crutchfield, 1988; Chiricos and Delone, 1992; Liska and Chamlin, 1984; Weidner and Frase, 2003). These studies focus on the relationship between contextual characteristics (e.g., unemployment rates, racial composition, crime rates, and urbanism) and imprisonment rates. However, these macro-level studies have largely ignored court processes, especially courtroom decision-making processes, and failed to include offender and case characteristics. Therefore, the association between imprisonment rates and contextual characteristics may simply reflect differences in the types of defendants and cases that are processed across different social contexts.

The third approach relies on multilevel data, where measures of social context are used to predict individual-level sentencing decisions. Myers and Talarico (1987) presented the first contextualized sentencing research using this approach. They employed county-level indicators, including crime rates, unemployment rates, racial composition, and urbanization, to analyze sentencing severity in Georgia. They reported that sentencing outcomes varied significantly as a function of different dimensions of county-level social context.

Following the lead of Myers and Talarico (1987), several studies have included social context in predicting individual-level sentencing decisions. These studies showed small but significant direct effects of urbanization (Kramer and Steffensmeier, 1993; Steffensmeier et al., 1993), racial composition (Crawford, Chiricos, and Kleck, 1998), political party identification (Huang et al., 1996; Steffensmeier et al., 1993), and crime rates (Crawford et al., 1998). Overall, although a number of studies reported significant influences from courtroom- and community-level social contexts, this body of work has several limitations. First, most studies were limited to a single state (e.g., Pennsylvania and Georgia), so any identified effect of social context on sentencing may be unique to the state under study. Second, these studies often have relied on regression techniques that may overstate the statistical significance of contextual influences (Ulmer and Johnson, 2004). Third, they have focused on a narrow set of theoretical accounts of contextual influences.

More recently, studies have used more appropriate multilevel models in their investigations of social context and its effect on sentencing decisions (e.g., Britt, 2000; Fearn, 2005; Kautt, 2000; Ulmer and Johnson, 2004; Weidner, Frase, and Schultz, 2005). Here, again, these multilevel studies have employed a narrow spectrum of theoretical accounts for contextual influences on sentencing. Further, these multilevel studies have mostly focused on a single state, typically using sentencing data from Pennsylvania (e.g., Britt, 2000; Johnson, 2006; Ulmer and Johnson, 2004; Ulmer and Bradley, 2006) (but see Fearn, 2005; Helms and Jacobs, 2002; Weidner et al., 2005). Finally, these studies have suffered from several methodological limitations, including problems with how dependent variables are measured, selection bias, and unaddressed spatial autocorrelation. I discuss these methodological limitations in greater detail, and describe how I plan on addressing these concerns in Chapter 4.

Research Gaps

Among the variety of theoretical accounts examined, one avenue of research that has garnered particular attention has been studies that have examined the minority threat perspective. Here, the focus has been on identifying whether minority presence in a jurisdiction is positively associated with individual-level sentencing decisions (e.g., Britt, 2000; Fearn, 2005; Helms and Jacobs, 2002; Ulmer and Johnson, 2004). Although these previous multilevel sentencing studies have contributed to research theoretically and methodologically, important questions remain. The

first concerns the effect of levels of minority threat on sentencing decisions. For example, the extant studies provide mixed and inconclusive evidence regarding the association between minority presence in an area and sentencing severity, with some finding a positive association and some finding none. Also, although Eitle, D'Alessio, and Stolzenberg (2002: 558) have advocated for studies that assess the influence of distinct measures of racial and ethnic threat, the extant studies have only examined the association between minority population size and sentencing severity. Therefore, it remains unknown how and to what extent different dimensions of minority threat may affect sentencing decisions. In addition, it remains unknown whether different dimensions of minority threat may have differential effects on minority offenders vs. white offenders.

Second, prior sentencing research has ignored changes in social context, thus it is unknown how changes in social context may affect individual-level sentencing decisions. This gap is important and notable because theoretical accounts of sentencing often implicitly assume a change in social context, or, as I argue, should anticipate change effects. The third is related to state effects. More specifically, although theories indicate that a broader social environment, such as states, may exert an effect on sentence severity directly and indirectly, state-level social environment has rarely been examined in sentencing research. Thus, researchers still do not know whether state-level social environment directly affects individual sentencing decisions, or if it moderates the effect of county-level social environment and individual offenders' race and ethnicity.

Not the least, previous sentencing research is characterized by several methodological limitations, including problems with how dependent variables are measured, omitted variable bias, selection bias, inappropriate statistical models, and unaddressed spatial autocorrelation. In addition, the generalizability of prior research is largely unknown because of its focus on one state (e.g., Pennsylvania and Georgia) or the federal system.

The Proposed Study

The first goal of this dissertation is to contribute to an emerging literature in criminology on sentencing and contextual effects, first by unpacking the direct and conditioning effects of social context on sentencing decisions, and then by examining whether changes in county-level social context, as well as state-level social context, influence criminal sentencing.

The second goal is to contribute to policy debates and discussions that aim at improving sentencing practices and removing disparities. Understanding how social context influences courtroom decision-making may have important policy implications. In an era when many states have created a wide range of new sentencing practices (e.g., sentencing guidelines) to reduce inconsistency in sentencing, it is especially important to identify whether and how individual-level sentencing decisions are shaped by their surrounding communities. If social context indeed affects sentencing, that runs counter to the goal of increased consistency in sentencing. Accordingly, policies would need to be developed to address and remove this source of inconsistency and disparity.

In this dissertation, the main theoretical perspective I draw on to develop hypotheses about contextual effects is the minority threat perspective. The main empirical prediction derived from this perspective in sentencing research is that ecological measures of racial and ethnic threat are positively related to sentencing severity. In theorizing how changes may affect sentencing decisions, I draw on the minority threat perspective and the social threat perspective. Collectively, these perspectives provide the theoretical foundation for developing hypotheses in three separate sets of analyses I present in chapters 5, 6, and 7. In Chapter 5, I examine direct and conditioning effects of social context on sentencing severity. In Chapter 6, I investigate the effects of changes in social context, arguing that theoretical perspectives could be equally applied to the effects of changes in social context on criminal sentencing. In Chapter 7, I assess the effects of state-level social context on sentencing decisions. I further examine whether state-level social environment conditions the effects of county-level social contextual influences, and whether the interaction effect between county- and state-level social context is more pronounced for minority groups (blacks and Hispanics), as opposed to white offenders.[1]

Data for this dissertation come from the State Court Processing Statistics for 1998, 2000, and 2002, which include 17,440 convicted felons in 60 urban counties across 23 states. The data are unique in that they offer extensive information on the processing of defendants, provide important demographic and case information, and include a range of counties and states, which enable me to study state effects on individual-level sentencing decisions. In addition, because the counties sampled represent courts that process a large proportion of arrestees in the U.S., findings

[1] In this dissertation, social ecology, social context, social environment, and social conditions are used interchangeably.

from analyzing the data should have a greater generalizability than prior studies that only focus on one state. In addition, to collect various measures of social context, I extract data from the U.S. Census of Bureau, the Bureau of Justice Statistics, and the National Center for State Courts. Given the nature of the research questions and data that are used to address these questions, I use multilevel modeling techniques to test all the hypotheses. Ultimately, the goal of this dissertation is to contribute to criminological and criminal justice research by examining whether the influence of social context on criminal sentencing is more nuanced than what prior research has established and by advancing the development of theoretical accounts of sentencing.

Outline of this Dissertation

This dissertation is organized as follows. Chapter 2 provides a review of relevant theoretical and empirical research. Chapter 3 articulates the theoretical foundation and hypotheses for this dissertation. Chapter 4 describes the data, measures, and methods. Chapters 5 through 7 collectively examine the effects of social context on courtroom decision-making. More specifically, Chapter 5 assesses how county-level social context, levels of different dimensions of minority threat in particular, influences sentencing decisions. Chapter 6 investigates whether changes in county-level social context, changes in minority threat and social threat in particular, affect courtroom decision-making. Chapter 7 examines whether state-level social context, racial and ethnic context in particular, affects sentencing decisions directly, and also whether it moderates county-level social context and individual offenders' race and ethnicity. Chapter 8 concludes with a summary and discussion of the dissertation's implications for theory, research, and policy, emphasizing the need for theories that can account for more nuanced and various effects of social context on courtroom decision-making and for analytic strategies adequate for estimating such influences.

CHAPTER 2

BACKGROUND

> *Courtroom workgroups decide defendants' fates. But to understand their functioning we must also examine the environment in which they operate. Workgroups are not autonomous organizations totally isolated from the outside world and impervious to its pressures. On the contrary, they are highly dependent on their environment; they depend on decisions made by others for their very existence.*
>
> — Eisenstein and Jacob (1977: 40)

Let us first think about why social context may matter for sentencing decisions. Consider the following situations. Imagine that defendants convicted of the same offense are sentenced in two dramatically different counties, where one county is experiencing a high level of poverty and unemployment, and the other county is wealthy. Imagine that a minority defendant is sanctioned in an ethnically heterogeneous community and another minority defendant of similar background is sentenced in a mostly white community. Imagine that a defendant is sentenced in an environment where most residents embrace a "law-and-order" ideology and another defendant of similar background is sentenced in an environment where most residents embrace a more liberal ideology. Imagine that a defendant is sanctioned in a context where most residents belong to fundamentalist congregations and another defendant is sentenced in a context where rather few residents belong to such groups. Finally, imagine that a defendant is sanctioned in a state that has three-strikes laws, and then a similar defendant is sentenced in a state that does not have such laws. If social context does not matter in any of the scenarios listed above, then defendants will receive similar sentences. Based on what contextual studies in criminology largely show, however, that situation seems unlikely. If such relationships between social context and sentencing severity exist, it will be important to identify and explain such relationships in theorizing criminal justice decision-making (Bernard and Engel, 2001: 20), and sentencing in particular. In addition, identifying relationships between social context and individual-level sentencing decisions should be of particular significance for policy discussions and debates, because sentencing decisions, by law, are supposed to be determined solely by legally relevant variables.

As indicated in Chapter 1, the goal of this dissertation is to contribute to an emerging literature in criminology on sentencing and contextual effects. To achieve this goal, I examine three sets of research questions. First, does county-level social context affect sentencing severity? Further, does county-level social context amplify the effects of individual-level factors on sentencing? Second, do changes in social context influence sentencing decisions? In addition, do change effects vary based on baseline levels of social context? Third, does state-level social environment exert an effect on individual-level sentencing decisions? Also, do state-level social conditions amplify the effects of county-level social conditions on courtroom decision-making? And does the interaction between county- and state-level social conditions generate a more pronounced effect on sentencing severity for minority offenders, as opposed to for white offenders? Addressing these three sets of questions collectively contribute to a developing literature on sentencing and social context.

Before proceeding, a brief mention should be made to the "court community" perspective for two reasons. First, this perspective demonstrates that courtroom decision-making practices may vary across different contexts, illustrating that social context may matter. Second, the court community perspective provides guidance for researchers in their efforts to identify contextual influences that may affect courtroom decision-making.

Put simply, the court community perspective views courts as communities (Eisenstein, Flemming, and Nardulli, 1988; Eisenstein and Jacob, 1977) or social worlds (Ulmer, 1997). It argues that sentencing varies across courts depending on courtroom participants' shared workplace, interdependent working relations between key sponsoring agencies (the prosecutor's office, judges, and defense attorney), and distinct local legal and organizational cultures. These local cultures shape formal and informal case processing and sentencing norms, thus producing possible variations in case processing and sentencing outcomes (see Dixon, 1995; Eisenstein et al., 1988; Eisenstein and Jacob, 1977; Kupchik, 2006; Ulmer, 1997). More specifically, judges' attitudes toward defendants, crime, and criminal justice have at least some correspondence with local political attitudes and culture, no matter how judges are recruited (Eisenstein and Jacob, 1977: 45). In addition, because counties generally are responsive for building and maintaining courthouses and other physical facilities for courts, courtroom actors must compete for funding to maintain and operate courts. Therefore, due to the dependence of courts on local and state appropriating authorities, courtroom actors must have at least some sensibility and be responsive

to the demands at local and state levels (Eisenstein and Jacob, 1977: 55-56). In addition to pressures from the prosecutors' office, defense attorney, and police, courtroom actors must also adapt to pressures from the legislature, appellate courts, prisons, the media, and political authorities (Eisenstein and Jacob, 1977: 60). Overall, sentencing practices may vary across jurisdictions because courtroom contexts may be different.

The contention that individual judges are constrained in their sentencing decisions was supported by the work of Eisenstein and his colleagues. For example, after comparing the courtroom decision-making in Baltimore, Chicago, and Detroit, Eisenstein and Jacob (1977) concluded that "where defendants were processed was clearly more important than who they were or what they did" (p. 205). As a result, criminal courts may respond to and reflect the social, economic, and political characteristics of their court communities, and individual judges are constrained in their sentencing decisions by these characteristics. In this dissertation, I primarily focus on the racial and ethnic context in which judges operate and that may limit and determine sentencing decisions. In Chapter 7, I also examine changes in other aspects of county-level social context (e.g., number of immigrants, poverty, racial and ethnic economic inequality) and their effects on sentencing severity. If such influences of social context exist, they presumably operate through courtroom communities. I, however, will not observe the court communities. Instead, I will investigate the social environment in which judges operate and its effect on individual-level sentencing decisions.

Direct and Conditioning Effects of Social Environment

Here, I provide the background for analyses that are presented in Chapter 5—direct and conditioning effects of social environment on sentencing decisions. Drawing on the minority threat perspective, I examine direct effects of county-level social context on sentencing outcomes. Further, I turn attention to conditioning effects of social context on offenders' race and ethnicity.

Criminal Justice Sentencing in Social Context

When exploring the effects of social context on courtroom decision-making, researchers have employed the minority threat perspective (Bontrager, Bales, and Chiricos, 2005; Britt, 2000; Crawford, Chiricos, and Kleck, 1998; Fearn, 2005; Helms and Jacobs, 2002; Johnson, 2006; Myers and Talarico, 1987; Ulmer, 1997; Ulmer and Johnson, 2004; Weidner, Frase, and Schultz,

2005). They examined the role of racial or ethnic composition in individual-level sentencing decisions and generated mixed findings. For example, Myers and Talarico (1987), together with Britt (2000) and Weidner et al. (2005), found that all offenders were more likely to be imprisoned in jurisdictions with larger black populations. Bridges and Crutchfield (1988) revealed that percent black was positively related to black/white disparity in aggregate sentencing severity. However, Helms and Jacobs (2002), Kautt (2002), Ulmer (1997), Ulmer and Johnson (2004), and others failed to find support for a direct relationship between individual sentencing decisions and black population size in a county. Further, when examining the conditioning effect of minority concentration on race, previous studies provided divergent findings. For example, whereas Britt (2000) discovered that black percentage weakened the effect of race on sentence length, Ulmer and Johnson (2004) found that minority concentrations amplified race and ethnicity effects—that is, black and Hispanic defendants were sentenced for a longer time period in counties with greater concentrations of blacks or Hispanics.

Although I primarily focus on the minority threat perspective and Chapter 6 also investigates the social threat perspective, it bears mention briefly that multilevel sentencing studies have also examined other characteristics of county-level social context and their effects on individual-level sentencing decisions. For example, Myers and Talarico (1987), Britt (2000), and Helms and Jacobs (2002) have provided direct tests of the relationship between contextual economic conditions and individual-level sentencing decisions. Myers and Talarico (1987) found that higher unemployment rates led to slightly greater probabilities of incarceration, but greater racial income inequality reduced sentence lengths for all offenders. Myers and Talarico (1987) also documented evidence that black offenders were punished more severely in communities with high unemployment rates. Britt (2000) found that offenders living in areas with increasing unemployment rates were likely to receive longer prison sentences. However, Helms and Jacobs (2002) failed to find a statistically significant relationship between economic conditions in an area and sentencing severity.

In addition, evidence concerning the effect of crime rates on sentence severity is mixed. For example, Myers and Talarico (1987) revealed no effect of street crime on the likelihood of incarceration, but found a positive effect of crime rates on sentence length. Nonetheless, Helms and Jacobs (2002), as well as Crawford et al. (1998), found a positive effect of violent crime rates on sentencing severity.

Researchers have also examined the link between political conservatism in a jurisdiction and sentencing decisions (Fearn, 2005; Helms and Jacobs, 2002; Kramer and Steffensmeier, 1993; Steffensmeier et al., 1993; Steffensmeier et al., 1998; Ulmer and Johnson, 2004). They have examined the relationship between the Republican Party identification and sentencing severity and found mixed evidence. For example, Helms and Jacobs (2002) found a positive association, but Ulmer and Johnson (2004) found none. In addition, Fearn (2005) found that religious ideology affected the likelihood of receiving a prison sentence relative to a jail sentence, but not on the likelihood of prison versus non-custodial sanctions, and jail versus non-custodial sanctions.

In sum, previous research concerning the effects of social context on sentencing has substantially advanced our knowledge of the contextual factors that may influence courtroom decision-making. In particular, previous multilevel studies have examined direct effects of racial and ethnic context (e.g., Fearn, 2005; Ulmer and Johnson, 2004; Weidner et al., 2005), and some have tested the conditioning effects of social context on race and ethnicity (e.g., Britt, 2000; Helms and Jacobs, 2002; Ulmer and Johnson, 2004). However, several questions remain. For example, we do not know whether different dimensions of racial and ethnic threat will have differential effects on sentencing severity, and whether different dimensions of racial and ethnic threat will produce differential effects for racial and ethnic minority offenders, as opposed to for white offenders. Much less known is whether different dimensions of racial and ethnic threat will produce differential effects on different criminal sanction types. Not the least, the results of the bulk of the extant studies may reflect only those sentencing practices in the federal system and in one state (e.g., Pennsylvania and Georgia). Thus, we do not know whether the identified findings concerning racial and ethnic context could be generalized to other states. In other words, if county-level racial and ethnic context affects sentencing decisions within one state, we do not know whether this effect crosses state boundaries.

Race and Ethnicity and Their Effects on Sentencing

Not only does Chapter 5 examine direct effects of ecological measures of minority threat, it also assesses the effect of individual-level minority threat, as reflected by defendants' race and ethnicity. In addition, I also investigate whether different levels—in this case, individual and county levels—of minority threat will interact to produce tougher criminal sanctioning for

minority offenders. Below, I discuss theoretical accounts for race and ethnicity effects on sentencing, followed by the empirical literature on these effects.

Before proceeding, it bears emphasizing that a number of studies have investigated to what extent criminal justice decisions, and sentencing decisions in particular, are influenced by race and ethnicity. A growing number of studies have also explored the joint effects of race (and ethnicity) and sex (Leiber and Mark, 2003; Spohn and Holleran, 2000; Steffensmeier et al., 1998). These studies have produced less than uniform findings concerning race effects (see Sampson and Lauritsen, 1997). Given the mixed evidence, Sampson and Lauritsen (1997) concluded that one of the most promising lines of inquiry for uncovering discrimination patterns involves the contextual analyses of criminal justice outcomes. For example, as many have argued (e.g., Britt, 2000; Chiricos and Crawford, 1995; Myers and Talarico, 1987; Peterson and Hagan, 1984; Sampson and Laub, 1993), the key to resolving racial differences in sentencing may turn in large part to contextual differences. Thus, an important theoretical and research gap concerning social context and sentencing is to unpack the conditioning effects of social context on offenders' race and ethnicity on courtroom decision-making.

The "focal concerns" perspective has been employed as an important theoretical account for race and ethnicity effects on sentencing severity. The roots of this perspective were articulated by Steffensmeier (1980) and later expanded by Steffensmeier and his colleagues (e.g., Steffensmeier and Demuth, 2000, 2001; Steffensmeier et al., 1993; Steffensmeier et al., 1995; Steffensmeier et al., 1998; Ulmer, 1997; Ulmer and Johnson, 2004). According to the focal concerns perspective, judges and other court community actors rely on three focal concerns to reduce the uncertainty in sentencing: defendants' blameworthiness, defendants' dangerousness and community protection, and practical constraints and consequences associated with the sentencing decisions. The focal concerns perspective argues that judges define defendants with respect to these three focal concerns and then determine sentencing decisions. Thus, race and ethnicity effects on sentencing severity may be due to their link to these focal concerns.

Recent research on sentencing has examined how the effect of race on sentencing outcomes is contextualized (Sampson and Lauritsen, 1997). For example, Chiricos and Crawford (1995) reviewed 38 studies on race and sentencing, and found that most studies showed that blacks were more likely to be sentenced to prison than whites, but there was no pattern of racial disparity in sentence length. They also found that black defendants were more likely to receive

imprisonment in areas with high unemployment, great minority presence, and in the South. In addition, Spohn (2000) reviewed studies that analyzed race effects on state and federal sentencing decisions. She found that racial minorities were sentenced more harshly than whites if they were young and male, or if they were convicted of less serious crime or drug offenses. The findings of several recently published studies on sentencing decisions in state courts (Spohn and Holleran, 2000; Steffensmeier and Demuth, 2001) and in federal courts (Everett and Wojtkiewicz, 2002; Steffensmeier and Demuth, 2000) reached a similar conclusion of a black disadvantage and a white advantage in incarceration decisions but small or negligible black-white differences in sentence-length decisions. Most recently, Mitchell (2005) conducted a meta-analysis of 71 published and unpublished studies, which indicated that blacks generally were sentenced more harshly than whites, but the magnitude of this race effect was small and highly variable.

Compared to the number of studies examining race effects on criminal sanctions, far fewer sentencing studies investigated Hispanic-white differences on sentence severity, due partly to the smaller number of Hispanics in many local areas and the frequent practice of classifying Hispanics into the "white" racial category (Steffensmeier and Demuth, 2001). However, Steffensmeier and Demuth (2006: 243) have argued that the scarcity of sentencing research on Hispanics is particularly alarming, given that Hispanics are the fastest growing minority group in the U.S. Indeed, recent studies have presented evidence that Hispanic defendants were sanctioned more harshly than whites and sometimes even blacks (e.g., Engen and Gainey, 2000; Spohn and Holleran, 2000; Steffensmeier and Demuth, 2000, 2001; Ulmer and Johnson, 2004). One possibility is that Hispanics may have replaced blacks as the new racial minority to be subjected to harsher criminal punishment.

Research Gaps

Overall, the extant multilevel sentencing research has primarily focused on levels of social context and their effect on individual-level sentencing decisions. In particular, this research has examined the association between the relative size of the minority population and sentencing severity. Research gaps, however, exist in studies that applied the minority threat perspective to investigate social context and its effect on sentencing. The first gap is related to the narrow test of the minority threat perspective, because previous studies have only focused on the effect of minority presence in an area and paid little attention to different dimensions of

minority threat (e.g., economic threat and power threat). This gap is notable because Blalock (1967) has conceptualized different forms of minority threat and Eitle, D'Alessio, and Stolzenberg. (2002) have called for an examination of different dimension of minority threat.

The second gap concerns the interactive effects between social context and offender characteristics, in particular, offenders' race and ethnicity, which is notable on at least two fronts. First, testing the interaction effects between defendants' race and ethnicity and ecological measures of racial and ethnic context is motivated by theoretical accounts of the minority threat perspective. Specifically, Stolzenberg, D'Alessio, and Eitle (2004) have called for multilevel tests of this perspective and for testing the interaction effect between ecological measures of minority threat and individuals' race and ethnicity. Second, contextualizing the effects of race and ethnicity can help develop our understanding on why the effects of race and ethnicity are more powerful in some jurisdictions, whereas racial and ethnic disparities do not exist in other jurisdictions. In addition, assessing the interaction effects across different levels of minority threat respond to calls to investigate how certain factors may amplify the effects of others (Agnew, 2005). When analyzing factors that determine sentencing severity, researchers often default to linear models, according to which factors influence sentencing independently. However, this research practice runs counter to empirical reality where "the effect of one life domain on another is influenced or conditioned by the remaining life domains, so the life domains interact in affecting one another" (Agnew, 2005: 117). Therefore, testing the interaction effects between offenders' race and ethnicity and county-level ecological measures of minority threat answers calls for a more complete examination of the minority threat perspective, and may enhance our understanding of how and to what extent sentencing disparities are produced across jurisdictions.

The Effects of Changes in Social Environment

Here, I provide the background for analyses I present in Chapter 6. Building off of the discussion of background for Chapter 5, Chapter 6 specifically focuses on a related question: do changes in social context affect sentencing decisions?

In examining the effects of social context on courtroom decision-making, most empirical research has restricted its focus to levels of social context. With only one exception, no prior study has assessed how changes in social context affect courtroom decision-making. The sole

exception—Britt (2000)—found that offenders sentenced in areas with increasing unemployment rates were likely to receive longer prison sentences.

This neglect of changes in social context is notable because change effects flow from theoretical arguments in sentencing, and the minority threat and social threat perspectives in particular. The argument about changes in ecological measures of minority threat and social threat is different from the one about levels of such threat. It bears mention that a focus on change effects is more prevalent in other social science disciplines. For example, economists have looked at both the level of unemployment and change in the unemployment on wage inflation, and found that the level of unemployment exerted very weak pressure on wage inflation, especially in the U.S.; by contrast, the effect of changes in the unemployment rate was always statistically significant in predicting wage inflation for both the U.S. during 1892-1987 and U.K. during 1857-1987 (see Alogoskoufis and Smith, 1991). In addition, several researchers have assessed the effect of changes in black population size on racially motivated crime (Green, Strolovitch and Wong, 1998) and whites' punitive attitudes (King and Wheelock, 2007). Most recently, researchers have also examined how neighborhood socioeconomic change affects health outcomes (e.g., Barret et al., 2008).

Changes in Social Environment

Prior multilevel sentencing studies have employed measures that reflect the levels of social context. For example, Ulmer and Johnson (2004) examined the effects of county-level minority concentration and conservative political electorates on sentence severity. Likewise, Helms and Jacobs (2002) investigated the effects of county-level political conservatism, violent crime rates, minority concentration, and unemployment on sentencing decisions. As discussed in the background section for direct and conditioning effects of social context, previous studies have produced divergent findings concerning the effect of social context (levels) on sentencing decisions.

Notably, theses studies entirely ignored the effect of changes in social context. At the same time, theories are compatible with changes in social context. Imagine that two counties have similar levels of poverty where one county has experienced a sharp increase in poverty, but the other has a relatively stable level of poverty. Whereas residents in both counties may see poverty at a certain level as normative, a large increase in poverty may elicit a high level of fear and anxiety in the public, which in turn, contributes to escalating pressure on criminal justice

agencies (e.g., prosecutors and judges) to impose more severe criminal punishment. Thus, an increase in poverty may have a discernible effect on criminal sentencing decisions, regardless of initial levels of poverty. In a similar vein, having a certain percentage of minorities may be considered as normative. But a rapidly growing influx of minorities, especially Hispanics—a group that is perceived as comprised of illegal immigrants, may very likely cause concerns, fears, and anxiety in the public, in turn, contributing to tougher sanctioning for offenders.

In fact, demographic and socioeconomic changes are prominent in the U.S. Between 1990 and 2000, for example, the foreign-born population in the United States increased by 57% (Suro, Fry, and Passel, 2005). Juxtaposed against these changes is variation in the degree of these changes across counties. One example is a significant variation in the growth of top-half and bottom-half income inequality across the approximately 3,000 counties in the contiguous U.S. during this period. Specifically, changes in income inequality ranged from -50% to 79% for the top half of the income distribution, with a mean of 2.7%. By contrast, changes in income inequality ranged from -37% to 44% for the bottom half, with a mean of -3.0% (Regev and Wilson, 2007). Since levels of these factors (e.g., income inequality) are often hypothesized to affect sentencing decisions (e.g., Myers and Talarico, 1987), it is plausible that changes in these factors would also influence individual-level sentencing decisions.

In addition, the effect of changes in social context on sentencing decisions may vary based on baseline levels of social context. For example, a 10% increase in poverty may have a different effect on sentencing in jurisdictions with 5% baseline-level poverty, as opposed to 25% baseline-level poverty. One possible explanation is that in areas characterized by lower levels of poverty (e.g., 5%), the poor may be integrated with the middle- and upper-class groups. In such situations, when the poverty rate has increased 10% in such areas, the middle- and upper-class groups may be especially aware of such changes and, in turn, more likely to demand intensified social control—such as tougher sanctioning—to address such changes. At higher baseline levels of poverty (e.g., 25%), however, the poor may live in segregated neighborhoods, and so the middle- and upper-classes may be rather apathetic to exacerbated economic conditions. Consequently, increases in poverty in these areas would not transfer into a demand for tougher criminal sanctioning. Therefore, although change effects on sentencing decisions are plausible, these effects have not been explored in extant sentencing research.

Overall, investigating changes in social context and their effect on individual-level sentencing decisions is important for two reasons. First, changes in social context are compatible with theoretical accounts in sentencing. Thus, employing changes in social context may provide opportunities to refine theories: is the effect of social context only restricted to levels or changes? Second, assessing the effect of changes in social context on sentencing decisions may also provide researchers an opportunity to identify a threshold level: at which point any change, such as a further increase in poverty, would generate greater or no effects on tougher sanctioning?

Research Gaps

Although theoretical accounts anticipate the effect of changes in social context on sentence severity, with the only exception of Britt (2000), empirical studies have ignored the effects of changes in social context, such as poverty, minority population size, number of immigrants, racial and ethnic economic inequality, and other community characteristics. Therefore, research gaps relate to direct and conditioning effects of changes in social context on sentencing decisions.

Though Britt's (2000) research sheds some light on the effects of changes, it is limited to only two measures of changes—unemployment and crime rates—and corresponding theoretical accounts. As a result, Britt ignored changes in other contextual measures that have significant theoretical relevance. Moreover, Britt's research only examined direct effects of changes. However, the association between changes in social conditions and sentencing severity may depend on baseline levels of social conditions. Therefore, it still remains largely unknown how and to what extent changes in communities may affect courtroom decision-making.

Chapter 6 conducts analyses that address these research gaps, thus advancing our knowledge of change effects on sentencing decisions. Drawing on the minority threat and social threat perspectives, I assess the effects of changes in social environment (e.g., minority population size, number of immigrants, poverty, racial and ethnic economic inequality). I also investigate whether the effect of changes in social environment on sentencing severity varies based on baseline levels of social conditions.

The Effects of State-Level Social Environment

Building off of prior discussions on the direct and conditioning effects of social environment, and changes in social context, I will also focus on a larger social environment—

states—and state-level effects on sentence severity. It is notable that when examining the effects of social context on courtroom decision-making, most empirical research has restricted its focus to county-level contextual measures (e.g., Britt, 2000; Johnson, 2006; Ulmer and Johnson, 2004; Ulmer and Bradley, 2006; Weidner et al., 2005). However, state-level social context may matter in affecting individual-level sentencing decisions. Given that state-level social environment is found to produce significant effects on incarceration rates (Greenberg and West, 2001), this effect of state-level social context may be operated in part through its effect on individual-level sentencing decisions. Therefore, state effects merit investigation in multilevel sentencing research.

State-Level Social Environment

One observation relevant to state-level social environment and its effect on individual-level sentencing decisions is that states vary considerably in their incarceration rates. For example, at midyear 2002, Louisiana had the highest incarceration rate (799), and Maine had the lowest incarceration rate (137). The ratio of the largest state incarceration rate to the smallest was around 6 (Harrison and Karberg, 2003). In addition, Rhode Island had the largest prison population growth rate from June 30, 2001 to June 30, 2002 (17.4%), and Illinois had the largest prison population reduction rate (-5.5%). States also exhibited substantial variations in the ratio of black-to-white incarceration, ranging from a high of 13.6-to-1 in Iowa to a low of 1.9-to-1 in Hawaii (Mauer and King, 2007).

State-level social environmental characteristics may exert an effect on sentencing decisions for at least two reasons. First, criminal justice policies and laws are set predominantly at the state level. Departments of corrections, parole boards, and sentencing commissions are state-level agencies. The laws and legal policies of states, such as those governing sentencing and parole, have important effects on sentencing decisions. Proposals for sentencing reform, most of which are designed to reduce or eliminate sentencing disparities and judicial discretions, have also been developed at the state level (Shane-DuBow et al., 1985).

More specifically, an examination of sentencing laws across states suggests that sentencing practices across states could differ significantly. States that have sentencing guideline systems include Arkansas, Delaware, Florida, Kansas, Maryland, Michigan, Minnesota, Missouri, North Carolina, Ohio, Oklahoma, Oregon, Pennsylvania, South Carolina, Utah, Virginia, and Washington. Even among states that have established sentencing guideline systems,

their sentencing guidelines vary. For example, sentencing guidelines are voluntary in Maryland, Missouri, Ohio, and Virginia. Further, sentencing statutes differ across states significantly (Rottman et al., 2000). In addition, the felony sentence range is different across states. For example, felony sentence ranges from no minimum to the death penalty in South Dakota, but felony sentence ranges from 5 years to the death penalty for 1st and 2nd degree crime in New Jersey. In the meantime, Weidner and Frase (2003) reported that availability of intermediate sanctions had a negative effect on percentage imprisoned: judges were less likely to impose prison sentences if there were alternative sanctions available. Juxtaposed against this finding is the fact that states vary in their intermediate sanctions available. For example, among five intermediate sanctions—intensive probation, work release, house arrest, electronic monitoring, and shock incarceration—the District of Columbia has only an electronic monitoring program available, and Florida has all five sanctions available.

In a similar vein, states vary in their state court organization which is controlled and regulated through statewide agencies. As such, states have different systems for selection and terms of trial court judges (Rottman et al., 2002). For example, trial judges may be selected by partisan election (e.g., Alabama), or by nonpartisan election (e.g., California), or appointed by governors (e.g., Colorado). This observation may be of importance because elected judges may be more responsive to the local political attitudes and culture (Eisenstein and Jacob, 1977). In addition, states have different sentencing procedures, and judges may have more discretion in some states relative to others. This discretion, available to judges in some states, could influence individual sentencing outcomes.

Second, studies that examined variations in incarceration rates across states have pointed to a number of state-level contextual factors that may influence individual-level sentencing decisions. For example, Greenberg and West (2001), along with other scholars, have argued that such factors as state crime rates, racial composition, unemployment, poverty, and political culture may influence incarceration rates (e.g., Arvanites and Asher, 1995; Beckett and Western, 2001; Greenberg and West, 2001; McGarrell, 1993; Michalowski and Pearson, 1990; Oitmet and Tremblay, 1996; Stucky et al., 2005). In sum, the previous studies on interstate variation in prison use have established that some state-level predictors predict imprisonment rates, and yielded some consistent findings. Notably, these are the same set of factors that researchers have used to predict individual-level sentencing decisions. This overlap suggests that state-level social

environment may affect individual-level sentencing decisions, and that there may be interaction effects between state- and county-level social contexts.

Building off of the above discussions, state-level social environment may have a direct effect on individual sentencing decisions. Greenberg and West (2001: 618) argued that state-level imprisonment rates are "produced by decisions made by different agencies and actors (e.g., legislatures, governors, police, prosecutors, judges and juries, and parole boards) with different agendas, constituencies, incentives, and constraints." Whereas police, prosecutors, judges and juries work at the local level, other decision makers (e.g., legislators, governors, and parole boards) work at the state level. Drawing on the theoretical foundation, which I describe in detail in Chapter 3, state-level social environment may affect individual criminal sentencing directly. In addition, the effect of state-level social environment may be more discernible in some counties than others, and the interaction between county- and state-level social contexts may generate more pronounced effects on minority offenders, as opposed to white offenders.

Most multilevel sentencing studies have used data from a single state (e.g., Britt, 2000; Johnson, 2006; Ulmer and Johnson, 2004; Ulmer and Bradley, 2006), which has precluded them from investigating state effects on individual-level sentencing decisions. By contrast, a few studies have used data from multiple states and attempted to model state effects when examining the impact of county-level social context on sentencing decisions (Fearn, 2005, Helms and Jacobs, 2002, Weidner et al., 2005). Specifically, by including state dummies (e.g., Helms and Jacobs, 2002) or incorporating sentencing guideline variables (e.g., Fearn, 2005; Weidner et al., 2005), these studies have found significant state effects on sentencing decisions. For example, states that had sentence guideline systems sanctioned their defendants less severely (Weidner et al., 2005).

Research Gaps

Despite previous discussions about state effects on sentencing, the existing literature has not focused on state-level social context and its effect on individual-level sentencing decisions. This is in part due to the data limitation pertaining to these previous studies. To examine the effect of state-level context, we need to have data from multiple states. However, this data limitation should not hinder research efforts to examine the effect of state-level social environment on individual-level sentencing outcomes.

As the few exceptions, Fearn (2005), Helms and Jacobs (2002), and Weidner et al. (2005) shed some light on state effects on sentencing decisions, but the effect of state-level context on sentencing remains largely unknown because the modeling strategy of using state dummies precluded researchers to find out what aspects of state-level social context affect sentencing decisions (e.g., Helms and Jacobs, 2002), and studies that included sentencing guideline variables did not investigate any theoretically important state-level predictors (e.g., Fearn, 2005; Weidner et al., 2005). In addition, it remains unknown whether state-level social context may amplify the effect of county-level social context, and whether the interaction between county- and state-level social contexts may result in tougher sanctioning for minority groups vs. white offenders.

Incorporating the work of prior studies, Chapter 7 is designed to analyze the effects of state-level social environment on individual-level sentencing decisions. I first assess direct effects of state-level predictors, and then I examine whether state-level social context modifies the effect of county-level social context and individual-level factors.

Summary

As stated in Chapter 1, the goal of this dissertation is to contribute to an emerging literature in criminology on sentencing, and contextual effects in general, first by unpacking direct and conditioning effects of social context on offender characteristics, and then by examining whether changes in social context, as well as state-level social environment, may influence criminal sentencing. I also explore whether the effect of changes in social context varies depending on baseline levels of social context. In addition to testing direct effects of state-level social environment on individual-level sentencing severity, I also assess whether state-level social conditions moderate the effect of county-level social context on courtroom decision-making, and whether the interaction between county- and state-level social contexts generates a more pronounced disadvantage for minority offenders, as opposed to white offenders.

To achieve the goal of this dissertation, I examine three sets of research questions related to direct and conditioning effects of social context, changes in social context, and state-level social environment. The three sets of research questions stem from the need for a multi-dimensional understanding in courtroom decision-making. As described in this chapter, it may be fruitful to examine a number of ways in which social context may influence sentencing. This

dissertation, therefore, collectively contributes to a developing literature by examining the multifaceted nature of social context and its effect on individual-level sentencing decisions. I next turn to the discussions about theoretical foundation and hypotheses in Chapter 3.

CHAPTER 3

THEORETICAL FOUNDATION

As discussed in previous chapters, prior sentencing literature, though relatively small, has established the significance of social context in affecting courtroom decision-making (e.g., Britt, 2000; Eisenstein and Jacob, 1977; Eisenstein et al., 1988; Fearn, 2005; Helms and Jacobs, 2002; Ulmer and Johnson, 2004; Weidner, Frase, and Schultz, 2005). In particular, one avenue of research that has garnered considerable attention is the minority threat perspective, and previous studies have examined this perspective by identifying whether there is an association between minority presence in a jurisdiction and individual-level sentencing decisions (e.g., Britt, 2000; Fearn, 2005; Ulmer and Johnson, 2004; Weidner et al., 2005). These studies have advanced our knowledge of how racial and ethnic minority presence may affect individual-level sentencing decisions, however, several questions and issues remain unaddressed. First, it remains unknown how different dimensions of racial and ethnic context may affect sentencing severity differently. Even less is known about how and to what extent different dimensions of minority threat may produce differential effects for racial and ethnic minorities vs. white defendants.

Second, prior sentencing research, as well as the social context literature, has restricted its focus to levels of social context. However, most, if not all, theoretical perspectives in sentencing are compatible with changes in social context, and changes may have a discernible effect on courtroom decision-making. In addition, the effect of changes in social context may vary depending on baseline levels of social context.

Third, prior multilevel sentencing research has mostly limited its attention to county-level social context and its effect on individual-level sentencing decisions. Nonetheless, state-level social environment may exert an influence on individual-level sentencing decisions. In addition, the effects of county-level social context on sentencing decisions may be conditioned—amplified or diminished—by state-level social context, and county- and state-level social contexts may combine to further exacerbate racial and ethnic disparities in sentencing practices. Overall, the effects of social context may be more nuanced than prior multilevel sentencing research literature has established. Next, I discuss theoretical foundation and hypotheses for analyses presented in chapters 5, 6, and 7, respectively.

Direct and Conditioning Effects of Social Environment

Chapter 5 is designed to examine direct effects of county-level social context on courtroom decision-making. Chapter 5 also aims to investigate interactive effects between social context and offenders' race and ethnicity. In Chapter 5, I begin by testing hypotheses related to direct effects of social ecology on sentence severity. Then I assess hypotheses related to interactions between social ecology and individuals' race and ethnicity on sentencing decisions. These hypotheses are derived from the minority threat perspective.

The Minority Threat Perspective

According to the minority threat perspective, in communities with a large percentage of minorities, courtroom actors are more punitive toward individuals that come into contact with the criminal justice system. Blalock (1967) was the first to theorize minority threat. He argued that a growing minority population poses a threat to a white majority. More specifically, the minority threat perspective suggests that as the relative size of the minority group increases, members of the majority group may perceive a growing threat and take actions to reduce the competition from the minority group (Blalock, 1967). He maintained that the source of perceived threat can assume two distinct forms: economic and power threat. In terms of economic threat, Blalock hypothesized that as minorities compete for jobs, positions, and economic resources, they may increasingly become a threat to the economic well-being of whites. With respect to power threat, Blalock proposed that as the relative size of the minority population increases, whites may increasingly perceive minorities as a threat to political power. As a result of these forms of threat, whites may demand to intensify social control to maintain their dominance and power. In addition, Blalock (1967: 145) argued that the relationship between both forms of threat and social control would be curvilinear, though the forms of nonlinearity should differ for economic threat as opposed to power threat. More specifically, higher levels of threat should lead to greater levels of social control. However, the positive association between minority economic threat and social control should be less pronounced in areas marked by higher levels of minority economic threat, what Blalock termed a *decelerating* threat effect. By contrast, the positive association between minority power threat and social control should be more pronounced in areas characterized by higher levels of minority power threat, what Blalock termed an *accelerating* threat effect.

In addition to economic threat and power threat, researchers have also conceptualized criminal threat as a distinct form of minority threat, racial threat in particular (Chiricos et al., 2004; Crawford et al., 1998; Liska and Chamlin, 1984). For example, Gibbs (1988: 2) stated that "black males are portrayed by the mass media in a limited number of roles, most of them deviant, dangerous, and dysfunctional." Similarly, Quillian and Pager (2001: 724) argued that young black men are more likely to induce crime-prone perceptions, because they fit the portrait of a typical street criminal, and have long been seen as a potential source of trouble and problems. As a result of this form of threat, there may be a demand for intensified social control from the white majority. For example, Peffley and Hurwitz (1998) documented that white respondents were more likely to approve police stops and searches of young black men walking near a drug house than of young white men.

Overall, the minority threat perspective argues that the relative size of racial and ethnic minority members in an area will be associated with the level of economic, political, and criminal threat perceived by majority members. This perceived threat, in turn, increases a demand for various aspects of formal social control among majority members, and ultimately leads to a higher level of crime control (Liska, 1992).

There is an accumulation of theoretical and empirical research testing the minority threat perspective. These works have examined racial composition (as a proxy for racial threat) in relation to a variety of social control measures, such as lynching (Corzine et al., 1983; Beck and Tolnay, 1990), the death penalty (Jacobs and Carmichael, 2002), the size and funding of police departments (Chamlin, 1989; Jackson, 1989; Kent and Jacobs, 2005; Stults and Baumer, 2007), arrest (Eitle, D'Alessio, and Stolzenberg, 2002; Liska et al, 1985; Parker et al., 2005), imprisonment (Bridges et al., 1987; Jacobs and Carmichael, 2001), and felon disenfranchisement (Behrens et al., 2003). In particular, sentencing researchers have also investigated the association between racial or ethnic composition and individual-level sentencing decisions, but the findings concerning this association differ across studies. For example, Myers and Talarico (1987), together with Britt (2000) and Weidner et al. (2005), found that offenders were more likely to be imprisoned in jurisdictions with larger black populations. However, Helms and Jacobs (2002), Kautt (2002), Ulmer (1997), Ulmer and Johnson (2004), and others failed to find support for this link.

Notably, each of these studies, regardless of the conclusion reached, provided only a narrow test of the racial and ethnic threat perspective. Specifically, they have focused on the relative size of the minority population, with little attention paid to different dimensions of minority threat. In addition, these studies have typically examined the effect of the size of the minority population on the combined category of prison and jail sentences (cf. Fearn, 2005). Thus, the largely unaddressed question is whether different dimensions of racial and ethnic threat affect sentencing decisions equally, and any identified effect influences sentencing severity equally when the outcome is prison vs. jail.

Building off of the above discussions, I examine three inter-related hypotheses that focus on individual- and contextual-level racial and ethnic threat in Chapter 5. I anticipate that the ecological effects of racial and ethnic threat will have greater effects on prison sentences than jail sentences.

Hypothesis 5.1: Black and Hispanic felons, especially black and Hispanic males, will be sentenced more harshly than other race/ethnicity and sex groups, net of other factors.

Hypothesis 5.2: Convicted felons sentenced in jurisdictions with higher levels of racial and ethnic threat will be sentenced more harshly, net of individual- and county-level controls. I first examine racial and ethnic composition, and then examine two other dimensions of threat—economic and power—not typically examined in sentencing literature.

Hypothesis 5.3: Individual-level race and ethnicity effects will be amplified by ecological measures of racial and ethnic threat. Specifically, racial and ethnic disparities in sentencing will be greater in jurisdictions marked by higher levels of racial and ethnic threat.

Collectively, tests of these hypotheses may provide a more adequate test of the minority threat perspective, and yield a more complete understanding of the ecological effects of racial and ethnic threat on individual-level sentencing decisions.

The Effects of Changes in Social Environment

The goal of Chapter 6 is to examine effects of changes in social context on courtroom decision-making. Again, with rare exceptions, previous research in criminal sentencing and social context has restricted its focus to effects of levels of social context on sentencing decisions. However, theoretical perspectives in sentencing are compatible with changes in social context, and arguments about changes in social context often flow from these perspectives. For

example, the minority threat perspective argues that a growing minority population poses a perceived threat, which, in turn, may lead to a demand for tougher sanctioning. Such an argument suggests that changes may have an independent effect on sentencing severity. For that reason and others, as identified in the background section for Chapter 6 in the previous chapter, I examine change effects, and employ the minority threat and social threat perspectives to develop hypotheses related to change effects. Below, I discuss these two perspectives, and draw particular attention to the effect of changes in social context on individual-level sentencing decisions, followed by hypotheses relevant to change effects.

The Minority Threat Perspective

As discussed in the theoretical foundation section for Chapter 5, this perspective argues that a growing minority population poses a growing threat to a white majority. The majority, in turn, demands intensified social control and ultimately higher levels of crime control, and tougher sanctioning in particular. The logic of change effects flows directly from this theoretical argument.

Tests of the minority threat perspective, however, have almost uniformly employed cross-sectional studies in which researchers examined static and contemporaneous levels—but not changes—of ecological measures of minority threat and their effect on individual-level sentencing decisions. Not the least, these studies offered mixed findings concerning the association between levels of minority threat and sentencing severity. For example, some researchers found that offenders were more likely to be imprisoned in jurisdictions with larger black populations (e.g., Britt, 2000; Myers and Talarico, 1987; Weidner et al., 2005), whereas others failed to find support for this association (e.g., Helms and Jacobs, 2002; Kautt, 2002; Ulmer, 1997; Ulmer and Johnson, 2004). Whether the results would have differed when change measures were employed is unknown.

It bears emphasizing, however, that King and Wheelock (2007) found that whites who live in places with a growing black population are more punitive, but they failed to find a significant effect of the static level of racial composition on whites' punitive attitudes. These findings have important implications for the focus of Chapter 6. Given that the vast majority of state appellate court and trial court judges are white (Rottman and Strickland, 2006), if changes in racial composition affect whites' punitive attitudes, changes in racial composition would

possibly influence sentencing severity. However, whether this punitive attitude is transferred into tougher sanctioning has not been investigated, thus it still remains unknown.

In addition, the effects of changes in ecological measures of minority threat may vary based on baseline levels of those measures. This interaction effect is anticipated by Blalock's (1967) minority threat perspective. Because Blalock offered different predictions for power threat and economic threat, the direction of the interaction between changes in ecological measures of minority threat and baseline levels of such threat measures depends on the form of the threat. Building off of the previous discussions, I develop hypotheses with respect to the direct and interactive effects of changes in ecological measures of minority threat with baseline levels of such measures.

Hypothesis 6.1: Changes in minority threat will be positively associated with sentencing severity. I conceptualize racial threat as economic and power threat posed by blacks, and ethnic threat as economic and power threat posed by Hispanics. I examine changes in minority population size—as measures for minority power threat—and changes in minority economic threat.

Hypothesis 6.2: The effect of changes in minority power threat will be greater in counties where baseline levels of the minority population sizes are greater, which is anticipated by Blalock's argument regarding an accelerating effect for minority power threat. By contrast, the effect of changes in minority economic threat will be less pronounced in counties that have higher baseline levels of minority economic threat, which is derived from Blalock's (1967) argument about a decelerating effect for minority economic threat.

The Social Threat Perspective

In addition to the minority threat perspective, I employ a second theoretical perspective—the social threat perspective—to examine change effects on individual-level sentencing decisions. Here, social threat refers to groups that "threaten the hegemony of middle- and upper-class rule . . ." (Sampson and Laub, 1993: 288). Such groups may consist of particular racial and ethnic groups, but need not to. In particular, I examine four forms of social threat in Chapter 6, including number of immigrants, economic conditions, and racial and ethnic economic inequality. Overall, these forms of social threat, including a large immigrant population, a large economically disadvantaged population, a high level of economic inequality between racial and ethnic groups, are hypothesized to generate social unrest and pose a threat to middle- and upper-

class groups. This perceived threat would lead to a demand for intensified social control and, ultimately, a higher level of crime control, and tougher criminal sanctioning in particular.

As mentioned earlier, studies that have examined the social threat perspective in sentencing research have rarely assessed changes in social threat measures, but primarily focused on static and contemporaneous levels. For example, studies have investigated economic conditions (e.g., poverty and unemployment) and its effect on individual-level sentencing decisions, but findings derived from these studies are far from uniform, with some finding a positive association (e.g., Britt, 2000; Myers and Talarico, 1987) and others finding none (e.g., Helms and Jacobs, 2002). Much less known is how and to what extent changes in ecological measures of social threat will affect sentencing severity, and whether this effect will be consistent across different baseline levels of social threat. To fill this gap, I develop hypotheses 6.3 and 6.4 relating to the direct and conditioning effects of changes in ecological measures of social threat.

Hypothesis 6.3: Changes in ecological measures of social threat will be positively associated with sentencing severity. Specifically, counties experiencing a greater increase in the number of immigrants, the concentration of the underclass, racial and ethnic inequality are more likely to mete out tougher punishment to criminal defendants.

Hypothesis 6.4: The effect of changes in ecological measures of social threat will vary depending on baseline levels of ecological conditions. I hypothesize that a growth in immigrant threat, exacerbating economic conditions, and worsening racial and ethnic economic inequality will have a greater effect in places with lower baseline levels of such threats.

Overall, I anticipate that the effect of changes in ecological measures of minority threat and social threat will be more pronounced for prison sentences, as opposed to jail sentences. Collectively, testing these hypotheses will inform us whether changes in social context produce any discernible effect on individual-level sentencing decisions, regardless of baseline levels of social context. In addition, testing these hypotheses will also highlight the idea of a possible threshold level where any further increase in ecological measures of minority threat and social threat will lead to greater or no effects on sentencing severity.

The Effects of State-Level Social Environment

The goal of Chapter 7 is to investigate state-level social context and its effect on individual-level sentencing decisions. In particular, I focus on state-level racial and ethnic

context and its effect on individual-level sentencing decisions. More specifically, Chapter 7 examines whether state-level racial and ethnic context affects sentence severity directly, and if state-level racial and ethnic context moderates the effect of county-level racial and ethnic context on sentencing severity, and if county- and state-level racial and ethnic context amplifies the effect of defendants' race and ethnicity.

The Minority Threat Perspective

As discussed in the theoretical foundation for Chapter 5, the minority threat perspective argues that greater minority presence may produce a higher level of perceived minority threat and ultimately a higher level of crime control among the white majority, what I refer to as the threat effect hypothesis. The competing perspective, the racial contact perspective, argues that higher levels of minority presence may enhance racial interactions and understanding, which, in turn, promotes positive racial attitudes and racial tolerance (Carsey, 1995; Liu, 2001; Voss, 1996). By extension, greater minority presence in an area should be negatively associated with sentencing severity, which I refer to as the tolerance effect hypothesis.

However, in addition to the above two dichotomous views about racial and ethnic context and sentencing severity, there may be a third possibility—that is, the effect of minority threat and racial tolerance may both occur, but one may be more pronounced than the other at different levels of minority presence in an area. In short, the relationship between minority presence in an area and sentencing severity may be a U-shaped curve where there is a tolerance effect and then, past a certain tipping point, a threat effect.

I develop four sets of hypotheses (below). Specifically, the first set of hypotheses focuses on the direct effect of county-level minority population size, and the second set focuses on the direct effect of state-level minority population size. The third set argues that state-level minority population size will amplify the effect of county-level minority population size on sentencing severity. The fourth set anticipates that the interaction effect between state- and county-level minority population sizes will aggravate a black and Hispanic disadvantage in sentencing outcomes. Within each set of hypotheses, I propose three sub-hypotheses regarding the effect of minority population size—one is derived from the traditional minority threat perspective, one is derived from the tolerance perspective, and the third anticipates a U-shaped curve which reflects a tolerance effect first and then a threat effect.

Hypothesis 7.1A: County-level minority population size will be positively associated with more severe sentencing.

Hypothesis 7.1B: County-level minority population size will be negatively associated with sentencing severity.

Hypothesis 7.1C: County-level minority population size will be negatively associated with sentencing severity, but this relationship will become positive after county-level minority population size crosses some threshold level.

Hypothesis 7.2A: State-level minority population size will be positively associated with more severe sentencing.

Hypothesis 7.2B: State-level minority population size will be negatively associated with sentencing severity.

Hypothesis 7.2C: State-level minority population size will be negatively associated with sentencing severity, but this relationship will become positive after state-level minority population size crosses some threshold level.

Hypothesis 7.3A: Any positive association between county-level minority population size and sentencing severity will be more pronounced in states characterized by greater minority presence.

Hypothesis 7.3B: Any negative relationship between county-level minority population size and sentencing severity will be more pronounced in states marked by higher levels of minority presence.

Hypothesis 7.3C: The negative association between county-level minority population size and sentencing severity will be more pronounced in states with lower levels of minority presence; after county-level minority population size crosses some threshold level, the positive association between county-level minority population size and sentencing severity will be more pronounced in states with greater minority presence.

Hypothesis 7.4A: Minority offenders will receive tougher criminal sanctioning in counties and states characterized by larger minority population sizes.

Hypothesis 7.4B: Minority offenders will be punished less harshly in counties and states marked by larger minority population sizes.

Hypothesis 7.4C: Minority offenders will be punished less harshly in counties and states with larger minority population sizes before county- and state-level minority population size

reaches a threshold level; after county- and state-level minority population size crosses the threshold level, minority offenders will be punished more harshly in counties and states with larger minority population sizes.

Overall, Chapter 7 examines the effect of state-level racial and ethnic context on individual-level sentencing decisions and its interaction effect with county-level racial and ethnic context. Chapter 7 also assesses whether the interaction effect between county- and state-level racial and ethnic contexts may amplify the disadvantage black and Hispanic defendants have in criminal sanctioning. Collectively, tests of these four sets of hypotheses mentioned above aim to achieve a more complete understanding of how sentencing disparities are processed through different levels of contexts. In doing so, Chapter 7 responds to calls for multilevel contextual analyses of the minority threat perspective (e.g., Blalock, 1984; Liu, 2001) and calls for contextual analyses of sentencing (e.g., Britt, 2000; Fearn, 2005; Ulmer and Johnson, 2004).

Summary

Again, the goal of this dissertation is to contribute to a developing literature in criminology on sentencing, and social context in general, by unpacking the direct and conditioning effects of social context with offender characteristics, and by examining the effects of changes in social context and state-level social context. In doing so, this dissertation primarily focuses on one particular perspective—the minority threat perspective, from which I derive hypotheses concerning level effects, change effects, and state effects. This dissertation expands sentencing research and research in social context to the interactive effects of social context with offender characteristics, changes in social context, and state-level social context.

The findings will inform sentencing research, as well as research in social context, that the effect of social context on sentencing and likely other individual behavior may be more nuanced than what prior research has established. First, not only does social context—racial and ethnic context in particular—have a direct effect on sentencing decisions, it may also interact with important offender characteristics, such as race and ethnicity. In addition, different dimensions of racial and ethnic context may have differential effects on individual-level sentencing decisions. Second, changes in social context fit well with theoretical perspectives (e.g., the minority threat and social threat perspectives), so prior studies that examine the effects of static and contemporaneous levels of social context may be inadequate. Finally, in sentencing

research and research in social context in general, not only does an immediate social environment deserve considerations, but also a broader social environment may impact sentencing decisions, as well as other individual behavior. States, in particular, may affect individual-level sentencing decisions directly; states may alter county effects on sentencing severity; states may interact with counties in generating an even greater disadvantage for minority groups, as opposed to for white offenders. Collectively, this expansion of social context in sentencing research may lead to a fruitful inquiry to the more nuanced effects of social context on courtroom decision-making, as well as other individual behavior in general.

CHAPTER 4

DATA AND METHODS

In this chapter, I describe the data, measures, and methods I employ for all the analyses in this dissertation. Then I describe how I plan on overcoming some identified methodological limitations in prior sentencing research.

Data

I address a number of hypotheses using a combination of individual-level sentencing data and county-level, as well as state-level, contextual data. The criminal sentencing data come from the State Court Processing Statistics for 1998, 2000, and 2002. After I removed those defendants who were not identified as white, non-Hispanic black, or black, the data include 17,440 convicted felons in 60 urban counties across 23 states.[2] I describe the SCPS data in greater detail below.

Since 1988, the Bureau of Justice Statistics (BJS) has sponsored a biennial data collection, the State Court Processing Statistics (SCPS), on the processing of felony defendants in the state courts of the Nation's 75 most populous counties. Every two years, the SCPS collects data for felony cases filed during May in 40 large urban counties, so the SCPS data do not include federal defendants. The SCPS tracks these felony cases for up to 1 year. These cases are representative of the felony cases filed in the Nation's 75 most populous counties during the month (Rainville and Reaves, 2003). According to the FBI's Uniform Crime Reports for 2000, these counties accounted for 49% of all reported serious violent crimes in the U.S., including 60% of robberies, 47% of murders and non-negligent manslaughters, 46% of aggravated assaults, and 37% of forcible rapes. At the same time, these counties made up 39% of all reported serious property crimes, including 55% of motor vehicle thefts, 37% of burglaries, and 37% of larceny/thefts (Rainville and Reaves, 2003).

As identified by those researchers who have used the data, such as Steffensmeier and Demuth (e.g., Demuth and Steffensmeier, 2004a, 2004b; Steffensmeier and Demuth, 2006), the

[2] I removed defendants who were convicted for misdemeanors because they may be sentenced differently from convicted felons.

SCPS data have several strengths. For example, the SCPS data offer extensive information on the processing of defendants, and contain rich detail about individual defendant and offense characteristics, including defendants' race and ethnicity and prior contact with the criminal justice system. In addition, the data also provide specific sanction types that defendants received, which allows me to investigate the effect of social context on a trichotomous outcome: prison vs. jail vs. non-custodial sanctions. Another important strength of the SCPS data is that they include felony cases filed across 23 states, which enables me to study state effects on sentencing in Chapter 7. Not the least, the SCPS data allow great generalizability of findings to urban counties in the U.S.

Despite the strengths of the SCPS data, the data share weaknesses common to data sets used in most sentencing research, such as a lack of information on defendants' socioeconomic status and offender-victim relationships. Another weakness is missing data. Among the three sets of scholars who have used the data, when dealing with the missing data problem, they either have used multiple imputation (e.g., Demuth and Steffensmeier, 2004a, 2004b; Steffensmeier and Demuth, 2006) or listwise deletion (e.g., Fearn, 2005; Weidner et al., 2005). Steffensmeier and Demuth focused on individual-level factors and their effects on sentencing, and the others focused on county-level social context and its effect on individual-level sentencing decisions.

The different emphases are relevant for the following reason. If missing data are somehow a function of county- or state-level characteristics, an imputation approach that only considers individual-level factors, as is the case with Steffensmeier and Demuth's approach, may not be appropriate. The challenge in such cases is that, essentially, the imputation approach must be a multilevel one. Unfortunately, there is no well-established or agreed-upon imputation algorithm for missing data in multilevel contexts. HLM 6.0, the software becoming widely used for multilevel data analyses, provides the options of listwise deletion and analysis of what are termed multiply-imputed data for handling missing data at level 1 (Raudenbush et al., 2004: 46). Although this software supports the analysis of multiply-imputed datasets, it does not perform multiple imputation (Horton and Lipsitz, 2001: 249).

Multiple imputation has become a common approach to address missing data problems in social science. As Allison (2000: 301) has stated, "multiple imputation (MI) appears to be one of the most attractive methods for general-purpose handling of missing data in multivariate analysis." He has noted that multiple imputation has several "desirable features," such as that

"introducing appropriate random error into the imputation process makes it possible to get approximately unbiased estimates of all parameters," "repeated imputation allows one to get good estimates of the standard errors," and "MI can be used with any kind of data and any kind of analysis without specialized software" (pp. 301-302). Similarly, Brown and Kros (2003) have commented that multiple imputation "is robust to the normalcy conditions of the variables used in the analysis and its outputs complete data matrices" (p. 617). Likewise, Acock (2005: 1019) has argued that multiple imputation allows researchers to obtain improved parameter estimates because it incorporates the missing data uncertainty into the standard errors.

Although multiple imputation may be able to address the problems associated with missing data, such as loss of efficiency, complication in data handling and analysis, and bias due to differences between the observed and unobserved data (Horton and Lipsitz, 2001: 252), there are required assumptions regarding the missingness distribution and the imputation model. For example, the data must be missing at random (MAR)—that is, the probability of missing data on a particular variable X can depend on other observed variables, but not on X itself, after controlling for the other observed variables (Allison, 2000: 302). However, it is easy to violate the conditions required for MI in practice because "there are often strong reasons to suspect that the data are not MAR. Unfortunately, not much can be done about this . . . Hence, any general-purpose method will necessarily invoke the missing at random assumption" (Allison, 2000: 302). Even when the MAR assumption is met, there can be problems. For example, Horton and Lipsitz (2001: 252) have argued that multiple imputation may provide more bias when the imputation model is poorly specified (also see Allison, 2000). This issue is important because imputation model specification carries with it the same challenges associated with model specification in general. That is, it tends to be better when guided by theory, prior research, and relevant variables. Schafer (1999:6) has argued that "the processes of imputation and analysis should be guided by common-sense. For example, suppose that variables with skewed, truncated, or heavy-tailed distributions are, for the sake of convenience, imputed under an assumption of joint normality." However, such guidance, as well as relevant data, often is not available. Not the least, imputation can potentially produce substantially biased results between real and imputed data (see Myrtveit, Stensrud, and Olsson, 2001). For these reasons, Acock (2005: 1020) has argued that the multiple imputation results may be problematic "because they depend on the moment structures, missingness process and patterns, and the parameters under consideration."

In short, multiple imputation can be helpful for handling missing-data problems, but it is not a perfect remedy (Allison, 2000; Barnard and Meng, 1999; Horton and Lipsitz, 2001). Indeed, Horton and Lipsitz (2001: 253) have argued that although multiple imputation is "a powerful and useful tool applicable to many missing data settings, if not used carefully it is potentially dangerous. The existence of software that facilitates its use requires the analyst to be careful about the verification of assumptions, the robustness of imputation models, and the appropriateness of inferences." They argued that it is even more important for more complicated models.

Because the SCPS data include cases filed in 60 urban counties across 23 states, the issue of missing data is even more complicated than in single-level models because missing values may be due to state factors, county factors, defendant factors, or any combination of them. The missingness pattern may differ depending on the specific variable, and the MAR assumption may be violated for some, if not all missing data. For example, some ethnic groups may be less likely to report ethnicity, which would violate the assumption of MAR. In addition, due to the multilevel nature of the data, constructing a correctly specified and robust imputation model is difficult, not the least because of the absence of any guiding theory or research about the proper imputation model.

A key question is whether listwise deletion is appropriate in contexts where imputation is of questionable appropriateness. Little (1992: 1229) has argued that an advantage of listwise deletion is that "valid inference is obtained when missingness depends on the regressors, as the probability that X1 is missing for a case may depend on the value of X1 for that case." He has also argued that this property is useful and not shared by other more sophisticated approaches (p. 1230). In a similar vein, Allison (2000) found that listwise deletion does well even when the MAR assumption is violated in his simulation analyses. He concluded that "more generally, it can be shown that listwise deletion produces unbiased regression estimates whenever the missing data mechanism depends only on the predictor variables, not on the response variable" (p. 304). Allison (2000: 308) concluded that "listwise deletion is clearly better in all the conditions studied here."

In this dissertation, I use listwise deletion to handle missing data and do so for several reasons. First, it is the approach most often used in sentencing studies that I have reviewed. Second, it avoids using created data (i.e., imputed values) in a situation both where there is little

theoretical or empirical information to guide imputation modeling decisions and where the multilevel nature of the data create special challenges to imputation. Third, it creates a set of analyses that can be used to inform later methodological efforts to assess how much sentencing research results vary when using different approaches to managing missing data. The results should, of course, be interpreted with caution, as would be the case in any set of analyses where there was some non-trivial level of missing data. (In this study, for most of the analyses, approximately 18 percent of the individual-level cases were missing.)

To collect various measures of social context at county and state levels, I extract data from the U.S. Census of Bureau, National Jail Census, Census of State and Federal Adult Correctional Facilities, the Uniform Crime Reports, and National Center for State Courts. Collectively, this final data set, which combines the SCPS data and a range of contextual measures, provides a rich and detailed body of information for examining social context and its effect on courtroom decision-making.

Measures

Dependent Variables

Since Wheeler et al. (1982), most sentencing research has examined sentencing as a two-stage decision-making process: first, whether to incarcerate, and, second, length of the incarceration if incarcerated (e.g., Britt, 2000; Demuth and Steffensmeier, 2004; Kupchik, 2006; Steffensmeier and Demuth, 2000, 2006; Steffensmeier et al., 1998; Ulmer and Johnson, 2004). The problem, however, as Holleran and Spohn (2004) have pointed out, is that prison and jail are two qualitatively different sentence types. Thus, the use of in/out decision as an outcome where "in" includes both prison and jail may increase the risk of measurement error and drawing different conclusions regarding the correlates of sentencing decisions (see also Harrington and Spohn, 2007).

For that reason, I examine the probability that different defendants received a jail, prison, or non-custodial sanction. This variable was coded 1 if the offender was sentenced to any length of confinement in a county jail, coded 2 if the offender was sentenced to any length of confinement in a state prison, and coded 3 if the offender was sentenced to any combination of non-incarceration options (i.e., probation, restitution, fines, suspended sentence, and so forth).

Non-custodial sanctions were held as the reference category in modeling. This variable is the outcome variable for analyses in chapters 5 and 6.

To investigate state effects, including direct effects of state-level social context, the interaction effect between county- and state-level social contexts, and the three-way interaction effect between individual-, county-, and state-level factors in Chapter 7, I use three-level models and cross-level interactions (see discussions below). Due to the modest number of counties and states, as well as rather complicated modeling strategies, I combine jail and prison sentences. Specifically, the incarceration variable was coded 1 if the offender was sentenced to any length of confinement in a county jail or state prison and 0 if the offender was sentenced to any combination of non-incarceration options (i.e., probation, restitution, fines, suspended sentence, and so forth). For those incarcerated, I examine how and to what extent state-level social context affects the length of incarceration. The sentence-length variable was operationalized as the months of incarceration in a county jail or state prison. I transform this variable by taking the natural log due to its extreme skew (after the transformation, the skewness statistic is -.728, significantly lower compared to 8.131 before the transformation).

Independent Variables

Individual-level measures. At the offender-level, I include extra-legal variables and legal variables. Extra-legal variables—those, by law, that are not supposed to influence sentencing outcomes—include age (in years), male (1=yes; 0=no), non-Hispanic Black (1=yes; 0=no), and Hispanic (1=yes; 0=no). Legal variables include prior criminal history (the additive scale of prior felony arrest, prior felony conviction, prior jail incarceration, and prior prison incarceration), criminal justice status (1=active; 0=otherwise), multiple arrest charges (1=yes; 0=no), dummy variables if the most serious convicted charge is a violent offense (1=yes; 0=no), a property offense (1=yes; 0=no), and a drug offense (1=yes; 0=no). I also include plea bargaining (1=yes; 0=no) and a dummy variable indicating whether the defendant was detained prior to trial. Because I use the State Court Processing Statistics for three different years, I include dummy variables for years 1998 and 2000, holding 2002 as the reference year to control for cohort effects.

Contextual measures. I extract a range of measures of social context for year 2000 from the U.S. Census of Bureau, the National Jail Census, and the Census of State and Federal Adult Correctional Facilities, the Uniform Crime Report, and the National Center for State Courts. To

obtain measures of changes in social context, I also collect measures of social context for year 1990 as baseline levels of social context, and then calculate the difference between the same measure of social context in 1990 and 2000. The dependent variables and contextual measures of interest for analyses in chapters 5, 6 and 7, respectively, are presented in tables 4.1, 4.2, and 4.3.

Table 4.1. Measures for Chapter 5

Variables	Measures
Dependent variable	Jail (1), prison (2), non-custodial sanctions (3)
Contextual variables	
The minority threat perspective	
Racial threat	Percent non-Hispanic black Ratio of white-to-black unemployment rate Ratio of black-to-white voters who voted for the 2000 presidential election
Ethnic threat	Percent Hispanic Ratio of white-to-Hispanic unemployment rate Ratio of Hispanic-to-white voters who voted for the 2000 presidential election

Table 4.2. Measures for Chapter 6

Variables	Measures
Dependent variable	Jail (1), prison (2), non-custodial sanctions (3)
Contextual variables	
The minority threat perspective	
Racial threat	Change in percent Non-Hispanic black (1990-2000) Change in white-to-black unemployment ratio (1990-2000)
Ethnic threat	Change in percent Hispanic (1990-2000)

Table 4.2—continued.

Variables	Measures
The social threat perspective	Change in percent foreign born (1990-2000) Change in percent below poverty (1990-2000) Change in racial inequality (1990-2000) Change in ethnic inequality (1990-2000)

Table 4.3. Measures for Chapter 7

Variables	Measures
Dependent variables	Prison or jail (1), non-custodial sanctions (0) Sentence length (natural log)
State-level contextual variables	
The minority threat perspective	
Racial threat	Percent non-Hispanic black
Ethnic threat	Percent Hispanic
County-level contextual variables	
The minority threat perspective	
Racial threat	Percent non-Hispanic black
Ethnic threat	Percent Hispanic

Methods

With multilevel data, Raudenbush and Bryk (2002) recommended the use of hierarchical linear modeling (HLM), which incorporates a unique random effect into the statistical model for each county (and state) and produces more robust standard errors than non-hierarchical models allow (p. 100). I estimate hierarchical multinomial logistic regression models for analyses presented in chapters 5 and 6, because the outcome variable for analyses in these two chapters is a trichotomous variable. For analyses in Chapter 7, I estimate hierarchical logistic regression models for the incarceration decision—a dichotomous outcome—and hierarchal linear models for the sentence–length decision. Because chapters 5 and 6 focus on the effects of county-level

social context, I use two-level hierarchical models. Chapter 7 examines state effects, thus I employ three-level hierarchical models.

In addition, to assess the interactive effect of social context with defendants' race and ethnicity in Chapter 5, and the interactive effect of state-level social context with county-level context and individual-level factors in Chapter 7, cross-level interaction techniques are employed. To investigate whether the effects of changes in social context vary depending on baseline levels, I include multiplicative interaction terms between changes in social context and baseline levels of social context.

I specify a regression equation that allows individual- and county-level predictors to have different associations with the probabilities of different outcomes (e.g., jail=1, prison=2, and non-custodial sanctions=3). Thus, the probability of receiving a jail sentence is Φ_{1ij}, the probability of receiving a prison sentence is Φ_{2ij}, and the probability of receiving a non-custodial sanction is $\Phi_{3ij}=1-\Phi_{1ij}-\Phi_{2ij}$, given that non-custodial sanction is held as the reference category. The level-1 model for the jail outcome is expressed:

$$\eta_{1ij}=\log(\Phi_{1ij}/\Phi_{3ij})=\beta_{0j(1)}+\beta_{1j(1)}X_{1ij}+\beta_{2j(1)}X_{2ij}+\ldots+\beta_{qj(1)}X_{qij}, \text{ where}$$

$$\beta_{0j(1)}=\gamma_{q0(1)}+\gamma_{q1(1)}W_{1j}+\ldots+\gamma_{qs(1)}W_{sj}+u_{qj(1).}$$

And the level-1 model for the prison outcome is written:

$$\eta_{2ij}=\log(\Phi_{2ij}/\Phi_{3ij})=\beta_{0j(2)}+\beta_{1j(2)}X_{1ij}+\beta_{2j(2)}X_{2ij}+\ldots+\beta_{qj(2)}X_{qij}, \text{ where}$$

$$\beta_{0j(2)}=\gamma_{q0(2)}+\gamma_{q1(2)}W_{1j}+\ldots+\gamma_{qs(2)}W_{sj}+u_{qj(2).}$$

Here, X are individual-level factors, and W are county-level factors. In general, these are the basic statistical models used for the analyses in subsequent chapters, though the specific model specification may vary due to cross-level interactions or the modeling outcome may be changed to a dichotomous outcome (i.e., the in/out decision) or a continuous outcome (i.e., the sentence-length decision) in Chapter 7. I use HLM 6.0 for all the analyses.

Addressing Methodological Limitations in Prior Research

Prior sentencing research suffers from various methodological limitations (Mears, 1998). In addition to problems on how dependent variables are measured, the methodological problems include selection bias and problems in dealing with selection bias, omitted variable bias, inappropriate statistical models, and spatial autocorrelation. This dissertation aims to contribute

to the current sentencing literature by taking steps to address these methodological limitations. Next, I turn to each methodological limitation, followed by my plans to address each limitation.

Problems with How Dependent Variables Are Measured

Most sentencing research has examined sentencing as a two-stage decision-making process that is comprised of the decision to incarcerate and the sentence-length decision if incarcerated (e.g., Britt, 2000; Demuth and Steffensmeier, 2004; Kupchik, 2006; Steffensmeier and Demuth, 2000, 2006; Steffensmeier et al., 1998; Ulmer and Johnson, 2004; Wheeler et al., 1982). When examining the decision to incarcerate, sentencing research has mostly combined prison and jail into incarceration.

The problem, however, is that prison and jail are two qualitatively different sentence types for several reasons (see Harrington and Spohn, 2007; Holleran and Spohn, 2004). First, offenders who are sentenced to jail typically serve a shorter sentence (e.g., a year or less), and those who are sentenced to prison serve from one year to life. Second, the offenders sentenced to prisons are typically different from those who are sentenced to jail: they are convicted of serious crimes and/or have more extensive criminal records. Third, the post-incarceration consequences for offenders who are sentenced to prison are more profound and detrimental than their counterparts who are sentenced to jail. For example, prisoners have "the stigma of a prison record and the distrust and fear that it inevitably elicits" (Petersilia, 2003: 3). And there are more serious and pernicious collateral consequences with a prison record, because there are abundant laws that restrict jobs for which ex-prisoners can be hired, their eligibility for public welfare and public housing subsidies, and voting rights (Holleran and Spohn, 2004: 214; Mauer and Chesney-Lind, 2002; Uggen, Manza, and Thompson, 2006). Therefore, the common practice of combining prison and jail sentences may increase the risk of measurement error and drawing different conclusions regarding the correlates of sentencing decisions.

Indeed, when studies examined prison and jail separately, they found different predictors for these two outcomes. For example, Fearn (2005) found that several community-level predictors had statistically significant effects on the likelihood of prison versus jail, but none of the community-level predictors she considered exerted a statistically significant effect on the likelihood of prison versus non-custodial sanctions or jail versus non-custodial sanctions. In addition, Holleran and Spohn (2004) found that the effects of offender and case characteristics varied depending on the way in which the incarceration decision was defined, and that combining

jail and prison sentences masked important differences across race and ethnicity, sex, and types of crime. Most recently, Harrington and Spohn's (2007) research supported Holleran and Spohn's (2004) argument that "separating jail sentences from prison sentences enhances our understanding of the sentencing process and the factors that affect the sentences that judges impose" (p. 236).

In this dissertation, I examine a trichotomous outcome—prison, jail, and non-custodial sanctions for analyses in chapters 5 and 6. HLM 6.0 allows me to compare coefficients of each independent variable on the three outcomes. If the difference between coefficients of independent variables on prison versus jail is not statistically significant, I will combine prison and jail.

Omitted Variable Bias

As previous chapters have established, research has shown that courts may vary on a number of important dimensions. Whereas theories clearly indicate that social context has a role to play in courtroom decision-making, past research has focused primarily on the effects of offender-level characteristics. This practice would not be problematic if research did not consistently identify such factors as organizational, cultural, political, and social characteristics in a jurisdiction to be relevant, or potentially relevant, to sentencing decisions (e.g., Britt, 2000; Fearn, 2005; Kautt, 2002; Myers and Talarico, 1987; Ulmer and Kramer, 1996; Ulmer and Johnson, 2004). Therefore, failure to consider the context may lead to omitted variable bias, which may produce biased estimates for the variables in the model.

In this dissertation, I include contextual measures at county and state levels when examining individual-level sentencing outcomes, which will supposedly improve model specifications. The caveat, however, is that I may still have omitted variable bias due to failure to consider judge-level characteristics because several studies have revealed the importance of judge-level characteristics on sanction severity (e.g., Johnson, 2006; Myers and Talarico, 1987).

Selection Bias

Bushway et al. (2007: 151) articulated selection bias as follows, "Sample selection bias issues arise when a researcher is limited to information on a nonrandom sub-sample of the population of interest." In sentencing research, sample selection bias occurs when we study the sentence length decision because prison or jail incarceration can only result if the defendants are sentenced to jail or prison. However, defendants become more sociologically homogeneous as they move through successive stages of criminal processing (see Berk, 1983), and the sample is

non-random in that they are more serious offenders than the population. Therefore, sentencing researchers have highlighted the importance of including a correction factor for sample selection bias or unobserved heterogeneity in sentence-length models. Failure to control for this selection process may mask the impact of race and other extralegal variables on sentencing outcomes, and estimates from sentence length model may be biased and inconsistent (see Bushway et al., 2007).

One common approach in criminological research is Heckman's (1979) two-stage models. This approach, when applied to sentencing research, involves estimating a probit model for selection (i.e., incarceration), calculating a correction factor—the Inverse Mill's Ratio, and inserting the correction factor into the second OLS model for sentence length. Since Berk (1983) introduced the Heckman two-stage model to the field of criminology, it has been typical for sentencing length analyses to include a correction factor for selection bias stemming from the incarceration decision.

However, there is considerable controversy surrounding whether the Heckman approach may do more harm than good, mostly due to collinearity between the correction factor and the included predictors for sentence length (Bushway et al., 2007). To address this concern, Bushway et al. advocate for models with exclusion restrictions—variables that affect the decision to incarcerate, but not the sentence-length decision (p. 153). However, almost no sentencing research ever implemented exclusion restrictions in their passing reference to the Heckman two-stage model, except two most recent sentencing papers (Bushway et al., 2007; Griffin and Wooldredge, 2006).

In this dissertation, I include a selection bias correction factor in sentence-length models. This procedure involves estimation of a probit model of selection (prison or jail incarceration), and the equation is then used to calculate the Inverse Mill's Ratio. An important challenge is selecting a set of measures for the selection equation that would prevent multicollinearity between the Inverse Mill's Ratio and the predictors of sentence length. Most of these measures are chosen based on their utility, as well as prior sentencing literature that successfully implemented the Heckman models as exclusion restrictions (e.g., Griffin and Wooldredge, 2006). These include the 59 county dummy variables, several dummy variables for whether a defendant was charged with burglary, larceny, forgery, fraud, and motor vehicle theft. I suspect that being charged with these offenses may produce greater probabilities of receiving a jail or prison sentence, but may not lead to longer sentences. More importantly, multicollinearity tests indicate

that the collinearity between the correction factor and other predictors in the sentence-length model is not problematic.[3]

It bears mention that the selection process also occurs in earlier sentencing stages (e.g., cases lost from arrest to conviction). Modeling this selection process (predicting conviction), however, is a challenge, because the Heckman two-stage model is limited to ordinary and generalized least-squared models (Griffin and Wooldredge, 2006: 905). Due to this difficulty, the common practice in sentencing research has been to correct for selection bias only when predicting sentencing length (a continuous outcome), but not receiving a prison or jail sentence or not (a dichotomous outcome). Therefore, I acknowledge that although Heckman's approach, when applied appropriately, can address selection bias introduced by cases that are convicted but not incarcerated, it does not account for cumulative selection bias from earlier decision-making stages of the system (Johnson, 2006: 275). This limitation is a characteristic of most, if not all sentencing research, and characterizes this dissertation as well.

Inappropriate Statistical Models

The relatively few published studies that assess both individual and contextual measures typically use traditional OLS or logistic regression techniques (e.g., Myers and Talarico, 1987; Steffensmeier et al., 1993; Ulmer, 1997; Kramer and Ulmer, 1996), which are inappropriate for multilevel data. These studies took an approach that estimates an offender-level regression model, but doing so may risk misestimating the effects of either contextual or individual factors or both on sentencing outcomes (Raudenbush and Bryk, 2002). Given that criminal cases are nested within county-level courts, similarities among cases at the county level are likely to occur. Statistically, this means that residual errors tend to be correlated within counties, violating the OLS assumption of independent error terms and thus risking misestimating standard errors.

For that reason, I employ hierarchical linear and non-linear models, which include a unique random effect into the statistical model for each county (and state) and produces more robust standard errors than non-hierarchical models (Raudenbush and Bryk, 2002: 100).

Unaddressed Spatial Autocorrelation

A concern in studies of social ecology is the potential problem of spatial dependence (Kubrin and Weitzer, 2003: 393-395). Spatial dependence across counties or neighborhoods has been identified and addressed in research in homicide, recidivism, birth weight, and other social

[3] The VIF factors were all below 4, and the results of condition indexes indicated acceptable levels of collinearity

outcomes (Kubrin and Weitzer 2003; Kubrin and Stewart, 2006; Morenoff et al., 2001; Morenoff, 2003; Reisig et al., 2007). This concern is notable in sentencing research too because criminal sanctions in one county may be influenced by criminal sanctioning in a neighboring county. This influence may happen for a number of reasons, including the fact that ecological predictors of criminal sentencing outcomes (e.g., poverty) can overlap county boarders. The social context in which courtroom actors work may comprise of surrounding counties which courtroom actors may have connections with in the course of their daily lives. In addition, the way a judge experiences in his/her county may be influenced by the context of surrounding courts. For example, if a county has a low crime rate, but the areas around it all have high crime rates, then crime in the surrounding areas could potentially be an important concern when judges living in the low-crime county make sentencing decisions. In this case, there is a spillover effect, whereby crime in surrounding courts produces an effect for the low-crime county. Overall, courtroom decision-making may be reinforced, exacerbated, moderated, or counteracted by the characteristics of adjacent and proximate counties. If so, spatial autocorrelation between counties may bias the estimates for the individual- and county-level predictors. Spatial dependence may be of particular relevance when studies focus on counties within one single state. However, spatial autocorrelation is ignored and unaddressed in those studies (e.g. Britt, 2000; Johnson, 2003, 2006; Ulmer and Johnson, 2004; Ulmer and Bradley, 2006). Though spatial dependence may not exist between counties, it warrants a concern, and thus should be tested.

As stated earlier, I use the State Court Processing Statistics (SCPS) for 1998, 2000, and 2002, which include sentencing data for 60 urban counties across 23 states. Because these counties are scattered across the country, visual inspection indicates that spatial dependence does not appear to be an issue.

Summary

I use the State Court Processing Statistics for 1998, 2000, and 2002, in combination with other data sources for contextual measures, to examine criminal justice sentencing in context. Compared to the data most multilevel sentencing studies have used, the State Court Processing Statistics data include cases collected in 60 counties across 23 states. The breadth of the data is of particular importance for investigating state effects on individual-level sentencing decisions.

(Hair et al., 1998: 220).

In addition to the goal of contributing to an emerging literature in criminology on sentencing and social context, I strive to contribute to sentencing literature in particular by addressing methodological limitations identified in prior sentencing research. Specifically, I develop plans to address such methodological concerns related to measuring dependent variables, dealing with selection bias, choosing appropriate statistical techniques. In the following chapters, I describe data, measures, and analytic strategies I use in each set of analyses in greater detail.

CHAPTER 5

MINORITY THREAT AND SENTENCING

Introduction

Sentencing decisions stand at the heart of the criminal justice system and for that reason have garnered considerable attention from researchers. Overall, prior studies have focused almost exclusively on individual-level predictors of sentencing. These studies document that those who have committed serious crimes and have prior offenses are more likely to receive more severe punishment (e.g., Albonetti, 1986, 1991; Britt, 2000; Spohn, 2000; Steffensmeier and Demuth, 2000, 2001; Steffensmeier, Kramer, and Streifel, 1993; Steffensmeier, Kramer, and Ulmer, 1995; Steffensmeier, Ulmer, and Kramer, 1998; Ulmer and Johnson, 2004). A number of studies also have examined the impact of extra-legal factors on sentencing. By and large, these studies show that men, minorities, and younger offenders are sentenced more harshly, even after controlling for offenders' prior criminal record and offense seriousness (e.g., Spohn, 2000; Steffensmeier and Demuth, 2000, 2001; Steffensmeier et al., 1998; Ulmer and Johnson, 2004).

More recently, sentencing research has moved in a new direction, focusing on whether sentencing outcomes vary across jurisdictions and the contextual factors that affect individual-level sentencing decisions (Hartley, Maddan, and Spohn, 2007: 383). These studies have examined racial or ethnic composition, unemployment, crime rates, political party identification, and their influence on sentencing severity (Britt, 2000; Fearn, 2005; Helms and Jacobs, 2002; Kautt, 2002; Johnson, 2006; Ulmer and Johnson, 2004; Weidner, Frase, and Schultz, 2005). Collectively, this body of work suggests that some characteristics of social context have an effect, net of individual offenders' characteristics and offense seriousness, on courtroom decision-making.

One avenue of research that has garnered particular attention has been studies that have examined the racial and ethnic minority threat perspective. Here, the focus has been on identifying whether there is an association between the size of the minority population and sentencing severity (e.g., Britt, 2000; Fearn, 2005; Helms and Jacobs, 2002; Ulmer and Johnson,

2004). Although an important advance, several questions and issues remain to be addressed. First, these studies provide mixed and inconclusive evidence regarding the association between minority population size and individual-level sentencing severity, with some finding a positive association and some finding none. Second, there is a question as to whether these studies provide an adequate test for the minority threat perspective. In particular, and as Eitle, D'Alessio, and Stolzenberg (2002: 558) have pointed out, studies are needed that measure and assess the influence of distinct measures of racial and ethnic threat. Not the least, it remains unknown whether racial or ethnic threat has a more pronounced effect on individuals receiving prison sentences as opposed to jail sentences.

Using data from the State Court Processing Statistics and other data sources, the current study will test three sets of hypotheses pertaining to the minority threat hypothesis. Each of these hypotheses is discussed in greater detail below. First, black and Hispanic offenders, especially black and Hispanic male offenders, will be more likely to be sentenced to prisons than other race/ethnicity and sex groups. Several studies have examined the interactive effects between race/ethnicity and sex, and have found that minority male offenders receive more severe sentences than other race/ethnicity and sex groups (Harrington and Spohn, 2007; Leiber and Mack, 2003; Spohn and Holleran, 2000; Steffensmeier and Demuth, 2000, 2006; Steffensmeier et al., 1998). Second, the ecological measures of racial and ethnic threat will be associated with individual-level sentencing decisions, and the expected effects will be more pronounced for prison sentences than for jail sentences. Third, black and Hispanic offenders will be subject to harsher punishment in areas where there is a higher level of racial and ethnic threat—that is, there will be an interaction effect between individual- and contextual-level threat (Stolzenberg, D'Alessio and Eitle, 2004). Collectively, tests of these hypotheses contribute to a body of work aimed at furthering our understanding of the individual and contextual effects on criminal sanctions. In doing so, the current study responds to the call of Stolzenberg, D'Alessio, and Eitle (2004), and others who have called for contextual analyses of sentencing (e.g., Britt, 2000; Fearn, 2005; Johnson, 2003, 2005; Ulmer and Johnson, 2004).

Below I begin by discussing the racial and ethnic threat perspective and the studies that have applied this perspective. I then describe the theoretical foundation for the hypotheses I will test, and discuss the data I will use to test these hypotheses. After presenting the analyses and results, I will discuss the study's implications for theory, research, and policy.

Research and Theory on Minority Threat

According to the minority threat perspective, courtroom actors are more punitive toward individuals that come into contact with the criminal justice system in communities with a large percent of minorities. Blalock (1967) was the first to theorize minority threat. He argued that a growing racial and ethnic minority population poses a threat to white majorities. More specifically, the minority threat perspective suggests that as the relative size of racial and ethnic minority group increases, members of the majority group—in this case, whites—may perceive a growing threat and take actions to reduce the threat (Blalock, 1967).

Blalock maintained that the source of perceived threat can assume two distinct forms: economic and power threat. With respect to economic threat, Blalock asserted that as blacks compete for jobs and other economic resources, they may increasingly threaten the economic well-being of whites. With respect to power threat, Blalock argued that as the relative size of the black population increases, whites may increasingly perceive blacks as a threat to political power. As a result of this type of threat, whites may increase social control to maintain their dominance in economic and political arenas. However, Blalock (1967) argued that the relationship between both forms of threat and social control would be curvilinear, though the forms of nonlinearity should differ (p. 145). More specifically, higher levels of threat should lead to greater levels of social control in both cases. In addition, according to Blalock, as one goes from areas lower in economic threat to those that are higher, the amount of social control exerted should be especially pronounced initially and then level off. This is what Blalock termed a *decelerating* threat effect. By contrast, as one goes from areas lower in power threat to those that are higher, the amount of social control exerted should be modestly higher at lower levels and then disproportionately higher at higher levels. This is what Blalock termed an *accelerating* threat effect.

In addition to economic and power threat, the threat of crime has been conceptualized as a distinct form of minority threat, especially racial threat (Chiricos, Welch, and Gertz., 2004; Crawford, Chiricos, and Kleck, 1998; Liska and Chamlin, 1984). This conceptualization, racial typification, has been pursued by a number of researchers. For example, Quillian and Pager (2001: 724) argued that young black men are more likely to induce crime-prone perceptions because they may fit the portrait of a typical street criminal and may be seen as a potential source of trouble and problems.

Overall, the main empirical prediction derived from the minority threat perspective is that the relative size of racial and ethnic minority members in an area will be associated with the level of economic, political, and criminal threat perceived by majority members. This perceived threat, in turn, increases demand for various aspects of formal social control among majority members. Ultimately, the demand leads to a higher level of crime control (Liska, 1992).

Many studies have tested the minority threat perspective by examining the effects of racial composition (typically percent black or percent nonwhite) on a range of social control measures, such as lynching (Corzine, Creech, and Corzine, 1983; Beck and Tolnay, 1990), the death penalty (Jacobs and Carmichael, 2002), the size and funding of police departments (Chamlin, 1989; Jackson, 1989; Kent and Jacobs, 2005; Stults and Baumer, 2007), arrest (Eitle, D'Alessio, and Stolzenberg, 2002; Liska, Chamlin, and Reed, 1985; Parker, Stults, and Rice, 2005), imprisonment (Bridges, Crutchfield, and Simpson, 1987; Jacobs and Carmichael, 2001), and felon disenfranchisement (Behrens, Uggen, and Manza, 2003). Although far from uniform, much of this research has revealed significant effects of racial composition on levels of crime control, thus providing empirical support for the minority threat perspective. However, a serious limitation is that most previous research has typically used the relative size of the black population to measure racial threat, and only a few studies have attempted to distinguish simultaneously between different dimensions of racial threat (see Eitle, D'Alessio and Stolzenberg, 2002; Stults and Baumer, 2007; Stolzenberg, D' Alessio and Eitle, 2004).

Minority Threat and Sentencing

Two lines of sentencing research that apply the minority threat perspective have been conducted. One is to examine racial and ethnic disparity in sentencing discretion, and the other is to investigate how racial and ethnic context may influence sentencing disparity.

At the individual level, several studies have used what has been termed a "focal concerns" perspective. For example, Steffensmeier and his colleagues identified three focal concerns that judges and other court actors use to inform their sentencing decisions—blameworthiness, practical constraints and consequences, and community protection (Steffensmeier, 1980; Steffensmeier et al., 1993; Steffensmeier et al., 1998). The focal concerns of blameworthiness and community protection, in particular, are related to the role that race and ethnicity may play in determining sanction severity. In the contemporary United States, blacks and Hispanics tend to be objects of crime-related fear and are perceived as particularly

threatening (Britt, 2000; Bontrager, Bales, and Chiricos, 2005; Chiricos et al., 2004; Spohn, 2000; Spohn and Holleran, 2000; Steffensmeier and Demuth, 2001; Steffensmeier et al., 1998). Therefore, court actors' assessments of perceived dangerousness or blameworthiness, as well as community protection, may be influenced by a defendant's race and ethnicity. In this regard, Steffensmeier et al. (1998) reported that, based on their study of Pennsylvania courts, judges view young adult black men as being more likely to be dangerous, committed to street life, and less likely to be reformed.

In the 1960s and early 1970s, many researchers concluded that blacks were sentenced more harshly than whites (Zatz, 1987). However, Kleck (1981) and Hagan and Bumiller (1983) reported that once seriousness of prior criminal records was controlled, the racial disparity was almost removed. Recent sentencing research has examined how the effect of race on sentencing outcomes is contextualized (Sampson and Lauritsen, 1997). Similarly, Steffensmeier, Ulmer, and Kramer (1998: 789) have argued that "researchers who simply test for the direct effect of defendant's race may miss the subtle and potentially more interesting interactive effects . . . They also may discount the continuing significance of race in American society . . . . " For example, Chiricos and Crawford (1995) reviewed 38 studies on race and sentencing, and they found that black defendants were more likely to receive imprisonment in areas with high unemployment, a large percentage of blacks, and in the South. In addition, Spohn (2000) reviewed studies that analyzed race effects on state and federal sentencing decisions, and she found that racial minorities were sentenced more harshly than whites if they were young and male, or if they were convicted of less serious crime or drug offenses. The findings of several more recent studies on sentencing decisions in state courts (Spohn and Holleran, 2000; Steffensmeier and Demuth, 2001) and in federal courts (Everett and Wojtkiewicz, 2002; Steffensmeier and Demuth, 2000) also revealed a black disadvantage and a white advantage in incarceration decisions, but small or negligible black-white differences in sentence-length decisions. Most recently, Mitchell (2005) carried out a meta-analysis of 71 published and unpublished studies, and found that blacks generally were sentenced more harshly than whites, but the magnitude of this race effect was small and highly variable. By contrast, Pratt (1998) conducted a meta-analysis of racial sentencing disparity research published from 1974 to 1996, and found that race was not significant in determining sentence length. However, he noted that "the true effect of race on

sentencing outcomes may be hidden behind differences in how researchers choose to operationalize the race variable" (p.520).

Compared to the number of studies examining race effects on criminal sanctions, far fewer sentencing studies have investigated Hispanic-white differences on sentence severity, due partly to the smaller number of Hispanics in many local areas and the frequent practice of classifying Hispanics as whites (Steffensmeier and Demuth, 2001). Steffensmeier and Demuth (2006: 243) have argued that the scarcity of sentencing research on Hispanics is particularly alarming, given that Hispanics are the fastest growing minority group in the U.S. Notably, recent studies have presented evidence that Hispanic defendants may be sanctioned more harshly than whites and sometimes blacks (e.g., Engen and Gainey, 2000; Spohn and Holleran, 2000; Steffensmeier and Demuth, 2000, 2001; Ulmer and Johnson, 2004).

At the contextual level, Bridges, Crutchfield, and Simpson (1987) reported that courts in Washington counties with large minority populations sanctioned nonwhites to prison at a relatively higher rate than courts in other counties. Subsequently, researchers have used the relative size of the minority population in a place as an indicator of racial threat (Bontrager et al., 2005; Britt, 2000; Crawford et al., 1998; Fearn, 2005; Helms and Jacobs, 2002; Johnson, 2006; Myers and Talarico, 1987; Ulmer, 1997; Ulmer and Johnson, 2004; Weidner, Frase, and Schultz, 2005). Their findings are mixed. For example, Myers and Talarico (1987), together with Britt (2000) and Weidner et al. (2005), found that offenders were more likely to be imprisoned in jurisdictions with larger black populations. However, Helms and Jacobs (2002), Kautt (2002), Ulmer (1997), Ulmer and Johnson (2004), and others failed to find support for a direct relationship between individual sentencing decisions and the percentage of blacks in a county. When examining the conditioning effect of minority concentration on race, previous studies have also produced mixed findings. For example, whereas Britt (2000) discovered that black percentage weakened the effect of race on sentence length, Ulmer and Johnson (2004) found that minority concentrations amplified the effect of race and ethnicity on sentence length—that is, black and Hispanic defendants were sentenced for a longer time period in counties with greater concentrations of blacks or Hispanics.

Notably, each of these studies, regardless of the conclusion reached, provided only a narrow test of the racial and ethnic threat perspective. Specifically, they have focused on the relative size of the minority population, with little attention to different dimensions of minority

threat. In addition, the studies have typically examined the effect of the size of the minority population on the combined category of prison and jail sentences (but see Fearn, 2005). Thus, the largely unaddressed question is whether different dimensions of racial and ethnic threat affect sentencing equally, and any identified effect affects sentencing equally when the outcome is prison vs. jail.

Before proceeding, it bears emphasizing that the racial and ethnic threat perspective not only argues for a direct effect, but also for an interaction effect. Specifically, blacks and Hispanics tend to be objects of crime fear and viewed as threatening (Spohn and Holleran, 2000; Spohn, 2000; Steffensmeier and Demuth, 2001; Steffensmeier et al., 1998; Ulmer and Johnson, 2004). In such situations, black and Hispanic defendants may be sentenced more severely in areas where there is a high level of racial and ethnic threat from blacks and Hispanics.

Prison and Jail Sentences

A basic question confronting sentencing researchers is whether prison and jail outcomes should be combined. According to Holleran and Spohn (2004), prison and jail are qualitatively different types of punishment; therefore, "separating jail sentences from prison sentences enhances our understanding of the sentencing process and the factors that affect the sentences that judges impose" (p. 236; also see Harrington and Spohn, 2007). In a similar vein, Steffensmeier et al. (1993: 422) contended that "a sentence of county jail time is viewed typically as less stigmatizing and less punitive than state prison time" (Kramer and Scirica, 1986).

From this perspective, blacks and Hispanics—stereotypical "threat" groups—may be more likely to be sent to prison than jail. Indeed, Holleran and Spohn (2004) found that "white offenders convicted of serious crimes are substantially more likely than similarly situated black or Hispanic offenders to serve their sentences in jail rather than prison" (p. 236; see also Harrington and Spohn, 2007). In addition, Ulmer and Kramer (1996: 400) reported that judges might be reluctant to send white offenders to predominately minority prisons.

A competing hypothesis, however, is that racial and ethnic disparity is more likely to occur in jail sentences than prison sentences. As Harrington and Spohn (2007: 37) have noted, "jails are generally local facilities, operated by city or county correctional systems and funded by local tax dollars; prison are state-operated systems . . . ." As a result, judges and other courtroom actors may have more discretion to sentence defendants to jail as opposed to prison. Some evidence for this view is provided by Rosecrance (1988), who found that probation officers were

not concerned with such factors as the offender's potential ability for rehabilitation or life circumstances when making recommendations for prison sentences. These factors might otherwise place black and Hispanic offenders at a greater risk of a prison sentence. Notably, the officers did focus on these factors (i.e., the offender's potential ability for rehabilitation or life circumstances) in deciding between jail or probation sentences (see Holleran and Spohn, 2004: 213). Such findings lend support to the notion that minority threat effects may be more pronounced for jail than prison outcomes.

The Present Study

Building off of the above discussions, I examine three inter-related hypotheses that focus on individual- and contextual-level racial and ethnic threat. The first hypothesis is that black and Hispanic felons, especially black and Hispanic males, will be sentenced more harshly than other race/ethnicity and sex groups, net of other factors. Here, I anticipate that the effect will be more pronounced for prison sentences than for jail and non-custodial sanctions, given that prison is a harsher punishment than the others and, in a threat situation, presumably would be the sanction of choice.

The second hypothesis is that convicted felons sentenced in jurisdictions with higher levels of racial or ethnic threat will be sentenced more harshly, net of individual- and county-level controls. Although I expect such an effect for both prison and jail sentences, I hypothesize that the ecological effects of racial and ethnic threat will have greater effects on prison sentences than jail sentences. I first examine racial and ethnic composition, and then examine two other dimensions of threat—economic and power—not typically examined in sentencing literature.

The third hypothesis is that individual-level racial and ethnic threat effects will be moderated by ecological measures of racial and ethnic threat. Specifically, I expect not only that black and Hispanic felons will be disproportionately more likely to be sentenced to prison relative to other groups of offenders, but also that this difference will be greater among offenders who are sentenced in jurisdictions marked by higher levels of racial or ethnic threat.

Data

I test the three sets of hypotheses using a combination of individual-level sentencing data and county-level contextual data. The criminal sentencing data came from the State Court Processing Statistics for 1998, 2000, and 2002, which include 17,440 convicted felon offenders

in 60 urban counties across 23 states. Approximately one third of the data were from 1998, 2000, and 2002, respectively. As shown in table 5.1, the average age was 31, and the sample had 83 percent male convicted felons. Forty-two percent of the convicted felons were non-Hispanic black, and 25 percent were Hispanic.

Table 5.1. Descriptive Statistics

	N	Percent
Outcome Measure		
Non-custodial sanctions	4,180	24.0%
Jail	6,680	38.3%
Prison	6,580	37.7%
	Mean	SD
Offender Level (N=17,440)		
Black	.42	.49
Hispanic	.25	.43
Male	.83	.38
Black x male	.34	.47
Age	31.02	10.05
Age²	1,063.44	706.40
Criminal justice status	.38	.49
Criminal history scale	1.93	1.50
Multiple arrest charge	.59	.49
Violent offense	.17	.38
Property offense	.32	.47
Drug offense	.39	.49
Detention	.53	.50
Plea bargaining	.95	.22
Year 1998	.34	.47
Year 2000	.32	.46
County Level (N=60)		
Racial threat		
Pct. black	.16	.13
Pct. black²	.04	.07
White-to-black unemp. ratio	.41	.09
White-to-black unemp. ratio²	.17	.08
Black-to-white voting ratio	.28	.34
Black-to-white voting ratio²	.20	.51
Ethnic threat		
Pct. Hispanic	.17	.15
Pct. Hispanic²	.05	.10
White-to-Hispanic unemp. ratio	.51	.10
White-to-Hispanic unemp. ratio²	.27	.10

Table 5.1—continued.

	Mean	SD
Hispanic-to-white voting ratio	.18	.34
Hispanic-to-white voting ratio²	.15	.60
Controls		
Sentencing guideline states	.35	.48
Southern counties	.32	.47
Resource deprivation	.00	1.00
Crime rates	5,126.55	1,853.69
County jail capacity	1.21	0.84
State prison capacity	1.03	.13
Density (ln)	6.57	1.23

Since 1988, the Bureau of Justice Statistics (BJS) has sponsored a biennial data collection, the State Court Processing Statistics (SCPS), on the processing of felony defendants in the State courts of the Nation's 75 most populous counties. Every two years, the SCPS collects data for felony cases (state, not federal) filed during May in 40 large urban counties. The SCPS tracks these felony cases for up to 1 year. These cases are representative of the felony cases filed in the Nation's 75 most populous counties (Rainville and Reaves, 2003). According to the FBI's Uniform Crime Reports program for 2000, these counties accounted for 49% of all reported serious violent crimes in the U.S., including 60% of robberies, 47% of murders and non-negligent manslaughters, 46% of aggravated assaults, and 37% of forcible rapes. At the same time, these counties made up 39% of all reported serious property crimes, including 55% of motor vehicle thefts, 37% of burglaries, and 37% of larceny/thefts (Rainville and Reaves, 2003). Overall, the SCPS data are unique in that they offer extensive information on the processing of defendants, provide important offender and offense characteristics, and allow great generalizability of findings to urban counties in the U.S. (Demuth and Steffensmeier, 2004).

County data were obtained from various sources and then merged with the SCPS data. The 2000 U.S. Census data were used to capture county-level variations in social structural characteristics (e.g., levels of resource deprivation, density, percent black, percent Hispanic, white-to-black unemployment ratio, and white-to-Hispanic unemployment ratio). The Current Population Survey in the 2000 U.S. Census was the source for the state-level voting rates for whites, blacks, and Hispanics in the 2000 presidential election. The National Jail Census 1999

was the source for county jail capacity measure, and The Census of State and Federal Adult Correctional Facilities 2000 was the source for state prison capacity measure. County-level index crime rates were obtained from the Uniform Crime Reports. In addition, sentencing guideline states were identified by the State Court Organization from the National Center for State Courts.

Below, I describe each variable in the analyses. Table 5.1 provides the means and standard deviations for all the study variables, and table A.1 provides the zero-order correlations of all the county-level variables, including the ecological measures of racial and ethnic threat, as well as the control variables. Overall, this final data set, which combines the SCPS data and various contextual measures, provides a rich and detailed body of information for examining the influence of racial and ethnic threat on sentencing severity.

Dependent Variable

Since Wheeler et al. (1982), most sentencing research has examined sentencing as a two-stage decision-making process that is comprised of whether to incarcerate and for how long (e.g., Britt, 2000; Demuth and Steffensmeier, 2004; Steffensmeier et al., 1998; Steffensmeier and Demuth, 2000, 2006; Ulmer and Johnson, 2004). The problem, however, as Holleran and Spohn (2004) have indicated, is that prison and jail are two qualitatively different sentence types. Thus, the use of in/out decision as an outcome where "in" includes both prison and jail may increase the risk of measurement error and different conclusions regarding the correlates of sentencing decisions.

For that reason, the incarceration decision variable in this study was coded 1 if the offender was sentenced to any length of confinement in a county jail, coded 2 if the offender was sentenced to any length of confinement in a state prison, and coded 3 if the offender was sentenced to any combination of non-incarceration options (i.e., probation, restitution, fines, suspended sentence, and so forth). Non-custodial sanctions were held as the reference category in modeling.[4] Among these convicted felons, 38.3% were sentenced to county jails, 37.7% were sanctioned to state prisons, and 24% received non-custodial sanctions.

Individual- and Contextual-Level Racial and Ethnic Threat Variables

At the individual level, the offender's race (non-Hispanic black) was used as an indicator of racial threat (1=yes; 0=no), and the offender's ethnicity (Hispanic) was used as an indicator of

[4] HLM 6.0 was used for all the analyses. Since HLM 6.0 treats the highest number in the response category as the reference category in modeling multinomial outcomes, I coded non-custodial sanctions as 3.

ethnic threat (1=yes; 0=no). The reference category was whites.[5] At the county level, I investigate the contextual effects of racial and ethnic threat separately in the analyses.

The first racial threat measure is the size of the non-Hispanic black population at the county level. This measure is the most commonly used indicator of racial threat, including sentencing studies (e.g., Britt, 2000; Fearn, 2005; Kautt, 2002; Ulmer and Johnson, 2004). To evaluate the possible nonlinear effects of racial composition, I consider both the linear and squared versions of this variable in the analysis.

In addition, I examine two distinct measures of racial threat—economic and power threat. Following the lead of Eitle, D'Alessio and Stolzenberg (2002), I measured black economic threat using the ratio of white-to-black unemployment rate. A higher value represents a higher level of white unemployment rate compared to minority groups and, in turn, a higher level of economic threat posed by minority groups.

Black power threat was measured as the ratio of black-to-white voters who voted for the 2000 presidential election. This measure was created in four steps: first, I derived the voting-age population that is black or white from the 2000 U.S. Census; second, I obtained the percentage of blacks and whites who voted in the 2000 presidential election in each state from the Current Population Survey in the 2000 U.S. Census; third, I multiplied the white and black voting-age population in each county (from the first step) with the corresponding percentage of whites and blacks who voted in that state (from the second step), respectively, to obtain the black and white subpopulation who voted for the 2000 presidential election; finally, I computed the ratio of black-to-white voters by dividing the black subpopulation by the white subpopulation obtained from the previous step. All three racial threat measures were coded such that higher scores indicate higher levels of racial threat. Here, again, I included both the linear and squared versions of each threat measure in the analyses to capture possible nonlinear effects of racial threat.

After examining racial threat, I investigate the ecological effects of ethnic threat on sentencing decisions. Similar to the construction of the three racial threat measures, the three ethnic threat measures were the size of the Hispanic population (measured by percent Hispanic), Hispanic economic threat (measured by white-to-Hispanic unemployment ratio), and Hispanic power threat (measured by Hispanic-to-white voting ratio). These measures were coded such that higher scores indicate higher level of ethnic threat. Once again, I included both the linear and

[5] Anyone who did not fit in the three categories—white, non-Hispanic black, and Hispanic—was omitted from the

squared versions of each threat measure in the analyses to capture possible nonlinear effects of ethnic threat on sentencing severity.

Control Variables

The analyses include a number of control variables to reduce the likelihood that any identified finding is spurious. Because Steffensmeier et al. (1995) found that the age-sentencing association is curvilinear, I included both the linear and squared versions of age. Prior sentencing research also consistently showed that offenders' criminal history and offense severity affect sentencing outcomes. For this reason, following the lead of Demuth and Steffensmeier (2004), I constructed the following measures. The first is criminal history, which I obtained by adding up four dummy variables that reflect an offender's prior contact with the criminal justice system, including prior felony arrest, prior felony conviction, prior jail incarceration, and prior prison incarceration (Cronbach's alpha=.800). The second is criminal justice status (1=yes; 0=no), which reflects whether the convicted felon's criminal justice status at time of arrest was active or not. The third is multiple arrest charges (1=yes; 0=no). To control for the offense severity, I included three dummy variables to capture the most serious offense type for which the offender was convicted: violent offense (1=yes; 0=no), property offense (1=yes; 0=no), and drug offense (1=yes; 0=no), holding other offense as the reference category (see Johnson, 2006). Prior research also revealed that the conviction mode and pre-trial outcome affect sentencing severity (e.g., Albonetti, 1986; Fearn, 2005; Ulmer and Johnson, 2004), thus I controlled for plea bargaining (1=conviction resulting from plea bargaining; 0=otherwise) and detention (1=detained prior to trial; 0=otherwise). Since the defendants were processed in the state courts in years 1998, 2000, and 2002, there might be cohort differences that should be assessed due to changes in laws, policies, and law enforcement and court practices from year to year. As a result, I created dummy variables for years 1998 and 2000, holding year 2002 as the reference year.

There are various county-level factors that could influence sentencing decisions. For example, sentencing could be a function of county jail and state prison capacity. In the analyses, I controlled for county jail capacity when predicting jail sentences, and controlled for state prison capacity when predicting prison sentences. County jail capacity was computed by dividing jail population by jail capacity.[6] Similarly, state prison capacity was computed by dividing prison

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final dataset.

[6] Four counties in the state of New York do not have county jail information in the 1999 National Jail Census. For these four counties, I use the jail capacity value for New York City.

population by rated prison capacity. If this value is over 1, the county jail or state prison is operating over capacity. Higher scores on these two measures mean that the institutions are running with less capacity to take more jail or prison inmates. Further, sentencing could be a function of local crime rates. Thus, I controlled for the average index crime rates from 1998-2002 (Cronbach's alpha=.969).[7]

In addition, I controlled for density, which captures interracial interaction, and may serve to increase pressure on the criminal justice system to respond to crime (see Eitle et al., 2002). The natural log of the density measure was used to correct for skew. Following Sampson and Laub (1993), I introduced a control for county-level resource deprivation. The measure was created by performing a principal components analysis on the following variables: median family income, median household income, percent receiving public assistance, percent below poverty, percent unemployed in civilian populations above 16 years old, and per capita income (λ=4.768, the absolute factor loading>.810, Cronbach's alpha=.734). Finally, possible regional and state differences in sentencing practices and the explanatory variables were controlled for by the inclusion of two dummy variables—a dummy variable distinguishing counties located in a Southern state and a dummy variable indicating that counties are located in a state that has sentencing guidelines.[8]

Analytic Strategy

Due to the nature of the data and the use of a multinomial outcome, I used hierarchical generalized linear modeling (HGLM), which incorporates a unique random effect into the statistical model for each county and produces more robust standard errors than non-hierarchical models allow (Raudenbush and Bryk, 2002: 100).[9] In addition, to assess the moderating effect of the ecological measures of racial and ethnic threat on the offender's race and ethnicity, cross-level (or macro-micro) interaction techniques were employed (see Kreft and de Leeuw, 1998:

[7] The UCR crime index includes seven offenses: homicide, forcible rape, robbery, aggravated assault, burglary, larceny-theft, and motor vehicle theft.

[8] Sentencing guideline states include Florida, Maryland, Michigan, Missouri, Ohio, Pennsylvania, Utah, Virginia, and Washington. There are 21 counties that are located in these 9 states.

[9] Given the ordered nature of the incarceration measure—the categories are increasingly more punitive ranging from non-custodial sanctions to prison—an alternative model would be ordinal logistic regression (see Holleran and Spohn, 2004). Ordinal logistic regression models assume the parameters are invariant across the response categories (Long, 1997: 141), referred to as the proportional odds assumption. I estimated an ordinal regression model using SAS's PROC LOGISTIC which provides a test for the proportional odds assumption (HLM 6.0 does not provide this test). The ordinal logistic regression model, however, violated the proportional odds assumption ($p<.05$). As a result, I analyzed the incarceration decision using multinomial logistic regression models.

12).[10] For all the analyses, I used HLM 6.0 and present the model estimates with robust standard errors.[11]

Results

Hypothesis One

Inspection of model 1 in table 5.2 shows that blacks and Hispanics are, as expected, significantly more likely to receive a jail or prison sentence than non-custodial sanctions. However, the effects are not greater for prison vs. jail sentences.[12]

[10] Models were run in which the slopes of black, Hispanic, male, and black x male were allowed to vary across counties. None of them varied significantly ($p<.05$). However, I proceed with cross-level interactions for the following reasons. First, Raudenbush and Bryk (2002) have argued that if theoretical arguments suggest that cross-level interaction effects might be present, "the analyst should proceed with posing level-2 models for these slopes" (p. 258). They stressed that "the homogeneity tests for intercepts and slopes are only a guide and should not substitute for informed judgment" (p. 129). Second, these slopes may indeed vary substantively across counties, but the modest number of counties included in the analyses (N=60) may not provide sufficient statistical power to detect statistically significant variation. To give an example, the variance component of the black slope was .02 (SD=.13, df=59, χ^2=56.87, $p>.05$) for the jail outcome and was .05 (SD=.22, df=59, χ^2=74.38, $p>.05$) for the prison outcome. Given this amount of variance and the coefficient of black, 95% of all the 60 counties had black slopes falling between -.24 and .27 for the jail outcome, and 95% of all the counties had black slopes ranging from -.57 to .29 for the prison outcome. This rather wide range suggests that black slopes indeed varied substantially across counties, and the failure to detect such a statistically significance variance may be due to the lack of statistical power. Third, Raudenbush and Bryk refer to a model in which the slopes are fixed, and in which level-2 models are posed for these slopes, as a model with nonrandomly varying slopes. For these models, they argued that the slopes do vary from one level-2 unit to another level-2 unit, but their variation is nonrandom (i.e., patterned), and the slopes may vary strictly as a function of level-2 predictors. They contended that "hierarchical linear models may involve multiple level-1 predictors where any combination of random, nonrandomly varying, and fixed slopes can be specified" (p. 28). For these reasons— theoretical reasons to investigate whether the effect of being black or Hispanic varies as a function of the ecological measures of racial or ethnic threat, the modest number of counties, and potentially nonrandom (patterned) slope variations—I estimate cross-level interactions.

[11] The variance inflation factors for all the county-level variables (linear versions of the ecological measures of racial and ethnic threat, as well as county-level control variables) were all below 4. In addition, the results of condition indexes indicated acceptable levels of collinearity (Hair et al., 1998: 220). All the variables were grand mean centered, which helps to ameliorate multicollinearity problems between the linear and quadratic terms of racial and ethnic threat measures. The multicollinearity test for all the offender-level variables did not reveal any problems.

[12] The coefficients of black and Hispanic on prison sentences were not significantly different from the coefficients on jail sentences (χ^2=.86, df=1, $p>.05$; χ^2=1.20, df=1, $p>.05$). This test is performed in HLM 6.0 by using the multivariate hypothesis testing features of the software. In the hierarchical multinomial regression example given in their book, Raudenbush and Bryk (2002: 332) used the test to assess whether the Catholic school dummy variable had similar effects on the probability of attending a four-year college versus attending a two-year college. The details about how to apply the multivariate hypothesis testing features of the software for hierarchical models are in the HLM manual (Raudenbush et al., 2004: 58-59).

Table 5.2. Hierarchical Multinomial Logistic Regression Models of Race/Ethnicity on the Decision to Incarcerate

	Model 1: Main effects		Model 2: Race/ethnicity and sex interaction		Model 3: Race and sex interaction	
	For jail	For prison	For jail	For prison	For jail	For prison
Intercept	.40*	.51**	.40*	.51**	.40*	.51**
	(.18)	(.14)	(.18)	(.14)	(.18)	(.14)
Offender Level						
Black	.21**	.15*	-.05	-.19	-.02	-.16
	(.05)	(.07)	(.12)	(.11)	(.10)	(.11)
Hispanic	.28**	.21**	.17	.13	.30**	.23**
	(.08)	(.08)	(.17)	(.12)	(.08)	(.08)
Male	.21**	.54**	.05	.34**	.09	.37**
	(.06)	(.06)	(.09)	(.10)	(.08)	(.09)
Black x male			.35*	.43**	.30*	.40**
			(.15)	(.14)	(.13)	(.13)
Hispanic x male			.16	.12		
			(.18)	(.13)		
Age	.02*	.01	.02*	.01	.02*	.01
	(.01)	(.02)	(.01)	(.02)	(.01)	(.02)
Age^2	-.00*	-.00	-.00*	-.00	-.00*	-.00
	(.00)	(.00)	(.00)	(.00)	(.00)	(.00)
Criminal justice status	.14	.26**	.14	.26**	.14	.26**
	(.07)	(.08)	(.07)	(.08)	(.07)	(.08)
Criminal history scale	.10*	.61**	.10*	.61**	.10*	.61**
	(.05)	(.03)	(.05)	(.03)	(.05)	(.03)
Multiple arrest charge	.14*	.44**	.14*	.44**	.14*	.44**
	(.06)	(.07)	(.06)	(.07)	(.06)	(.07)
Violent offense	-.09	.54**	-.08	.55**	-.08	.55**
	(.15)	(.13)	(.15)	(.13)	(.15)	(.13)
Property offense	-.33**	-.35**	-.32**	-.34**	-.32**	-.34**
	(.11)	(.12)	(.11)	(.12)	(.11)	(.12)
Drug offense	-.48**	-.52**	-.49**	-.53**	-.49**	-.53**
	(.15)	(.19)	(.15)	(.19)	(.15)	(.19)
Detention	.71**	1.57**	.71**	1.57**	.71**	1.57**
	(.10)	(.08)	(.10)	(.08)	(.10)	(.08)
Plea bargaining	.31	-.57*	.32	-.57*	.32	-.57*
	(.25)	(.22)	(.25)	(.22)	(.25)	(.22)
Year 1998	.55*	.50	.55*	.51	.55*	.51
	(.23)	(.28)	(.23)	(.28)	(.23)	(.28)
Year 2000	.19	.22	.19	.22	.19	.22
	(.15)	(.15)	(.15)	(.15)	(.15)	(.15)
Random effect						
Intercept, τ_{00}	1.89**	1.12**	1.90**	1.13**	1.89**	1.13**
χ^2	2,229	1,472	2,235	1,482	2,233	1,481

*p<.05 **p<.01 (N=17,440 within county; N=60 between county)

Note: The outcome measure being modeled, the decision to incarcerate, has three outcomes—non-custodial sanctions, jail, and prison sentences. In the model presented here, non-custodial sanctions is the omitted category.

I anticipated that there would be an interaction effect between race/ethnicity and sex, such that black males and Hispanic males would be punished more harshly than other race/ethnicity and sex groups. Model 2 in table 5.2 suggests that the race effect is indeed moderated by sex, but there is no statistically significant ethnicity-sex interaction. In model 3, I present only the race-sex interaction. Then, to show graphically what the interaction indicates, figure 5.1 presents the predicted probabilities for non-custodial, jail, and prison sentences for each of six race/ethnicity and sex groups, setting all the covariates at their means.[13]

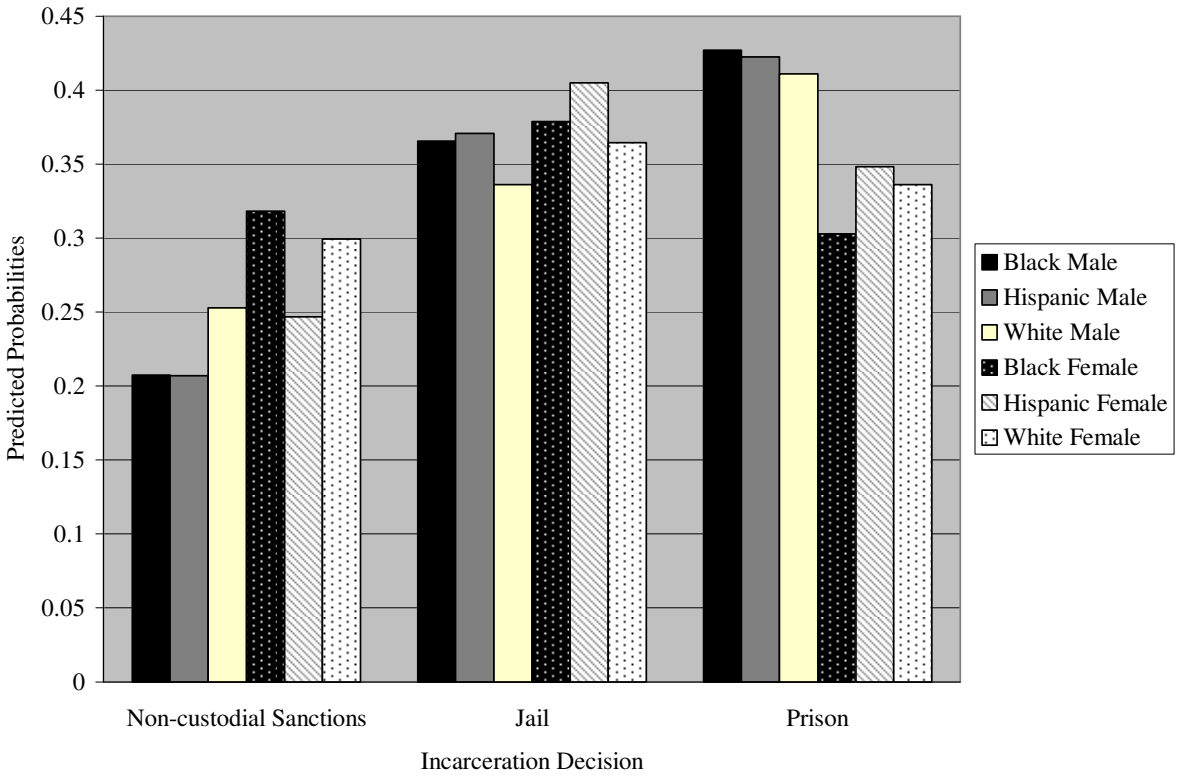

Figure 5.1. Predicted Probabilities of Receiving a Non-custodial, Jail, or Prison Sentence for Six Race/Ethnicity and Sex Groups

[13] I computed the predicted probabilities for each sentence type using the formula Holleran and Spohn (2004) provided (see footnote 6, pp. 219-220).

Figure 5.1 shows that, as expected, the probability of receiving a prison sentence, the most punitive sanction type, is markedly higher among black and Hispanic males than other groups. The contrast between minority males and white males is less pronounced than the contrast between minority males and females. However, additional analyses suggest that black males and Hispanic males are significantly more likely to receive prison sentences than their white counterparts.[14] Somewhat surprisingly, black females have the lowest predicted probability of receiving a prison sentence. Notably, the probability of receiving a jail sentence is relatively similar across all the race/ethnicity and sex groups, in turn, supporting the argument for separately analyzing jail and prison outcomes (Harrington and Spohn, 2007; Holleran and Spohn, 2004).

Hypothesis Two

Tables 5.3 and 5.4 provide a test of the second hypothesis. Review of table 5.3 shows that when racial threat is operationalized as the size of the black population in the county, both the linear and quadratic terms are statistically significant for the jail sentences, but only the quadratic term is statistically significant for the prison outcome.[15] Here, again, I present the predicted probabilities of receiving a non-custodial, jail, and prison sentence, setting the covariates at their means, in figure 5.2.

Table 5.3. Hierarchical Multinomial Logistic Regression Models of the Effect of Racial Threat in Counties on the Decision to Incarcerate

	Black population size		Black economic threat		Black power threat	
	For jail	For prison	For jail	For prison	For jail	For prison
Intercept	.40*	.53**	.40*	.53**	.40*	.54**
	(.16)	(.13)	(.17)	(.13)	(.17)	(.12)
Pct. black	-11.84*	-6.17				
	(4.49)	(3.31)				
Pct. black²	18.36*	14.11*				
	(6.97)	(6.66)				

[14] I categorized the sample into black males, Hispanic males, white males, and females. Then, I estimated a model which includes indicators for black males, Hispanic males, and females, holding white males as the reference category. The coefficients of black males (b=.25, se=.08, p<.01) and Hispanic males (b=.24, se=.09, p<.01) for the prison outcome indicate that the contrast between minority males and white males was statistically significant.

[15] The coefficient of percent black for jail sentences was not statistically different from the coefficient of percent black for prison sentences (χ^2 = 2.93, df=1, p>.05), and the coefficient of the squared version of percent black on prison and jail sentences did not differ significantly either (χ^2 =.92, df=1, p>.05).

Table 5.3—continued.

	Black population size		Black economic threat		Black power threat	
	For jail	For prison	For jail	For prison	For jail	For prison
White-to-black unemp. ratio			-13.99	-11.62		
			(13.70)	(10.82)		
White-to-black unemp. ratio²			17.37	13.69		
			(14.91)	(12.21)		
Black-to-white voting ratio					-3.57*	-1.98
					(1.72)	(1.12)
Black-to-white voting ratio²					2.33*	2.00**
					(.94)	(.61)
Sentencing guideline states	-.22	-.75*	-.19	-.68	-.41	-.90**
	(.34)	(.31)	(.41)	(.36)	(.36)	(.28)
Southern counties	-.22	.21	-.28	.30	-.28	.19
	(.42)	(.34)	(.41)	(.34)	(.39)	(.31)
Resource deprivation	-.26	-.07	-.36	.00	-.32	-.16
	(.26)	(.16)	(.24)	(.19)	(.25)	(.18)
Crime rates	.00	-.00	-.00	-.00	.00	-.00
	(.00)	(.00)	(.00)	(.00)	(.00)	(.00)
County jail capacity (for jail)	.12		.04		.08	
	(.13)		(.16)		(.14)	
State prison capacity (for prison)		.68		.77		.85
		(1.05)		(1.05)		(1.01)
Density (ln)	.01	.10	-.17	.07	-.06	.06
	(.22)	(.13)	(.21)	(.14)	(.22)	(.14)
Random effect						
Intercept, τ_{00}	1.70**	.98**	1.90**	1.08**	1.78**	.91**
χ^2	2,322	1,172	2,217	1,154	2,484	1,123

*p<.05 **p<.01 (N=17,440 within county; N=60 between county)

Notes:
1. The outcome measure being modeled, the decision to incarcerate, has three outcomes—non-custodial sanctions, jail, and prison sentences. In the model presented here, non-custodial sanctions is the omitted category.
2. Models also included all individual-level variables presented in table 5.2; however, the model estimates for the individual-level variables remained virtually unchanged so I present only the results for the effects of county-level factors.

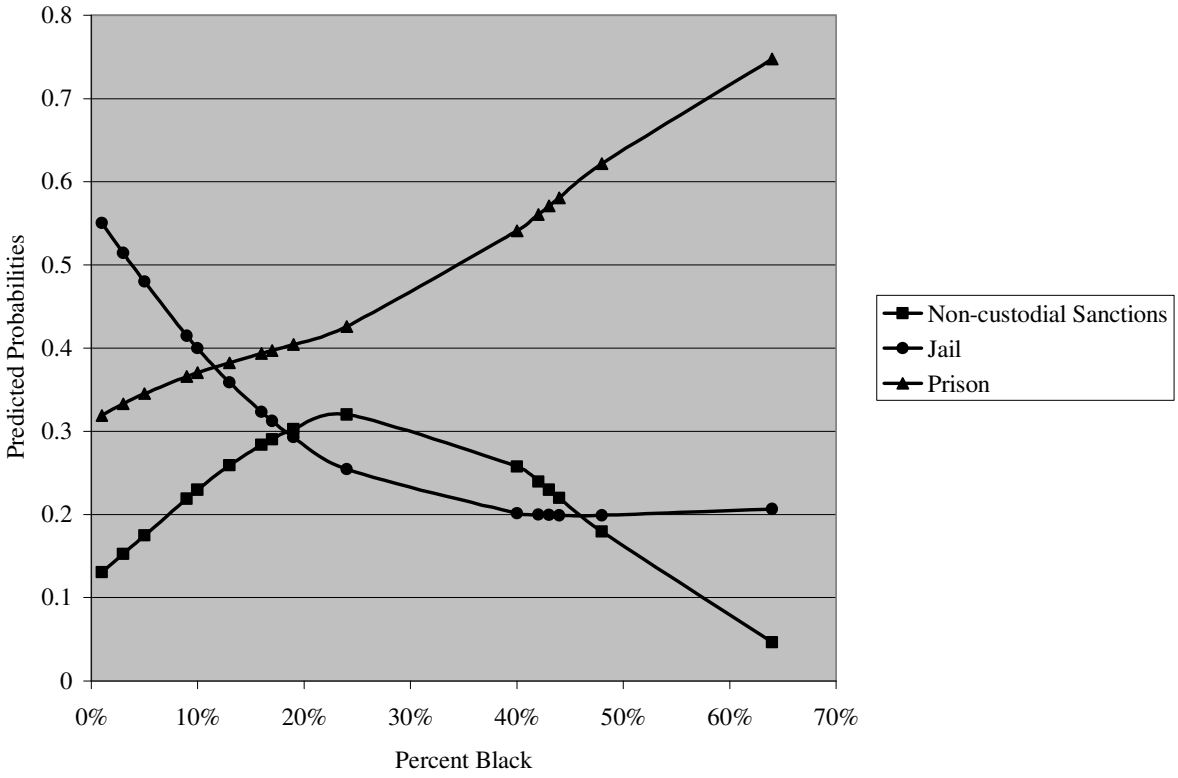

Figure 5.2. Predicted Probabilities of Receiving a Non-custodial, Jail, or Prison Sentence at Different Levels of Percent Black

The figure suggests that the effect of percent black varies depending on the type of the sentence. For example, the probability of receiving a prison sentence markedly increases at an accelerating rate, as percent black increases. More specifically, the probability of receiving a prison sentence is modestly higher at lower levels of percent black, and it is disproportionately higher at higher levels of percent black. By contrast, as percent black increases, the probabilities of receiving a jail sentence decrease, but they decrease at a decelerating rate. The probability of receiving non-custodial sanctions increases first as percent black increases, and then it declines at higher levels of percent black. Notably, in counties with a larger black population size, courtroom actors use prison sentences more frequently than jail or non-custodial sanctions. Inspection of the black economic threat model in table 5.3 does not reveal a statistically

significant effect on jail or prison sentences. The black power threat model shows similar findings to those in the black population size model.

Table 5.4 provides a test of the second hypothesis related to ethnic threat—namely, the expectation that convicted felons sentenced in jurisdictions characterized by a high level of ethnic threat are more likely to receive tougher sentences. Here, I employed three ethnic threat measures, including percent Hispanic, Hispanic economic threat, and Hispanic power threat. Since the Hispanic power threat model reveals similar findings to those in the Hispanic population size model, I only graph the predicted probabilities for the latter model (see figure 5.3).

Table 5.4. Hierarchical Multinomial Logistic Regression Models of the Effect of Ethnic Threat in Counties on the Decision to Incarcerate

	Hispanic population size		Hispanic economic threat		Hispanic power threat	
	For jail	For prison	For jail	For prison	For jail	For prison
Intercept	.40*	.53**	.40*	.53**	.40*	.53**
	(.16)	(.13)	(.17)	(.13)	(.16)	(.13)
Pct. Hispanic	7.83**	1.86				
	(2.56)	(2.13)				
Pct. Hispanic²	-10.05**	-3.38				
	(3.18)	(2.79)				
White-to-Hispanic unemp. ratio			13.49	5.77		
			(15.08)	(13.24)		
White-to-Hispanic unemp. ratio²			-12.07	-5.52		
			(14.83)	(13.33)		
Hispanic-to-white voting ratio					4.25*	.75
					(1.97)	(1.46)
Hispanic-to-white voting ratio²					-2.41*	-.68
					(.93)	(.70)
Sentencing guideline states	.17	-.66*	-.32	-.77*	-.01	-.70*
	(.38)	(.32)	(.39)	(.32)	(.37)	(.31)
Southern counties	-.46	.25	-.36	.24	-.42	.31
	(.45)	(.38)	(.42)	(.34)	(.47)	(.38)
Resource deprivation	-.36	.04	-.37	-.02	-.42	.06
	(.28)	(.22)	(.24)	(.17)	(.28)	(.23)
Crime rates	-.00	-.00	-.00	-.00	-.00	-.00
	(.00)	(.00)	(.00)	(.00)	(.00)	(.00)
County jail capacity (for jail)	.19		.05		.14	
	(.18)		(.14)		(.17)	

Table 5.4—continued.

	Hispanic population size		Hispanic economic threat		Hispanic power threat	
	For jail	For prison	For jail	For prison	For jail	For prison
State prison capacity (for prison)		.47		.76		.59
		(1.06)		(1.07)		(1.08)
Density (ln)	-.13	.09	-.11	.11	-.19	.08
	(.18)	(.11)	(.22)	(.14)	(.19)	(.12)
Random effect						
Intercept, τ_{00}	1.67**	1.07**	1.90**	1.09**	1.74**	1.05**
χ^2	1,780	1,082	2,036	1,082	1,673	1,021

*p<.05 **p<.01 (N=17,440 within county; N=60 between county)

Notes:
1. The outcome measure being modeled, the decision to incarcerate, has three outcomes—non-custodial sanctions, jail, and prison sentences. In the model presented here, non-custodial sanctions is the omitted category.
2. Models also included all individual-level variables presented in table 5.2; however, the model estimates for the individual-level variables remained virtually unchanged so I present only the results for the effects of county-level factors.

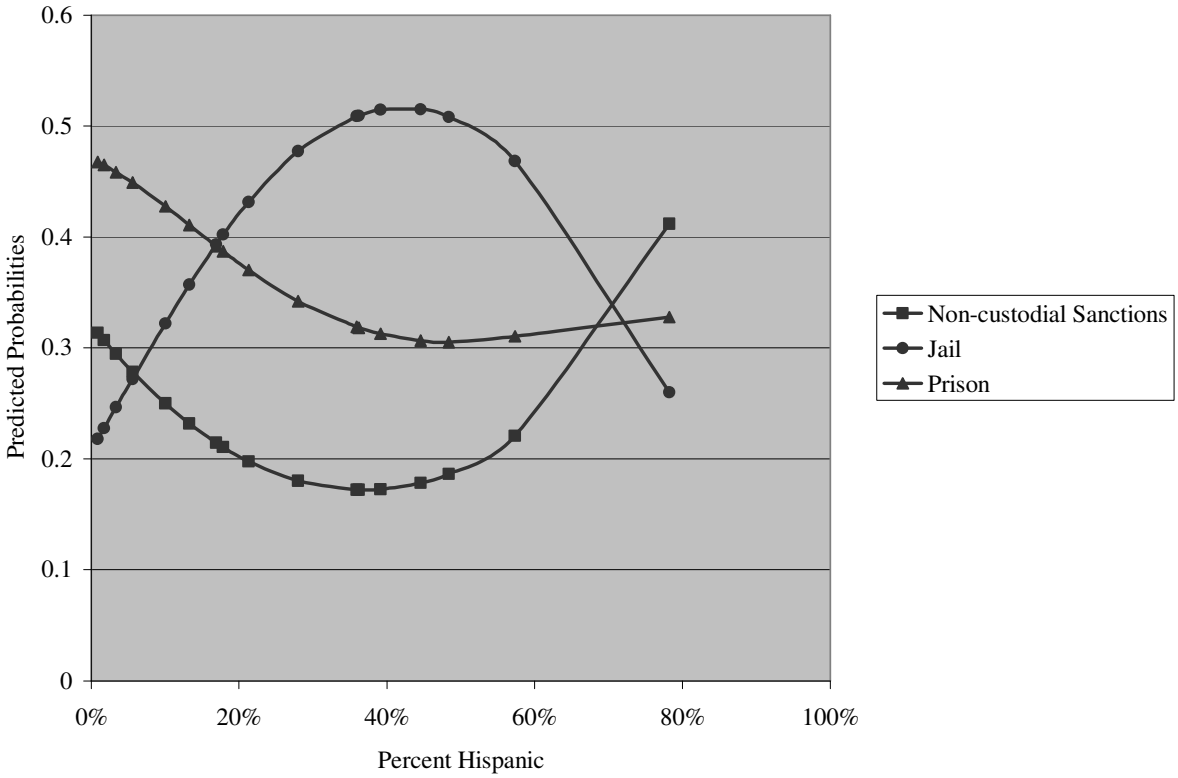

Figure 5.3. Predicted Probabilities of Receiving a Non-custodial, Jail, or Prison Sentence at Different Levels of Percent Hispanic

Review of the Hispanic population size model, as well as figure 5.3, indicates that percent Hispanic has a nonlinear effect on jail sentences. In particular, the probabilities of receiving jail sentences are greater at higher levels of percent Hispanic, but the probabilities become smaller in jurisdictions with a larger Hispanic population size. More strikingly, and in contrast to what I predicted, the probabilities of receiving a prison sentence decrease at a decelerating rate as percent Hispanic increases. The effect of Hispanic population size on prison sentences is significantly different from its effect on jail sentences.[16] The probability of receiving non-custodial sanctions decreases first as percent Hispanic increases, and then escalates at higher levels of percent Hispanic. This result does not provide support for the second hypothesis

regarding ethnic threat.[17] Further, when ethnic threat is operationalized as Hispanic economic threat, there are no statistically significant results relating to the corresponding threat measure.

Hypothesis Three

Finally, tables 5.5 and 5.6 provide a test of the third hypothesis. The black population size model in table 5.5 reveals a statistically significant interaction between race and percent black. In the black economic threat model, there is no statistically significant interaction. In the black power threat model, there is a significant interaction. Figure 5.4 presents the predicted probabilities of receiving a non-custodial, jail, or prison sentence for blacks and whites associate with the black population size model in table 5.5.

[16] The coefficients of the linear and squared versions of percent Hispanic for the prison outcome were significantly different from the coefficients for the jail outcome (χ^2=6.537, df=1, p<.05; χ^2=6.204, df=1, p<.05), respectively.
[17] I ran a model in which I included the interaction between percent black and percent Hispanic. However, this interaction term was not statistically significant, suggesting that the effects of racial threat and ethnic threat do not depend on one another.

Table 5.5. Hierarchical Multinomial Logistic Regression Models of the Interactive Effect of Racial Threat in Counties and Race on the Decision to Incarcerate

	Black population size		Black economic threat		Black power threat	
	For jail	For prison	For jail	For prison	For jail	For prison
Intercept	.40*	.56**	.39*	.54**	.40*	.54**
	(.17)	(.13)	(.17)	(.13)	(.17)	(.12)
Black	-.01	-.13	-.03	-.17	.01	-.10
	(.10)	(.11)	(.10)	(.11)	(.11)	(.11)
Pct. black	-12.22**	-6.16				
	(4.46)	(3.09)				
Pct. black²	19.31**	13.97*				
	(6.86)	(6.03)				
Black x Pct. black	.32	-3.81*				
	(1.41)	(1.72)				
Black x Pct. black²	-1.55	5.73				
	(2.74)	(3.41)				
White-to-black unemp. ratio			-13.14	-12.09		
			(13.60)	(11.03)		
White-to-black unemp. ratio²			16.23	14.17		
			(14.75)	(12.49)		
Black x White-to-black unemp. ratio			5.82	1.83		
			(3.82)	(5.02)		
Black x White-to-black unemp. ratio²			-7.48	-1.48		
			(4.57)	(6.16)		
Black-to-white voting ratio					-3.54*	-1.64
					(1.71)	(1.09)
Black-to-white voting ratio²					2.28*	1.67**
					(.91)	(.55)
Black x Black-to-white voting ratio					-.18	-1.43*
					(.50)	(.56)
Black x Black-to-white voting ratio²					.22	1.18**
					(.38)	(.41)
Random effect						
Intercept, τ_{00}	1.71**	.95**	1.90**	1.09**	1.77**	.89**
χ^2	2,330	1,134	2,206	1,150	2,469	1,075

*p<.05 **p<.01 (N=17,440 within county; N=60 between county)

Notes:
1. The outcome measure being modeled, the decision to incarcerate, has three outcomes—non-custodial sanctions, jail, and prison sentences. In the model presented here, non-custodial sanctions is the omitted category.
2. Models also included all individual-level variables presented in table 5.2; however, the model estimates for the individual-level variables remained virtually unchanged so I present only the results for the effects of county-level factors.

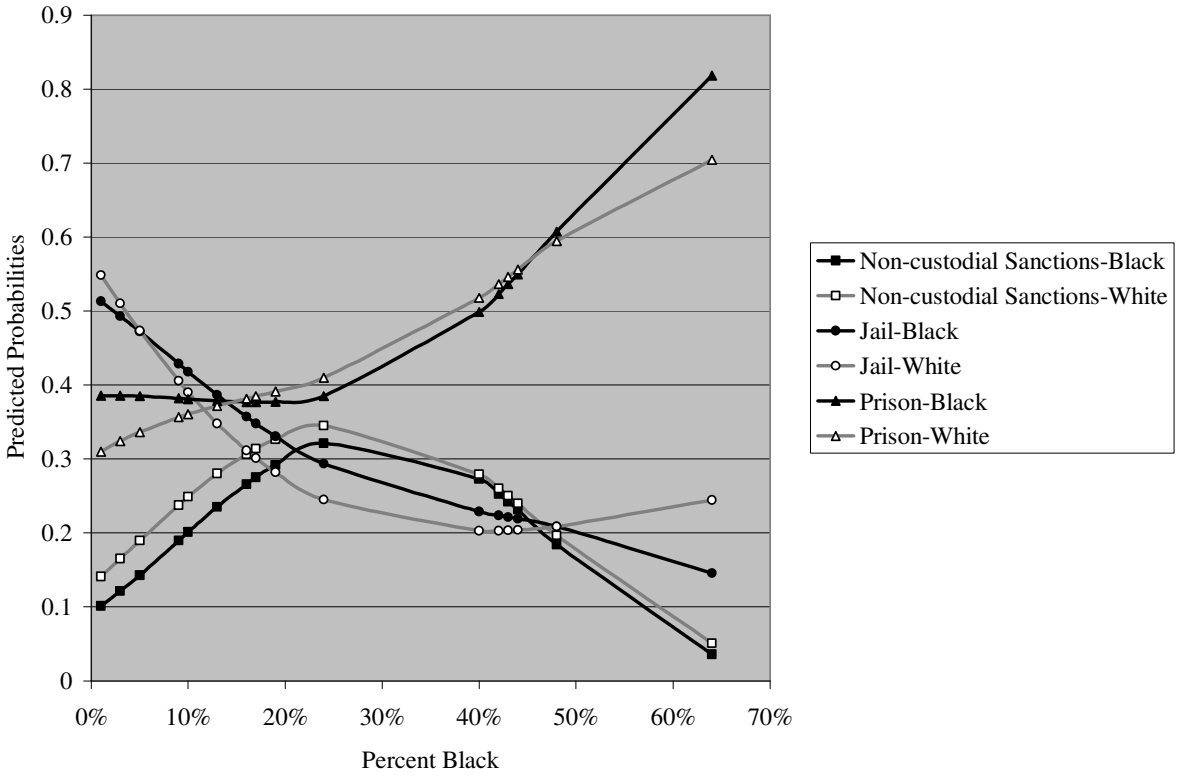

Figure 5.4. Predicted Probabilities of Receiving a Non-custodial, Jail, or Prison Sentence for Blacks and Whites: Race and Black Population Size Interaction

This figure suggests that the moderating influence of black population size varies depending on the sanction type. Inspection of figure 5.4 shows that as percent black increases, the probabilities of receiving a prison sentence are greater for both blacks and whites. Notably, the probabilities for whites increase linearly; the probabilities for blacks increase modestly at lower levels of black population size, but escalate disproportionately at higher levels of black population size. By contrast, blacks and whites have similar probabilities of receiving jail sentences: both decrease as percent black increases. With respect to non-custodial sanctions, whites have greater probabilities of receiving non-custodial sanctions than blacks, but this difference diminishes at higher levels of percent black.

When we turn to the interaction between ethnicity and the ecological measures of ethnic threat (see table 5.6), no statistically significant effect surfaces. The one exception—depicted in figure 5.5—is Hispanic economic threat. Here, there is a significant interaction effect (see figure 5.5). Visual inspection of the figure reveals that Hispanics have greater probabilities of receiving prison sentences, although this difference diminishes in areas with higher levels of Hispanic economic threat. Instead, at higher levels of Hispanic economic threat, whites have greater probabilities than Hispanics to receive prison sentences. Notably, at almost all levels of Hispanic economic threat, the probability of receiving a jail sentence among Hispanics is higher than whites. This difference is more evident in counties with lower and higher levels of Hispanic economic threat and less so in counties in the middle. Hispanics have the lowest probabilities of receiving non-custodial sanctions, and it stays flat as Hispanic economic threat level differs across counties. Overall, the findings provide no support for the interaction between ethnicity and ecological effects of ethnic threat.

Table 5.6. Hierarchical Multinomial Logistic Regression Models of the Interactive Effect of Ethnic Threat in Counties and Ethnicity on the Decision to Incarcerate

	Hispanic population size		Hispanic economic threat		Hispanic power threat	
	For jail	For prison	For jail	For prison	For jail	For prison
Intercept	.42*	.55**	.40*	.53**	.42*	.54**
	(.17)	(.13)	(.17)	(.13)	(.17)	(.13)
Hispanic	.37**	.29*	.33**	.27**	.34**	.24*
	(.13)	(.12)	(.08)	(.08)	(.10)	(.10)
Pct. Hispanic	7.06**	1.20				
	(2.56)	(2.15)				
Pct. Hispanic²	-8.35*	-1.91*				
	(3.19)	(2.83)				
Hispanic x Pct. Hispanic	.63	.54				
	(1.45)	(1.28)				
Hispanic x Pct. Hispanic²	-2.75	-2.42				
	(1.97)	(1.47)				
White-to-Hispanic unemp. ratio			13.58	5.96		
			(14.97)	(13.07)		
White-to-Hispanic unemp. ratio²			-12.18	-5.81		
			(14.69)	(13.18)		
Hispanic x White-to-Hispanic unemp. ratio			-12.07*	-5.25		
			(6.01)	(6.48)		

Table 5.6—continued.

	Hispanic population size		Hispanic economic threat		Hispanic power threat	
	For jail	For prison	For jail	For prison	For jail	For prison
Hispanic x White-to-Hispanic unemp. ratio²			11.05 (5.64)	4.01 (6.08)		
Hispanic-to-white voting ratio					3.88 (1.95)	.47 (1.49)
Hispanic-to-white voting ratio²					-2.11* (.93)	-.44 (.72)
Hispanic x Hispanic-to-white voting ratio					-.14 (.49)	.18 (.45)
Hispanic x Hispanic-to-white voting ratio²					-.24 (.26)	-.34 (.22)
Random effect						
Intercept, τ_{00}	1.67**	1.07**	1.90**	1.09**	1.74**	1.06**
χ^2	1,750	1,076	2,048	1,085	1,652	1,015

*p<.05 **p<.01 (N=17,440 within county; N=60 between county)

Notes:

1. The outcome measure being modeled, the decision to incarcerate, has three outcomes—non-custodial sanctions, jail, and prison sentences. In the model presented here, non-custodial sanctions is the omitted category.
2. Models also included all individual-level variables presented in table 5.2; however, the model estimates for the individual-level variables remained virtually unchanged so I present only the results for the effects of county-level factors.

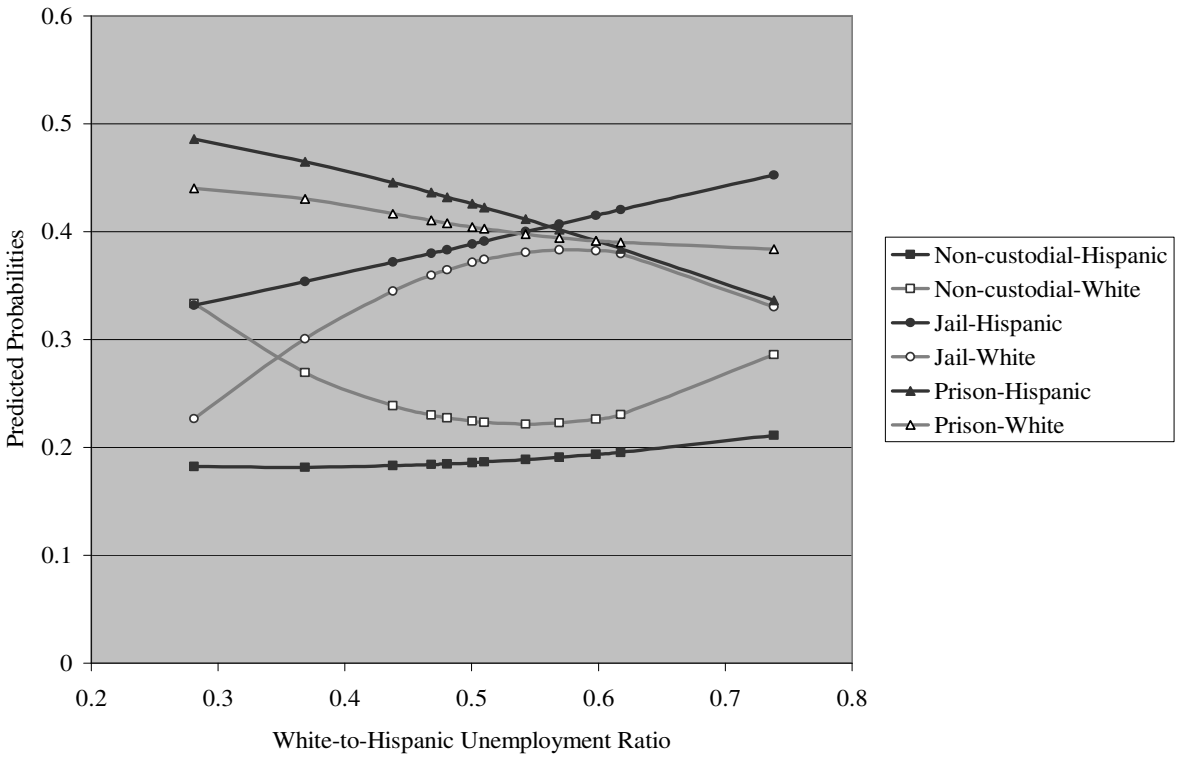

Figure 5.5. Predicted Probabilities of Receiving a Non-custodial, Jail, or Prison Sentence for Hispanics and Whites: Ethnicity and Hispanic Economic Threat Interaction

Discussion and Conclusion

Studies examining discretions in sentencing practices have made important contributions to our knowledge of the factors that affect sentencing outcomes. More recently, sentencing research has incorporated contextual-level factors to study sentencing disparity within a multilevel framework. Building off of this work, and heeding calls for testing the minority threat perspective within a multilevel framework (Stolzenberg, D'Alessio and Eitle, 2004) and for separating prison and jail sentences (Harrington and Spohn, 2007; Holleran and Spohn, 2004), this paper contributes to the emerging literature on multilevel sentencing research by examining different dimensions of racial and ethnic threat and exploring whether they exert differential effects on prison and jail sentences. The emphasis on hypothesizing differential effects of racial

and ethnic threat on prison and jail sentences stems from the fact that prison sentences may be more stigmatizing and punitive (Steffensmeier et al., 1993; Holleran and Spohn, 2004). The focus on different dimensions of racial and ethnic threat stems from the fact that recent studies emphasize the role that social context can play in courtroom decision-making (Ulmer and Johnson, 2004) and from the research documenting that more precise conceptualization of racial and ethnic threat is needed (Eitle et al., 2002).

Building off of prior research, I developed three hypotheses: (1) the probability of receiving a prison sentence will be greater for black and Hispanic felons, especially black and Hispanic male offenders; (2) a higher level of racial and ethnic threat in a jurisdiction will be associated with a greater probability of receiving a prison sentence; and (3) racial and ethnic threat will amplify the effect of the offender's race/ethnicity on sentencing severity, in particular, on prison sentences. These hypotheses were tested by analyzing the State Court Processing Statistics data.

In support of the first hypothesis, I found that black and Hispanic male offenders indeed have greater probabilities of receiving prison sentences than other race/ethnicity and sex groups. With respect to the second hypothesis for racial threat, the findings are mixed. As expected, percent black and black power threat were associated with greater probabilities of receiving a prison sentence, but not a jail sentence. By contrast, percent black and black power threat were related to lower probabilities of being sent to county jails, controlling for county jail operating capacity. Notably, as percent black and black power threat increase, the probability of receiving a prison sentence increases at an accelerating rate, providing support for Blalock's (1967: 145) argument that the effect of power threat is nonlinear. Black economic threat, however, was not associated with prison or jail sentences. When the focus turns to ethnic threat, a different pattern emerged—percent Hispanic and Hispanic power threat were associated with greater probabilities of being sentenced to county jails, but they were associated with smaller probabilities after percent Hispanic and Hispanic power threat reached a threshold level. Unexpectedly, however, percent Hispanic and Hispanic power threat were associated with smaller probabilities of receiving a prison sentence. Finally, with respect to the third hypothesis, I found that racial threat, when operationalized as percent black and power threat, amplified the effect of the offender's race on prison sentences. I also found that Hispanic economic threat conditioned the effect of the offender's ethnicity on jail sentences, but this interaction did not support the third hypothesis.

By and large, the study's findings lend support for the racial threat perspective. At the individual level, the results are in accord with the theoretical expectation that black and Hispanic males had greater probabilities of receiving prison sentences than other race/ethnicity and sex groups. At the county level, that increased black population size and black power threat were associated with higher probabilities of receiving prison sentences supports the racial threat perspective. In addition, the ecological effects of racial threat—black population size and black power threat—amplified the effect of an offender's race on prison sentences, providing further evidence for the racial threat perspective. In accord with the racial threat perspective, in counties marked with a higher level of black population size and black power threat, it appears that courtroom actors are more responsive to the level of threat by sending convicted felons, especially black felons, to state prisons, net of controls for offenders' prior criminal history and offense seriousness, and contextual-level factors. With respect to the null finding for black economic threat, a possible explanation is that the black economic threat measure used here does not capture perceived economic threat. For example, other studies have failed to find a significant effect of black economic threat on arrests using similar measures for black economic threat (e.g., Eitle et al., 2002; Stolzenberg et al., 2004). By contrast, Stults and Baumer (2007) found that perceived economic threat impacts police size.

What accounts for the opposite findings regarding the contextual effects of ethnic threat? Contrary to what I predicted, higher levels of Hispanic population size and Hispanic power threat were associated with a decreased probability of receiving prison sentences. The association between probabilities of receiving jail sentences and Hispanic population size and Hispanic power threat, however, was nonlinear and an inversed U-shaped curve. That pattern could mean that the minority threat perspective does not apply to minority groups other than blacks, "due to the unique history of impetuous race relations between blacks and whites in the United States" (Stults and Baumer, 2007: 539). Also unexpected was the fact that at higher levels of ethnic threat, offenders were more likely to receive non-custodial sanctions than any forms of incarceration. A benign neglect perspective (Liska and Chamlin, 1984; Stolzenberg et al., 2004) might potentially explain this sentencing leniency at high levels of Hispanic population size and Hispanic power threat. According to this perspective, in communities with a large percentage of minorities, crimes, especially violent crimes, are more likely to occur within the same minority groups. In such situations, less pressure from the majority group is exerted on the criminal justice

system for crime control, or courtroom actors view crime perpetrated against minorities as less deserving of official action.

An interesting finding that bears mention is that black females have the lowest predicted probabilities of receiving a prison sentence, which accords with Griffin and Wooldredge's (2006) study. But what accounts for this unexpected finding? One possibility is that single-headed households are disproportionately more common among black females as compared with Hispanic and white females. In such situations, courtroom actors may be less likely to send someone to state prisons, which are often located in rural areas and far away from where most offenders live and have family ties.

In noting these conclusions, several limitations to the analyses should be taken into account. First, as Stults and Baumer (2007: 520) have emphasized, Blalock (1967: 154-155) suggested that the preferred measures of economic and political threat would be derived from surveys in which majority members are asked directly about the degree to which majority members perceive minority groups as threatening to their economic and political interests. A more precise measure of economic threat might generate different results. Second, I provided a test of economic and power threat, but not criminal threat. It is conceivable that criminal threat may produce different results. Third, the results should be interpreted with caution due to listwise deletion, as would be the case in any set of analyses where there was some non-trivial level of missing data (see Chapter 4).

These findings have implications for the minority threat perspective. Liska (1992) pointed out that minority threat research was fragmented along lines of substantive forms of social control, and it is probably more so in sentencing research. Yet many opportunities exist to test and extend the minority threat perspective in sentencing research. A considerable prospect is to particularly investigate how individual and ecological factors of racial and ethnic threat intersect to influence individual-level sentencing decisions (Stolzenberg et al., 2004). Indeed, as the present study found, contextual racial threat measures—in this case, black population size and black-to-white voting ratio—were associated with a more frequent use of prison sentences. However, important questions still remain. For example, much less is known about which intervening processes are more applicable for the association between prison sentences and racial threat. It is still not clear whether the minority threat hypothesis holds for other minority groups other than blacks.

These observations suggest implications for future research. First, future work should consider both racial and ethnic threat, because different patterns of findings emerged for racial threat and ethnic threat. For that reason, the research practice of combining blacks and Hispanics as minority threat (e.g., percent nonwhite) may produce mixed or null findings. Second, future research should continue to examine different dimensions of racial and ethnic threat. As revealed in this study, different measures of racial and ethnic threat generate different findings. A more precise conceptualization could help us to more adequately test the minority threat perspective and identify what forms of threat may generate an evident effect on levels of social control. Third, future research also can go beyond this study in important ways, one of which is to use survey measures of economic, power, and criminal threat to assess the minority threat perspective in sentencing severity. Finally, future research should try to model prison and jail sentences differently, because the effect of both individual-level and contextual-level racial threat is manifested in prison sentences, but not in jail sentences. As a result, combining prison and jail sentences would have masked the significant effect of contextual measures of racial threat on sentencing severity. In the meantime, there is theoretical significance in distinguishing them and modeling them separately, given that prison is a more punitive punishment and reserved for more serious offenders.

From a policy perspective, the findings from this study are largely generalizable to urban counties. It suggests that the effect of racial and ethnic threat may be more pronounced than this study has established. Thus, it raises questions about an issue of justice and fairness in sentencing. The second implication is related to the effect of sentencing guidelines on reducing sentencing disparities. I found that the sentencing guideline state dummy was statistically significant in predicting prison sentences, but not jail sentences. In other words, counties—that are located in a state that has sentencing guidelines—are less likely to send convicted felons to state prisons. Steffensmeier et al. (1993: 436) pointed out that part of the stimulus for the movement of establishing sentencing guidelines among states is "the serious overcrowding in state prisons and the state's desire to establish a sentencing policy that ensures that prudent use of limited prison space." If so, sentencing guidelines have reached this goal—that is, reducing the number of convicted felons sent to prisons. However, sentencing guidelines appear to be less effective in accomplishing its more important goal—to reduce judicial discretion in sentencing,

because black and Hispanic males, as well as higher levels of racial threat in an area, are associated with greater probabilities of receiving prison sentences.

In conclusion, this study suggests that separating prison and jail sentences and investigating different dimensions of racial and ethnic threat may yield a more complete understanding of the effects of racial and ethnic threat on sentencing severity. Not the least, this study highlights the significance of social context, especially racial and ethnic context, in influencing individual-level sentencing decisions, which further our knowledge on the overall process by which sentencing disparity is produced.

CHAPTER 6

DO CHANGES IN SOCIAL CONTEXT AFFECT SENTENCING?[18]

Introduction

Sentencing disparities have garnered considerable attention from researchers for several decades. However, despite a large body of studies on the topic (e.g., Spohn, 2000; Steffensmeier and Demuth, 2000, 2001, 2006; Steffensmeier, Kramer, and Streifel, 1993; Steffensmeier, Kramer, and Ulmer, 1995; Steffensmeier, Ulmer, and Kramer, 1998; Zatz, 1987), the bulk of them to date have focused almost exclusively on individual-level factors associated with sentencing severity. More recently, sentencing research has incorporated social context in examining individual-level sentencing decisions (Hartley, Maddan, and Spohn, 2007: 383). These studies vary in the range of contextual factors they have examined, including racial or ethnic composition, unemployment, crime rates, political party identification (Britt, 2000; Fearn, 2005; Helms and Jacobs, 2002; Kautt, 2002; Johnson, 2006; Ulmer and Johnson, 2004; Weidner, Frase, and Schultz, 2005). Collectively, this body of work has made important contributions to the criminological knowledge of the contextual factors that may influence courtroom decision-making.

Although important advances have been made, most studies examining links between social context and individual-level sentencing decisions are cross-sectional, even though the theoretical arguments presented often imply a "change" logic—that is, a change in some contextual factor is held to produce more severe sentencing. This gap in research is notable because change models of sentencing are being tested with "level" models. Specifically, the study examines whether levels of some factor, not changes, increase sanction severity. It is also worth acknowledging because it is equally plausible that there are both change and level effects that influence sentencing. Finally, the gap is notable because social conditions do indeed change, thus underscoring the importance of examining such changes on sentencing. For example, and a particular relevance for studies of race, ethnicity, and sentencing, is the fact that the Hispanic population size increased by a 13 million or 58 percent between 1990 and 2000 in the U.S. Of

importance for studies of sentencing is the fact that such change is not evenly distributed. The West and the South, for example, have experienced the largest increase (Hobbs and Stoops, 2002).

The current study contributes to the literature on sentencing research, and specifically to calls for contextual analyses of sentencing that include changes in social conditions (e.g., Britt, 2000; Fearn, 2005; Johnson, 2003, 2005; Ulmer and Johnson, 2004), and, in particular, changes in inter-group conflict (Green et al., 1998; King and Wheelock, 2007; Olzak, 1992). It does so by using two theoretical perspectives—minority threat (i.e., racial and ethnic threat) and social threat—to test hypotheses about the influences of changes in social context on individual-level sentencing decisions, and how these influences may vary depending on baseline levels of minority and social threat.

Below, I begin by discussing prior sentencing research, and then describe the minority threat and social threat perspectives. After describing the hypotheses and the data and methods I use to test them, I present the findings and discuss the study's implications for theory, research, and policy.

Background

Most studies examining the link between social context and individual-level sentencing decisions have utilized measures that reflect static levels of social context. For example, Ulmer and Johnson (2004) examined the effects of county-level minority concentration and conservative political electorates on sentence severity. Likewise, Helms and Jacobs (2002) investigated the effects of county-level political conservatism, violent crime rates, minority concentration, and unemployment on sentencing decisions. The sole exception is Britt's (2000) research which found that offenders sentenced in areas with increasing unemployment rates were likely to receive longer prison sentences.

Notably, prior studies have almost entirely ignored changes in social context and their influence on sentencing. However, the study of changes in social context is worthy of note for at least three reasons. First, sentencing theories often entail a "change" logic. For example, the minority threat perspective argues that an increase—that is a change—in the minority population

[18] This chapter builds off of the prior chapter. This chapter focuses on change effects, however, and change-level interaction effects. There will be some parallels in discussing the minority threat perspective and data and methods sections.

size may result in intensified social control. Such argument is very different from the one that asserts that levels of the minority population size are correlated with levels of social control. Here, it bears emphasizing that when criminologists study other phenomena, they typically are explicit about this distinction. To use a prominent example, Cantor and Land (2001: 231-232), in discussing the relationship between unemployment and crime, have pointed out that "as the economy changes (regardless of the level), financial resources become tighter until a substantial shift in motivation occurs" (see also Cantor and Land, 1985).[19] They conceptualized both change and level effects in their theoretical model of the unemployment and crime relationship.

Second, and more broadly, social context has been identified as an important factor in studying a range of social outcomes (Sampson, Morenoff, and Gannon-Rowley, 2002). Previous sentencing research has taken heat off that observation and investigated how contextual factors influence sentencing decisions (e.g., Britt, 2000; Kautt, 2002; Fearn, 2005; Ulmer and Johnson, 2004). Here, again, however, little attention has been given to changes in social context.

Third, demographic and socioeconomic changes are prominent in the U.S. Between 1990 and 2000, for example, the total number of people living in high-poverty neighborhoods decreased by 24% (Jargowsky, 2003). During that period, the foreign-born population in the United States increased by 57% (Suro, Fry, and Passel, 2005). At the same time, the degree of these changes varied significantly across neighborhoods, cities, counties, and states. For example, the growth of top-half and bottom-half income inequality varied widely among the roughly 3,000 counties in the contiguous U.S. between 1990 and 2000. For the top half of the income distribution, changes in income inequality ranged from -50% to 79%, with a mean of 2.7%. By contrast, changes in income inequality ranged from -37% to 44%, for the bottom half, with a mean of -3.0% (Regev and Wilson, 2007). Notably, these are the very same factors (e.g., poverty, income inequality, minority population concentration) that are often hypothesized to influence sentencing disparities.

All three considerations—the implied change logic in theoretical arguments about sentencing, the salience of social ecology to criminological research in general, and these social changes that occurred between 1990 and 2000—point to the need of studies that examine how

[19] A focus on change effects is prevalent in other social science disciplines. For example, economists have looked at both the level of unemployment and change in unemployment on wage inflation (Alogoskoufis and Smith, 1991). Several researchers have assessed the effect of changes in black population size on racially motivated crime (Green, Strolovitch and Wong, 1998) and whites' punitive attitudes (King and Wheelock, 2007). Most recently, researchers have also examined how neighborhood socioeconomic change affects health outcomes (Barrett et al., 2008).

changes in ecological conditions influence sentencing severity. That is the focus of this study. Below, I discuss the perspectives I use to derive hypotheses about change effects. Before proceeding, it bears mention that the effect of changes in social context on sentencing may depend on baseline levels of these factors. In this study, I also explore the interaction between changes in social context and baseline levels of these factors.

Theoretical Perspectives

As noted above, criminologists have undertaken a handful of studies to investigate social ecology and its influence on sentencing, and they have focused on various types of social ecological conditions, such as racial or ethnic composition, unemployment, crime rates, political party identification and their influence on sentencing. Here, because of their prominence, I focus on two theoretical perspectives—minority threat and social threat. Liska (1992: 174), in *Social Threat and Social Control*, maintained that "the threat hypothesis assumes that social control is a response of elite, authorities, and majorities to acts, people, and distributions of people deemed threatening to their interests." He further pointed out that researchers need to address "who and what are threatening and who and what are threatened" (p. 176). The former refers to what action (e.g., unemployment) and what people (e.g., racial and ethnic minority, poor) are threatening, whereas the latter refers to the resources (e.g., political power, economic resources and positions) of social groups who are threatened (e.g., white majorities, middle- and upper-classes).

Minority Threat

One avenue of research that has garnered particular attention among sentencing researchers has been studies that have applied the racial and ethnic minority threat perspective. Blalock (1967) first theorized minority threat and argued that a growing racial and ethnic minority population poses a threat to white majorities. More specifically, the minority threat perspective suggests that as the relative size of racial and ethnic minority groups increases, members of the majority group—in this case, whites—may perceive a growing threat, and in turn may take actions to reduce the threat (Blalock, 1967). The logic of change effects flows directly from this theoretical argument.

Blalock went on to assert that the source of perceived minority threat can assume two distinct forms: economic and power threat. With respect to economic threat, he asserted that as blacks compete for jobs and other economic resources, they may increasingly threaten the

economic well-being and dominance of whites. With respect to power threat, he argued that as the relative size of the black population increases, whites may increasingly perceive blacks as a threat to political power. As a result of both forms of minority threat, whites may demand for intensified social control to maintain their dominance in economic and political arenas.

Blalock, however, offered divergent predictions about the consequences of minority economic and power threat. According to Blalock, when minority economic threat is considered, a given increase in minority population size should produce a smaller increment in inter-group competition in situations where the minority population size is already large (p. 148). Blalock explained that a wide variety of economic handicaps and exclusionary strategies are likely to have accumulated for minorities in such areas. Therefore, the ability of minorities to compete directly with whites for jobs and other economic resources is already impeded, so the need for other efforts, such as tougher sentencing, to help maintain the majority's dominance is, in turn, reduced (Stults and Baumer, 2007: 536). In reference to power threat, however, Blalock argued that in most circumstances, as the minority population size becomes larger, "the need for a higher degree of mobilization of resources by the majority group to maintain dominance becomes extremely great" (p. 154). Therefore, as the number of racial or ethnic minority grows to achieve more than a token presence in an area, the fear of the white majority grows. Stated differently, an increase in power threat at higher baseline levels will produce an even greater amount of social control relative to lower baseline levels because of an anticipated heightening of tensions, whereas a comparable increase at lower baseline levels will produce a smaller amount of social control. Thus, one key feature of the minority threat perspective is the interaction it posits between levels of minority threat and the rate at which white majority's dominance is eroded and minority threat has escalated.

Tests of Blalock's propositions have almost uniformly employed cross-sectional studies in which researchers examined levels but not changes of minority threat on a range of social control measures. In sentencing research, in particular, researchers have used the relative size of the minority population of a place (level) as an indicator of racial and ethnic threat (Bontrager, Bales, and Chiricos, 2005; Britt, 2000; Crawford, Chiricos, and Kleck, 1998; Fearn, 2005; Helms and Jacobs, 2002; Johnson, 2006; Myers and Talarico, 1987; Ulmer, 1997; Ulmer and Johnson, 2004; Weidner, Frase, and Schultz, 2005). The studies provided divergent findings regarding the association between minority population size and levels of social control. For example, Myers

and Talarico (1987), together with Britt (2000) and Weidner et al. (2005), found that offenders were more likely to be imprisoned in jurisdictions with larger black populations. However, Helms and Jacobs (2002), Kautt (2002), Ulmer (1997), Ulmer and Johnson (2004), and others failed to find support for a direct relationship between individual sentencing decisions and racial composition in a county. Whether the results would have differed when change measures were employed remains unknown.[20]

Social Threat

Social threat researchers have approached the threat perspective and the concept of threat through a slightly different lens. According to the social threat perspective, groups that "threaten the hegemony of middle- and upper-class rule are more likely to be subjected to intensified social control" (Sampson and Laub, 1993: 288). Such groups may consist of particular racial and ethnic groups. They may also consist of immigrants. Brown and Warner (1992), for example, have argued that "large variations across cities in the scope of immigration and the pace of social and economic change translate into substantial differences in the economic, political, and cultural threat posed by immigrants and create a promising background for a test of the threat hypothesis" (p. 294). Given that, as noted earlier, the foreign-born population in America increased by 57% between 1990 and 2000 (Suro et al., 2005), this observation is of particular interest and relevance in studying the effect of immigration on sentencing. In this historical context, therefore, investigating the effect of changes in the number of immigrants in crime control—sentencing decisions, in particular—is a promising background for a test of the social threat hypothesis.

On a related front, social threat studies have investigated the effect of economic conditions in social context on sentencing (e.g., Britt, 2000; Fearn, 2005; Helms and Jacobs, 2002; Myers and Talarico, 1987). Here, the general approach has been to argue that a large economically disadvantaged population may pose a threat to the middle- and upper-class hegemony. To reduce the perceived threat, courtroom actors may be expected to sentence offenders more severely in communities where there is a large threatening population (Liska,

[20] It bears emphasizing that King and Wheelock (2007) found that whites who live in places with a growing black population are more punitive, but they failed to find a significant effect of the static level of racial composition. These findings have important implications for the focus of this study—that is, the association between changes in racial composition and sentencing severity. Given that the vast majority of state appellate court and trial court judges are white (Rottman and Strickland, 2006), if changes in racial composition affects whites' punitive attitude, changes in racial composition would in turn influence sentencing decisions. However, whether this punitive attitude is transferred into tougher sanctioning has not been investigated. The focus of this study is to assess changes in ecological measures of minority threat and social threat and their influence on sentencing severity.

1992; Liska et al., 1981; Sampson and Laub, 1993). Several empirical studies have provided direct tests of the relationship between contextual economic conditions and individual-level sentencing decisions, and the results from these studies are mixed. For example, Myers and Talarico (1987) found that higher unemployment rates were associated with slightly higher chances of incarceration, whereas greater racial income inequality was associated with reduced sentence lengths for all offenders. Britt (2000) found that offenders living in areas with increasing unemployment rates were likely to receive longer prison sentences. However, Helms and Jacobs (2002) failed to find evidence for this perspective. Here, again, with rare exception (see Britt, 2000), these studies are cross-sectional, even though the social threat perspective implies that a greater increase in social threat (e.g., economic inequality, poverty) produces tougher sanctioning. Therefore, it remains largely unknown to what extent a growth in social threat (e.g., number of immigrants, poverty, economic inequality) may result in harsher criminal punishment.

Hypotheses

Building off of the above discussions, I develop five hypotheses about changes in social context and their influence on sentencing severity. Two of the hypotheses are related to the direct effects of changes in ecological measures of minority threat and social threat, and then two hypotheses investigate how and to what extent changes in ecological measures of minority threat and social threat depend on baseline levels of these measures. The fifth turns the attention to types of criminal sanctions, in particular, responding to Holleran and Spohn's (2004) assertion that jail sentences should be separated from prison sentences, and Steffensmeier et al.'s (1993: 422) contention that "a sentence of county jail time is viewed typically as less stigmatizing and less punitive than state prison time" (also see Kramer and Scirica, 1986). Given the more punitive nature of prison sentences, I anticipate that the effect of changes in social context will be more pronounced on prison sentences as opposed to jail sentences (hypothesis 5). Below each of the hypotheses is discussed in greater detail.

First, I hypothesize that changes in minority threat will be positively associated with sentencing severity. In this study, I conceptualize racial threat as economic and power threat posed by blacks, and ethnic threat as economic and power threat posed by Hispanics. Following prior research practice, which has used racial and ethnic composition to capture minority threat

(e.g., Britt, 2000; Fearn, 2005; Ulmer and Johnson, 2004), especially minority power threat (Stolzenberg et al., 2004), I first examine changes in the black and Hispanic population sizes, respectively. This positive effect of changes in the minority population size is anticipated by theories and by a handful of empirical studies (Green et al., 1998; King and Wheelock, 2007).[21] In addition to changes in minority population size, I also consider changes in minority economic threat, and anticipate a positive association between changes in minority economic threat and sentencing severity.

Second, I anticipate that changes in ecological measures of social threat will be positively associated with sentencing severity. In this study, I assess four sources of social threat—that is, immigrants, poverty, racial inequality, and ethnic inequality. The focus on immigrant threat is due to the rapid growth in the foreign-born population between 1990 and 2000. It is also because immigrants have increasingly become a focus of crime studies (e.g., Hagan and Palloni, 1999; Martinez and Lee, 2000; Martinez and Rosenfeld, 2001; Sampson, Morenoff, and Raudenbush, 2005). Even so, no study has examined the link between the immigrant threat and crime control.

In addition, I investigate the absolute level of poverty and relative level of poverty among different racial and ethnic groups because these measures are among the most commonly used in ecological-level social threat research (e.g., Blau and Blau, 1982; Parker et al., 2005; Reisig et al., 2007; Sampson and Laub, 1993; Wadsworth and Kubrin, 2004). Indicators of racial and ethnic economic inequality may be significant, in particular, to social threat analyses. One reason is that racial and ethnic inequality may lead to social unrest (Balkwell, 1992; Blau and Blau, 1982; Jackson, 1986; Sampson and Laub, 1993; Wadsworth and Kubrin, 2004), in turn, generating perceived threat among middle- and upper-classes, which may ultimately result in tougher sanctioning. Because racial and ethnic inequality involves both reference to race and ethnicity, as well as to economic conditions, it is treated here as a measure of social threat. In this regard, Sampson and Laub (1993: 293) have written that "the rising concentration of the underclass corresponds precisely with that population perceived as threatening . . . ." Hence, the second hypothesis is that, all else being equal, counties experiencing a greater increase in the number of immigrants, the concentration of the underclass, and racial and ethnic inequality are more likely to mete out tougher punishment to offenders.

[21] Green et al. (1998) assessed the effect of changes in racial composition on racially motivated crime, and King and Wheelock (2007) examined the impact of this measure on whites' punitive attitude. However, whether the punitive attitude is translated to sentencing severity was not investigated by the authors.

After examining direct effects of changes in social conditions on sentencing severity, I further assess whether the effect of changes varies depending on baseline levels of social conditions. Liska (1992: 186) has called for research to identify at which point further increase in the size of the minority population yields no increase or more increase in the perceived threat, given that the relative size of the minority population must reach a certain proportion before it is perceived as threatening by the majority. He essentially called for examining how levels of social threat may be nonlinear. To this end, I expand this line of call by examining the interaction effect between changes and levels in ecological measures of minority and social threat.

In particular, my third hypothesis is that the effect of changes in minority population size—as measures for minority power threat—will be greater in counties where baseline levels of minority population size are greater. This interaction effect is anticipated by Blalock's argument regarding an accelerating effect for minority power threat. In other words, any given amount of change in minority power threat may have a greater effect on sentencing severity in places that have greater baseline levels of minority power threat. As discussed earlier, Blalock (1967) argued that a further increase in areas characterized by higher baseline levels of minority power threat indicates that "the need for a higher degree of mobilization of resources by the majority group to maintain dominance becomes extremely great" (p. 154). As the minority population sizes increase, racial or ethnic minority may be more likely to mobilize, thereby polarizing different racial or ethnic constituencies (Horowitz, 1985). Consequently, the need for the white majority to mobilize their resources and intensify social control to maintain their dominance may become amplified.

By contrast, I hypothesize that the effect of changes in minority economic threat will be less pronounced in counties that have higher baseline levels of minority economic threat. This interaction effect is derived from Blalock's (1967) argument about the decelerating effect for minority economic threat—that is, increases in minority economic threat should produce smaller increments in sentencing severity in situations where baseline levels of minority economic threat are already high. As discussed earlier, Blalock explained that a range of economic handicaps and exclusionary strategies may have accumulated for minorities in such areas—areas that have higher baseline levels of minority economic threat. Therefore, the ability of minorities to compete directly with whites for jobs and other economic resources has already been constrained,

so the need for other efforts, such as tougher sanctioning, to help maintain the majority's dominance is, in turn, diminished (Stults and Baumer, 2007: 536).

Fourth, the effect of changes in ecological measures of social threat will depend on baseline levels of ecological conditions. In contrast to the discussion about minority threat, there is little theoretical or empirical basis for hypothesizing the direction of this interaction effect. Here, however, I hypothesize that a growth in immigrant threat and exacerbating economic conditions will have a greater effect in places with lower baseline levels of such threats. For example, an increase of 10% in poverty may have a greater effect on sentencing when the baseline level is 10%, as opposed to 40%. Why? One reason may be that in areas characterized by lower levels of poverty (e.g., 10%), the poor may be integrated with the middle- and upper-class groups. When the poverty rate has increased 10% in such areas, the middle- and upper-class groups may be especially aware of such changes and so be more likely to call for or support steps—such as tougher social control measures—to address them. At higher levels of poverty (e.g., 40%), the poor may live in segregated neighborhoods, and so the middle- and upper-classes may be rather apathetic to further growth in poverty. These groups may be more familiar and relatively comfortable with the fact that they live in places where some groups are economically deprived but segregated from them. Consequently, increases in poverty in these areas would not transfer into a demand for tougher social control measures to address exacerbating economic conditions.

The opposite may be true, too. One reason may be that in areas characterized by higher levels of social threat (e.g., immigrants, poverty, racial and ethnic inequality), further increases in ecological measures of social threat may ultimately polarize the threatening and threatened groups—the middle- and upper-classes. Therefore, this change may serve as catalyst for the middle- and upper-classes to take actions to address and reduce the threat, thereby producing tougher sanctioning in areas characterized by higher levels of social threat.

Fifth, across all of the above, the very nature of threat may transfer into a demand for symbolic control. Although this change may generate positive effects on both prison and jail sentences, this symbolic threat may be more pronounced in producing prison sentencing. The reason is that prison is not only more punitive, it arguably is a more symbolic display of social control. So, in a context of threat, prison may be a sanction of choice.

Data and Methods

The analyses employed a combination of individual-level sentencing data and county-level data. The sentencing data came from the State Court Processing Statistics (SCPS) for 1998, 2000, and 2002, which include 17,440 convicted felons who were sentenced in 60 urban counties across 23 states in the United States. The SCPS data provide information on offenders' age, race, ethnicity, sex, and a range of offense and offender's prior criminal history variables. I excluded convicted felons who were not identified as non-Hispanic white, non-Hispanic black, or Hispanic.

County-level data were obtained from several sources and then merged with the SCPS data. The 1990 and 2000 U.S. Census data were used to compute changes in county-level social structural characteristics (e.g., percent black, percent Hispanic, white-to-black unemployment ratio, percent foreign born, and percent below poverty). County jail capacity measure was obtained from the 1999 National Jail Census, and the 2000 Census of State and Federal Adult Correctional Facilities was the source for state prison capacity measure. County-level index crime rates were obtained from the Uniform Crime Reports, and sentencing guideline states were identified by the National Center for State Courts.

Below, I describe each variable in the analyses. Table 6.1 provides the means and standard deviations for all the study variables, and table A.2 provides the zero-order correlations of all the county-level variables, including changes, baseline levels of ecological measures, and control variables.

Table 6.1. Descriptive Statistics

	Mean	SD
Offender Level (N=17,440)		
Black	.42	.49
Hispanic	.25	.43
Male	.83	.38
Black x male	.34	.47
Age	31.02	10.05
Age ^{2}	1,063.44	706.40
Criminal justice status	.38	.49
Criminal history scale	1.93	1.50
Multiple arrest charge	.59	.49

Table 6.1—continued.

	Mean	SD
Violent offense	.17	.38
Property offense	.32	.47
Drug offense	.39	.49
Detention	.53	.50
Plea bargaining	.95	.22
Year 1998	.34	.47
Year 2000	.32	.46
County Level (N=60)		
Racial threat		
Change in pct. black (1990-2000)	.00	1.00
Pct. black (1990)	.15	.13
Change in white-to-black unemp. ratio (1990-2000)	.00	1.00
White-to-black unemp. ratio (1990)	.43	.12
Ethnic threat		
Change in pct. Hispanic (1990-2000)	.00	1.00
Pct. Hispanic (1990)	.13	.13
Social threat		
Change in pct. foreign born (1990-2000)	.00	1.00
Pct. foreign born (1990)	.13	.10
Change in pct. below poverty (1990-2000)	.00	1.00
Pct. below poverty (1990)	.12	.06
Change in racial inequality (1990-2000)	.00	1.00
Racial inequality (1990)	3.21	1.08
Change in ethnic inequality (1990-2000)	.00	1.00
Ethnic inequality (1990)	2.67	.95
Controls		
Sentencing guideline states	.35	.48
Southern counties	.32	.47
Resource deprivation (2000)	.00	1.00
Crime rates (1998-2002)	5,126.55	1,853.69
County jail capacity (2000)	1.21	0.84
State prison capacity (2000)	1.03	.13
Density (ln) (2000)	6.57	1.23

Dependent Variable

Heeding the recommendation of Holleran and Spohn (2004), Harrington and Spohn (2007), I separate prison sentences from jail sentences, and evaluate whether changes in indicators of minority threat and social threat have differential effects on prison sentences, as opposed to jail sentences (hypothesis 5). In this study, I coded the outcome variable—the

decision to incarcerate—as 1 if the offender was sentenced to any length of confinement in a county jail, 2 if the offender was sanctioned to any length of confinement in a state prison, and 3 if the offender was sentenced to any combination of non-incarceration options (i.e., probation, restitution, fines, suspended sentence, and so forth). The reference category in all the models was non-custodial sanctions.[22] Among the 17,440 convicted felons, those who were sentenced to county jails accounted for 38.3% and those who were sanctioned to state prisons accounted for 37.7%.

Changes in Ecological Measures of Minority Threat and Social Threat

At the county level, I investigate the contextual effects of changes in minority threat (i.e., racial and ethnic threat) and social threat in the analyses. I evaluate two measures of racial threat using indicators from the 1990 and 2000 U.S. Census. For each indicator, I calculated the difference between the county's condition in 1990 and in 2000.[23] The first change variable in racial threat is change in the size of the non-Hispanic black population in the county between 1990 and 2000. This change measure ranges from -.054 to .077 with a mean of .010, indicating that, on average, counties' racial makeup is fairly constant across 10 years.[24] The second change variable in racial threat is change in the white-to-black unemployment ratio from 1990 to 2000, which ranges from -.282 to .174, with a mean of -.023. This measure was used to indicate black economic threat.

Ethnic threat is measured by change in the size of the Hispanic population in the county between 1990 and 2000. This change measure ranges from -.003 to .128, with a mean of .043. Since the unemployment rate for Hispanic population is not available in the 1990 U.S. Census, I

[22] HLM 6.0 was used for all the analyses. I coded non-custodial sanctions, the reference category, as 3, because HLM 6.0 treats the highest number in the response category as the reference category in modeling multinomial outcomes.

[23] Several studies have used a similar technique to measure demographic changes (e.g., Green et al., 1998; King and Wheelock, 2007). One of the main advantages of using the change size is to allow easy interpretation, especially easy interpretation when it comes to interaction effects between changes and baseline levels of ecological measures of threat.

[24] Changes in the black population size were used as an approximate measure for changes in black power threat. Similarly, changes in the Hispanic population size were used as an approximate measure for changes in Hispanic power threat. The black population size and Hispanic population size were used as indicators of minority power threat measures for the following reasons. First, Eitle et al. (2002) found a correlation of .94 between the black population size and a more direct measure of black power threat—the number of black citizens' casting votes in a general election in South Carolina. Second, in my preliminary analysis, percent black in 2000 and a direct measure of black power threat in 2000 generated similar findings on sentencing severity, and these two measures were correlated at .86.

could not construct a change measure in Hispanic economic threat. In the analyses, I only present a test of Hispanic power threat.

Four ecology measures were used to indicate changes in social threat in the county. The first is change in percent foreign born from 1990 to 2000, which ranges from .001 to .109, with a mean of .046. The second social threat measure is change in percent below poverty from 1990 to 2000, ranging from -.037 to .037, with a mean of .003. The third is change in racial economic inequality, measured by the difference between the 1990 and 2000 black-to-white poverty ratios.[25] The racial inequality change measure ranges from -1.053 to 1.550, with a mean of .060. The last is change in ethnic inequality, which was operationalized as the difference between the 1990 and 2000 Hispanic-to-white poverty ratios. The ethnic inequality change measure ranges from -.739 to 2.193, with a mean of .467. Here, all the change measures were standardized for easy interpretation, and a higher score on any change measure suggests a greater amount of increase in such threat in the county.

Control Variables

To reduce the likelihood of spurious findings, I included a number of control variables in the analyses. At the individual level, I included the offender's race (a dummy variable with non-Hispanic black offenders coded as the high category) and the offender's ethnicity (Hispanic offenders were coded as the high category) because a number of studies have established that minority offenders are subject to more severe sentences (e.g., Spohn, 2000; Zatz, 1987). In some studies (e.g., Steffensmeier et al., 1995), the age-sentencing association has been found nonlinear, so I included both the linear and squared versions of age (in years) in all the analyses. Prior sentencing research has also consistently showed that offenders' criminal history and

[25] In fact, Parker et al. (2005: 1121), in their analysis, created a racial inequality composite factor by performing a principal components analysis on three variables: white-black unemployment ratio, white-black bachelor degree ratio, and white-black high school diploma ratio. In their theoretical conceptualization, this racial inequality measure represents black threat. In this study, I operationalized black economic threat as white-to-black unemployment ratio (a higher score indicates a higher level of black economic threat). I conceptualized racial inequality as a source of social threat, and operationalized racial inequality as black-to-white poverty ratio, with a higher score reflecting a higher level of inequality between whites and blacks in the county. Not surprisingly, these two measures were inversely and highly correlated (e.g., the correlation between white-to-black unemployment ratio in 1990 and black-to-white poverty ratio in 1990 was -.79). However, the change measures on these two ratios were only modestly correlated (r = -.38). In this study, I argue that black economic threat (measured by white-to-black unemployment ratio) and racial inequality (measured by black-to-white poverty ratio), as well as changes on these two threat measures, reflect two different theoretical concepts and intervening mechanisms: whereas a greater increase in white-to-black unemployment ratio, representing a growth in black economic threat, is expected to result in intensified social control, a greater increase in black-to-white poverty ratio, representing a growth in racial economic inequality, is anticipated to lead to intensified social control.

offense severity affect sentencing outcomes. For this reason, I followed the lead of Demuth and Steffensmeier (2004) and constructed the following measures. The first is criminal history, which was obtained by combining four dummy variables that reflect an offender's prior contact with the criminal justice system, including prior felony arrest, prior felony conviction, prior jail incarceration, and prior prison incarceration (Cronbach's alpha=.800). The second is criminal justice status which indicates whether the convicted felon's criminal justice status at time of arrest was active or not (a dummy variable with active criminal justice status coded as the high category). The third is multiple arrest charges (offenders who had multiple arrest charges were coded as the high category). To control for the offense severity, I included three dummy variables that capture the most serious offense type for which the offender was convicted: violent offense (violent offenders were coded as the high category), property offense (property offenders were coded as the high category), and drug offense (drug offenders were coded as the high category), holding other offense as the reference category. In addition, prior research has also found that the conviction mode and pre-trial outcome affect sentencing decisions (e.g., Albonetti, 1986; Fearn, 2005; Ulmer and Johnson, 2004), thus I controlled for plea bargaining (offenders who were convicted through plea bargaining were coded as the high category) and detention (offenders who were detained prior to trial were coded as the high category). Not the least, since the defendants were processed in the state courts in three different years (1998, 2000, and 2002), there might be changes in laws, policies, and court practices from year to year. As a result, there might be cohort differences that should be addressed. For this reason, I created dummy variables for years 1998 and 2000. Year 2002 was held as the reference year.

When investigating the effects of changes in social context on the decision to incarcerate, I controlled for baseline levels of social conditions in the analyses. More specifically, I extracted such measures as percent black, white-to-black unemployment ratio, percent Hispanic, percent foreign born, percent below poverty, black-to-white poverty ratio, and Hispanic-to-white poverty ratio from the 1990 U.S. Census. Each was included in the analyses when the corresponding change measure was examined.

Further, a range of county-level factors could influence courtroom decision-making. For example, judges may be constrained by county jail and state prison capacity levels when they decide whether to send convicted felons to these facilities (Ulmer and Johnson, 2004). To account for this possibility, I controlled for county jail capacity when predicting jail sentences

and state prison capacity when predicting prison sentences. I constructed county jail capacity measure by dividing jail population by jail capacity, and obtained state prison capacity measure by dividing prison population by rated prison capacity. If this capacity measure has a value over 1, the county jail or state prison is operating over its capacity. In the meantime, lower scores on these two measures indicate that the institutions are running with more capacity to take more inmates. Further, local crime rates may affect judges' decision-making process. For that reason, I controlled for the average index crime rates from 1998-2002 (Cronbach's alpha=.969).

In addition, density in 2000, which captures interracial interaction and may serve to increase pressure on the criminal justice system to respond to crime (see Eitle et al., 2002), was controlled. The natural log of the density measure was used because of its extreme skew (after the log transformation, the skewness statistic is .485, significantly lower than the skewness statistic of 4.425 before the transformation). I also introduced a control for county-level resource deprivation, which was constructed by performing a principal components analysis on the following variables obtained from the 2000 U.S. Census: median family income, median household income, percent receiving public assistance, percent below poverty, percent unemployed in civilian populations above 16 years old, and per capita income (λ=4.768, the absolute factor loading>.810, Cronbach's alpha=.734).[26] Finally, due to possible regional variation in the crime control system and the explanatory variables, I controlled for region (a dummy variable with counties located in the South coded as the high category). In a similar vein, I included sentencing guideline states (a dummy variable which reflects whether the county is located in a state that has sentencing guideline systems) to control for the possible state differences in sentencing practices.[27]

Analytic Strategy

Hierarchical generalized linear modeling (HGLM) was used for all the analyses because the data are hierarchical with individual convicted felons nested in counties and the outcome measure is a multinomial outcome. Compared to non-hierarchical models, HGLM produces more

[26] Because percent below poverty in 1990 was highly correlated with the resource deprivation composite factor in 2000 (r=.89), the 2000 resource deprivation factor was not included when changes in percent below poverty was assessed using a model which included percent below poverty in 1990.

[27] Among the 23 states, 9 states, including Florida, Maryland, Michigan, Missouri, Ohio, Pennsylvania, Utah, Virginia, and Washington, have sentencing guideline systems (Rottman et al., 2000). Twenty-one counties are located in these 9 states.

robust standard errors (Raudenbush and Bryk, 2002: 100).[28] Further, to evaluate the hypotheses regarding the interaction effect between changes in social context and baseline levels of social conditions, I used an interaction term that is the product of the predictor (change) and the hypothesized moderator (the baseline level). This method is the best approach for examining interaction effects, especially when there is little theoretical or empirical basis for dichotomizing the relevant variables (see Aiken and West, 1991; Hay et al., 2006; Jaccard, Turrisi, and Wan, 1990). For all the analyses, HLM 6.0 was used and the model estimates with robust standard errors were presented.[29]

Below, all the models assessing the direct and conditioning effects of changes in social context include individual-level controls. Table B.1 in appendix presents three models with results for individual-level variables. Model 1 assesses main effects of the individual-level factors; model 2 includes race-sex and ethnicity-sex interactions because several researchers have argued that the effect of race and ethnicity on sentencing decisions is moderated by sex (e.g., Leiber and Mack, 2003; Steffensmeier et al., 1998). Model 3 is the final individual-level model specification which includes the race-sex interaction. I omitted individual-level control variables from the tables to conserve space, and because the effects of these variables were virtually identical to those shown in model 3 (see table B.1).

Results

Hypothesis One—Minority Threat

Table 6.2 examines whether changes in different ecological measures of minority threat are associated with more severe sanctioning. Inspection of table 6.2 shows that none of the change measures are significantly associated with the decision to incarcerate,[30] neither is any

[28] The outcome measure—non-custodial sanctions, jail, and prison—are increasingly more punitive, so an alternative model would be ordinal logistic regression (see Holleran and Spohn, 2004). Ordinal logistic regression models assume that the parameters are invariant across the response categories (Long, 1997: 141), referred to as the proportional odds assumption. I estimated an ordinal regression model using SAS's PROC LOGISTIC to test whether this assumption has been met (HLM 6.0 does not provide such a test). Because this test indicates that the ordinal logistic regression model violated the proportional odds assumption ($p<.05$), I analyzed the decision to incarcerate using multinomial logistic regression models.

[29] I checked multicollinearity among county-level factors using the variance inflation factors and the condition indexes. The VIF factors were all below 4, and the results of condition indexes indicated acceptable levels of collinearity (Hair et al., 1998: 220). The multicollinearity test for all the offender-level variables did not reveal any problems.

[30] Different model specifications, including models without the baseline-level ecological measures of minority threat and models controlling for the contemporaneous-level ecological measures of minority threat (e.g., percent black in 2000), revealed similar findings related to the standardized change measures between 1990 and 2000.

baseline-level threat measure. In short, there is no change effect when changes in ecological measures of minority threat are assessed.

Table 6.2. Hierarchical Multinomial Logistic Regression Models of the Effect of County-Level Change in Minority Threat on the Decision to Incarcerate

	Black population size		Black economic threat		Hispanic population size	
	For jail	For prison	For jail	For prison	For jail	For prison
Intercept	.40*	.53**	.40*	.53**	.40*	.53**
	(.17)	(.13)	(.17)	(.13)	(.17)	(.13)
Threat—change (1990-2000)	-.26	.14	.16	.15	.28	.03
	(.25)	(.17)	(.28)	(.20)	(.25)	(.18)
Threat—level (1990)	-.97	.82	1.14	.20	1.10	-.16
	(2.77)	(2.17)	(2.24)	(1.55)	(2.01)	(1.36)
Sentencing guideline states	-.04	-.89*	-.33	-.79*	-.02	-.74*
	(.37)	(.35)	(.40)	(.35)	(.38)	(.30)
Southern counties	-.32	.12	-.36	.25	-.68	.20
	(.40)	(.33)	(.45)	(.34)	(.47)	(.35)
Resource deprivation (2000)	-.26	-.08	-.38	.01	-.47	-.01
	(.24)	(.14)	(.25)	(.19)	(.29)	(.22)
Crime rates (1998-2002)	-.00	-.00	-.00	-.00	-.00	-.00
	(.00)	(.00)	(.00)	(.00)	(.00)	(.00)
County jail capacity (for jail) (2000)	.21		.07		.20	
	(.13)		(.16)		(.18)	
State prison capacity (for prison) (2000)		.56		.56		.57
		(1.05)		(1.03)		(1.06)
Density (ln) (2000)	-.14	.07	-.12	.13	-.05	.11
	(.23)	(.16)	(.21)	(.14)	(.19)	(.12)
Random effect						
Intercept, τ_{00}	1.83**	1.06**	1.92**	1.07**	1.80**	1.09**
χ^2	1,890	1,042	2,092	1,015	1,791	1,073

*p<.05 **p<.01 (N=17,440 within county; N=60 between county)

Notes:
1. The outcome measure being modeled, the decision to incarcerate, has three outcomes—non-custodial sanctions, jail, and prison sentences. In the model presented here, non-custodial sanctions is the omitted category.
2. Models also included all individual-level variables presented in table B.1; however, the model estimates for the individual-level variables remained virtually unchanged so I present only the results for the effects of county-level factors.

Hypothesis Two—Social Threat

I turn to the test of the second hypothesis, which anticipates a positive association between changes in ecological measures of social threat and the decision to incarcerate. Review of table 6.3 indicates that the change measures in social threat used in this study are not associated with sentencing severity.[31] The only exception is changes in ethnic economic inequality measured by Hispanic-to-white poverty ratio between 1990 and 2000. Here, the effect of changes in ethnic inequality on jail sentences is significantly different from its effect on prison sentences.[32] To facilitate discussion on the effect of this change measure on prison vs. jail sentences, I graph the predicted probabilities of receiving a non-custodial, jail, and prison sentence at different levels of changes in the Hispanic-to-white poverty ratio in figure 6.1, setting all the covariates at their means.[33]

[31] An alternative measure for the absolute level of economic conditions, changes in percent unemployed between 1990 and 2000, was used in addition to changes in percent below poverty (results are available upon request). Though the coefficients for changes in percent unemployed and changes in percent below poverty were different, the percent unemployed model, similar to the percent below poverty model, did not reveal a significant change effect.

[32] The coefficient of change in the Hispanic-to-white poverty ratio between 1990 and 2000 was significantly different for prison vs. jail outcomes (χ^2=10.40, df=1, p<.01).

[33] The predicted probabilities for each sentence type were computed using the formula Holleran and Spohn (2004) provided (see footnote 6, p. 219-220).

Table 6.3. Hierarchical Multinomial Logistic Regression Models of the Effect of County-Level Change in Social Threat on the Decision to Incarcerate

	Pct. foreign born		Pct. below poverty		Racial inequality		Ethnic inequality	
	For jail	For prison	For jail	For prison	For jail	For prison	For jail	For prison
Intercept	.40*	.53**	.40*	.53**	.40*	.53**	.40*	.53**
	(.16)	(.13)	(.17)	(.13)	(.17)	(.13)	(.16)	(.13)
Threat—change (1990-2000)	.01	-.11	.32	.18	-.10	-.07	-.55**	-.06
	(.22)	(.14)	(.19)	(.15)	(.17)	(.14)	(.18)	(.13)
Threat—level (1990)	5.55*	.82	-6.56	1.24	-.43*	-.29	-.52*	-.20
	(2.36)	(1.69)	(4.20)	(2.91)	(.20)	(.15)	(.20)	(.14)
Sentencing guideline states	-.06	-.77*	-.42	-.74*	-.26	-.76*	-.65	-.85**
	(.35)	(.31)	(.38)	(.35)	(.36)	(.31)	(.38)	(.31)
Southern counties	-.55	.22	-.15	.28	-.40	.21	-.11	.20
	(.44)	(.34)	(.37)	(.34)	(.43)	(.33)	(.39)	(.36)
Resource deprivation (2000)	-.42	-.06			-.57*	-.16	-.51*	-.07
	(.25)	(.17)			(.24)	(.16)	(.20)	(.15)
Crime rates (1998-2002)	.00	-.00	.00	-.00	.00	-.00	-.00	-.00
	(.00)	(.00)	(.00)	(.00)	(.00)	(.00)	(.00)	(.00)
County jail capacity (for jail) (2000)	.17		.02		.03		.02	
	(.16)		(.15)		(.16)		(.12)	
State prison capacity (for prison)		.34		.78		.83		.57
(2000)		(1.11)		(1.05)		(.98)		(1.01)
Density (ln) (2000)	-.26	.10	-.15	.06	-.11	.14	-.12	.12
	(.17)	(.13)	(.19)	(.12)	(.20)	(.13)	(.17)	(.12)
Random effect								
Intercept, τ_{00}	1.64**	1.08**	1.76**	1.05**	1.77**	1.03**	1.56**	1.06**
χ^2	1,688	1,067	1,584	1,036	2,041	1,117	1,920	1,010

*p<.05 **p<.01 (N=17,440 within county; N=60 between county)

Notes:
1. The outcome measure being modeled, the decision to incarcerate, has three outcomes—non-custodial sanctions, jail, and prison sentences. In the model presented here, non-custodial sanctions is the omitted category.
2. Models also included all individual-level variables presented in table B.1; however, the model estimates for the individual-level variables remained virtually unchanged so I present only the results for the effects of county-level factors.

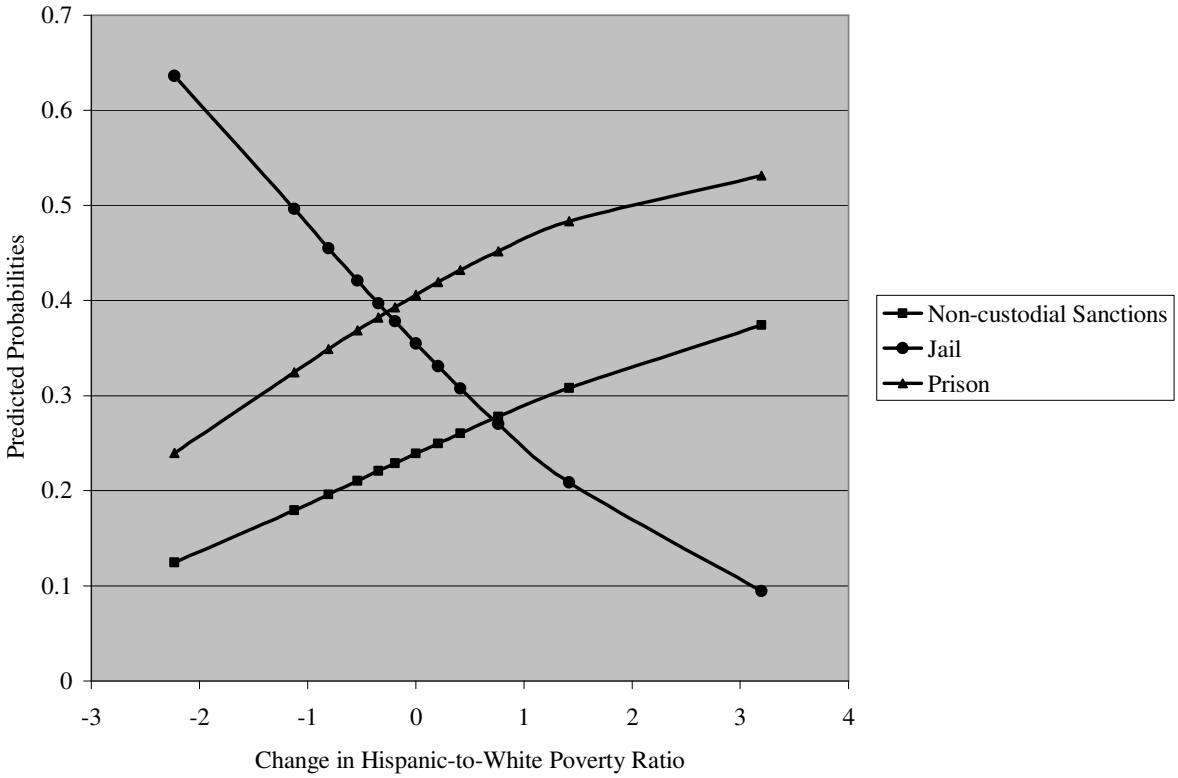

Figure 6.1. Predicted Probabilities of Receiving a Non-custodial, Jail, or Prison Sentence at Different Levels of Change in Hispanic-to-White Poverty Ratio

Figure 6.1 shows that, as expected, the effect of changes in ethnic inequality varies depending on the type of the criminal sanction. This figure suggests that the probability of receiving a prison sentence markedly increases as ethnic inequality increases. The probability of receiving a non-custodial sanction appears to follow a similar trend. By contrast, a higher degree of increase in ethnic inequality is associated with a lower predicted probability of receiving a jail sentence. Why the increase in the probability of non-custodial sanctions and prison and the decrease in the probability of jail? One possibility may be that for many counties, jail is a finite resource, whereas non-custodial sanctions (e.g., probation, fine) and prison may be less so. For example, jail capacity cannot typically be easily expanded. By contrast, probation caseloads can

be increased relatively easily, and, unless the state correctional system imposes constraints, counties are relatively free to send increasing numbers of convicted felons to state prisons.

Hypothesis Three—Minority Threat

Table 6.4 provides a test of the third hypothesis—that is, the idea that the effect of changes in ecological measures of minority threat may depend on baseline levels of these measures. Inspection of the table shows that there is a statistically significant interaction effect between changes and baseline levels of the racial threat measures—percent black and white-to-black unemployment ratio. I first address the interaction effect between changes in percent black between 1990 and 2000 and the 1990 percent black. To facilitate discussions about the interaction effect, I present the predicted probabilities of receiving a non-custodial, jail, and prison sentence at different levels of changes in percent black between 1990 and 2000, setting the covariates at their means, when percent black in 1990 is set at 5%, 10%, 20%, 30%, 40%, 50%, and 60%. Figures 6.2, 6.3, and 6.4 present these results for each of the three sanction types—a non-custodial sanction, a jail sentence, and a prison sentence, respectively.

Table 6.4. Hierarchical Multinomial Logistic Regression Models of the Interactive Effect of County-Level Minority Threat (Change and Level) on the Decision to Incarcerate

	Black population size		Black economic threat		Hispanic population size	
	For jail	For prison	For jail	For prison	For jail	For prison
Intercept	.40*	.53**	.40*	.53**	.40*	.53**
	(.15)	(.12)	(.16)	(.13)	(.17)	(.13)
Threat—change (1990-2000)	-1.15**	-.59**	-1.19	-.48	.40	.03
	(.31)	(.21)	(.62)	(.48)	(.32)	(.21)
Threat—level (1990)	-.55	1.17	1.90	.54	1.80	-.19
	(1.87)	(1.42)	(2.10)	(1.45)	(2.17)	(1.75)
Threat—change x level	3.43**	2.84**	2.82**	1.30	-1.19	-.01
	(.75)	(.68)	(1.03)	(.80)	(1.84)	(1.36)
Sentencing guideline states	.15	-.73*	-.35	-.80*	.05	-.74*
	(.37)	(.34)	(.36)	(.33)	(.40)	(.31)
Southern counties	-.24	.20	-.17	.33	-.63	.19
	(.42)	(.33)	(.45)	(.37)	(.46)	(.36)
Resource deprivation (2000)	-.36	-.17	-.24	.07	-.42	-.01
	(.22)	(.14)	(.25)	(.20)	(.32)	(.21)
Crime rates (1998-2002)	-.00	-.00	-.00	-.00	-.00	-.00
	(.00)	(.00)	(.00)	(.00)	(.00)	(.00)

Table 6.4—continued.

	Black population size		Black economic threat		Hispanic population size	
	For jail	For prison	For jail	For prison	For jail	For prison
County jail capacity (for jail) (2000)	.25 (.12)		.02 (.15)		.22 (.19)	
State prison capacity (for prison) (2000)		.56 (1.03)		.58 (1.01)		.47 (1.08)
Density (ln) (2000)	-.17 (.21)	.05 (.14)	-.16 (.19)	.11 (.12)	-.11 (.23)	.11 (.15)
Random effect						
Intercept, τ_{00}	1.53**	.86**	1.80**	1.07**	1.83**	1.11**
χ^2	1,867	1,059	1,968	1,015	1,818	1,075

*p<.05 **p<.01 (N=17,440 within county; N=60 between county)

Notes:
1. The outcome measure being modeled, the decision to incarcerate, has three outcomes—non-custodial sanctions, jail, and prison sentences. In the model presented here, non-custodial sanctions is the omitted category.
2. Models also included all individual-level variables presented in table B.1; however, the model estimates for the individual-level variables remained virtually unchanged so I present only the results for the effects of county-level factors.

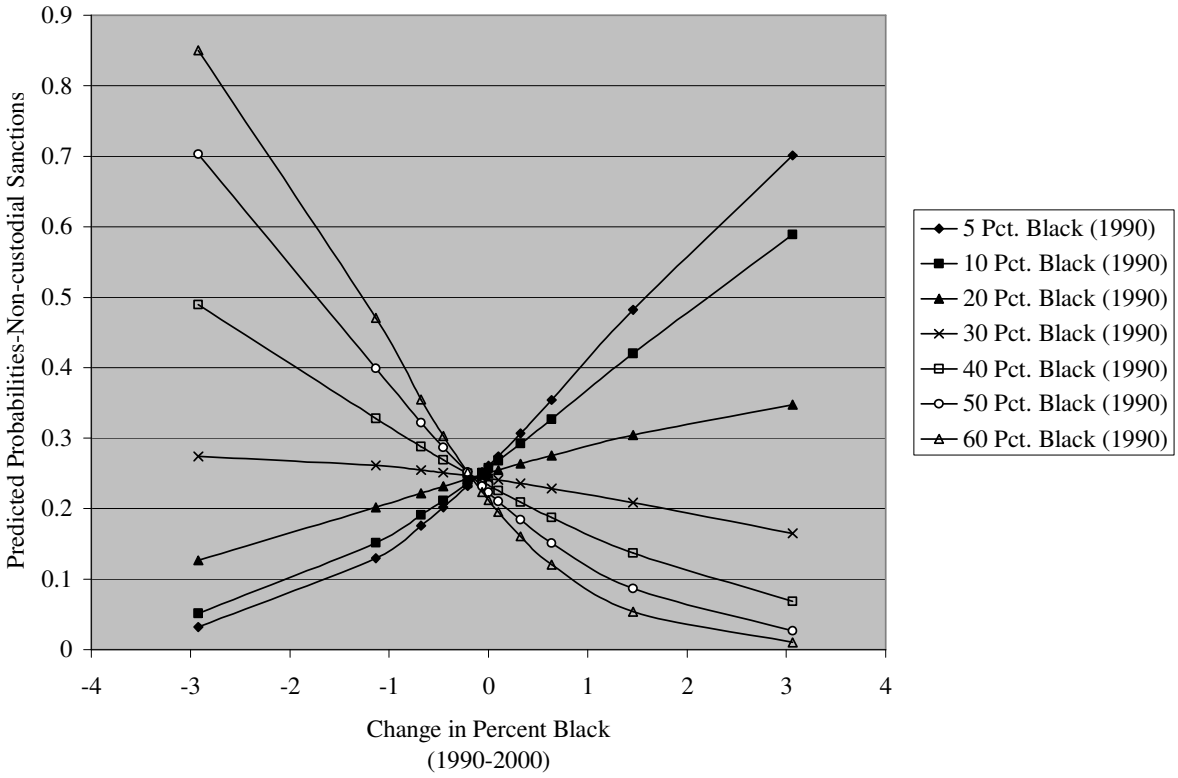

Figure 6.2. Predicted Probabilities of Receiving a Non-custodial Sanction, Given Different Change and Baseline Levels of Percent Black

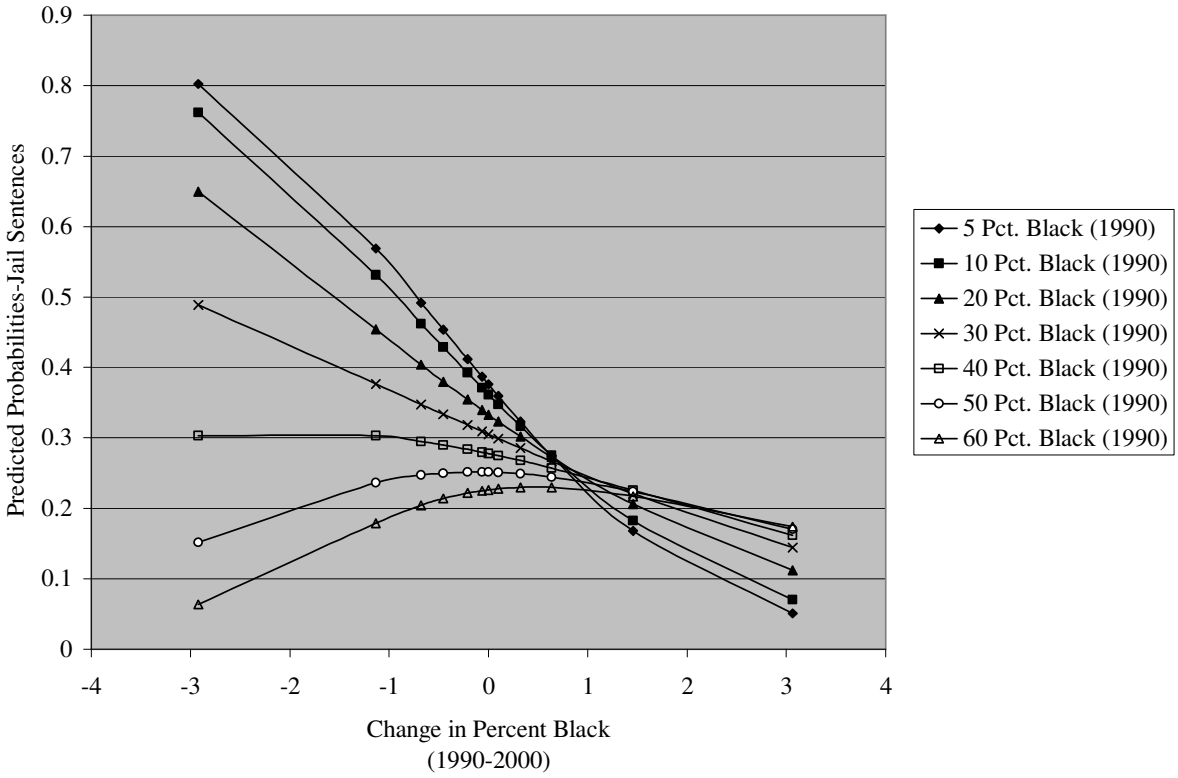

Figure 6.3. Predicted Probabilities of Receiving a Jail Sentence, Given Different Change and Baseline Levels of Percent Black

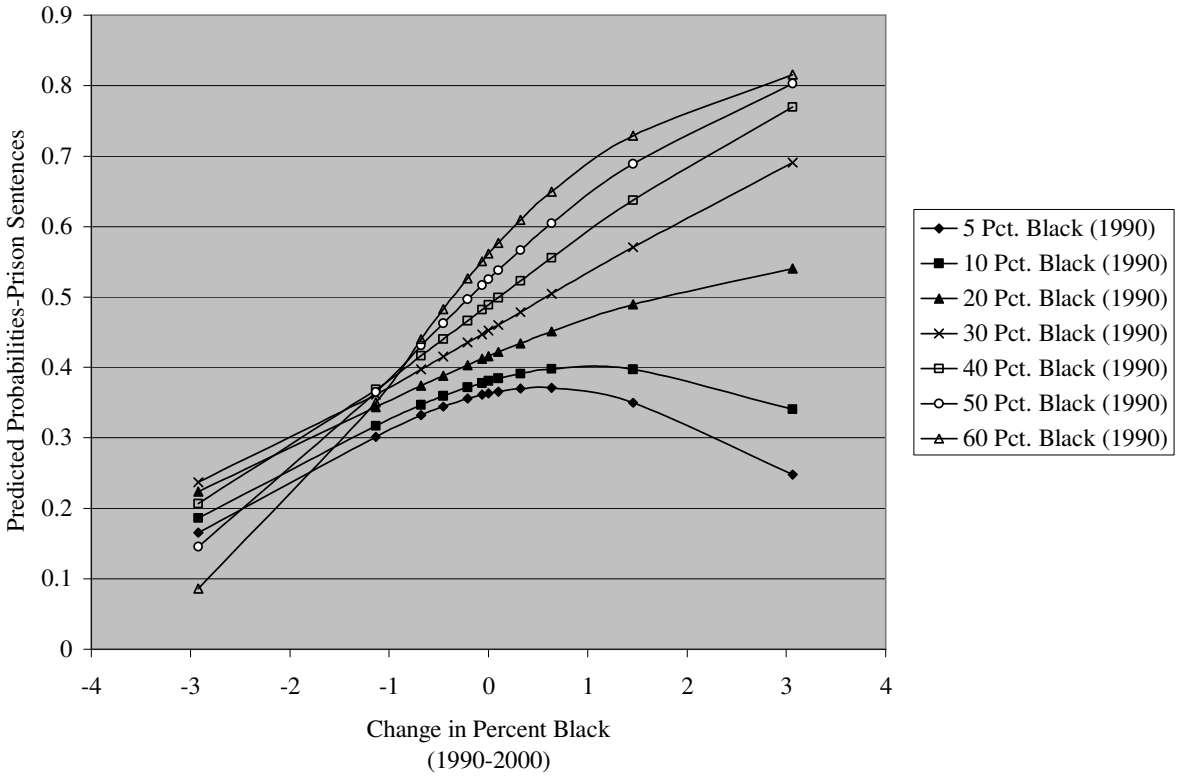

Figure 6.4. Predicted Probabilities of Receiving a Prison Sentence, Given Different Change and Baseline Levels of Percent Black

The figures suggest that the effect of changes in county-level black population size indeed depends on the initial black population size in 1990 for all three outcomes. Across all three figures, we see that in counties that have relatively larger black population sizes in 1990, the probabilities of receiving a non-custodial sanction decrease as the change in percent black increases. However, in the same situation, the probabilities of receiving a jail or prison sentence increase, and the probabilities of receiving a prison sentence increase even more rapidly. By contrast, in areas with relatively smaller black population sizes in 1990 (e.g., 5%, 10%), increases in percent black lead to increased probabilities of receiving a non-custodial sanction and decreased probabilities of receiving a jail sentence.

Of particular interest is prison outcome. Figure 6.4 shows that when the black population size in 1990 is as low as 5% and 10%, increases in percent black lead to increased probabilities of receiving a prison sentence, but this effect levels off and diminishes when the amount of increase in percent black is greater than the mean. By contrast, when the black population size in 1990 is at or above 20%, change in percent black is associated with continually increasing probabilities of receiving a prison sentence. More importantly, the effect of increases in percent black on prison sentences becomes more pronounced at higher baseline levels of the black population size. The probability of receiving a prison sentence increases most rapidly with changes in percent black in places where the black population accounts for over half of the county population in 1990. Overall, this interaction effect between changes in percent black and baseline levels of percent black provides support for Blalock's (1967) argument regarding an accelerating effect for black power threat. There are, however, important caveats that will be discussed in the conclusion.

We now turn to changes in black economic threat—measured by changes in white-to-black unemployment ratio between 1990 and 2000. Review of table 6.4 indicates that the effect of increases in black economic threat is conditioned by baseline levels of black economic threat. I graph the predicted probabilities of receiving a non-custodial, jail, and prison sentence—in figures 6.5, 6.6, and 6.7, respectively—at different degrees of changes in black economic threat and at seven distinct levels of black economic threat in 1990, setting all the covariates at their mean.

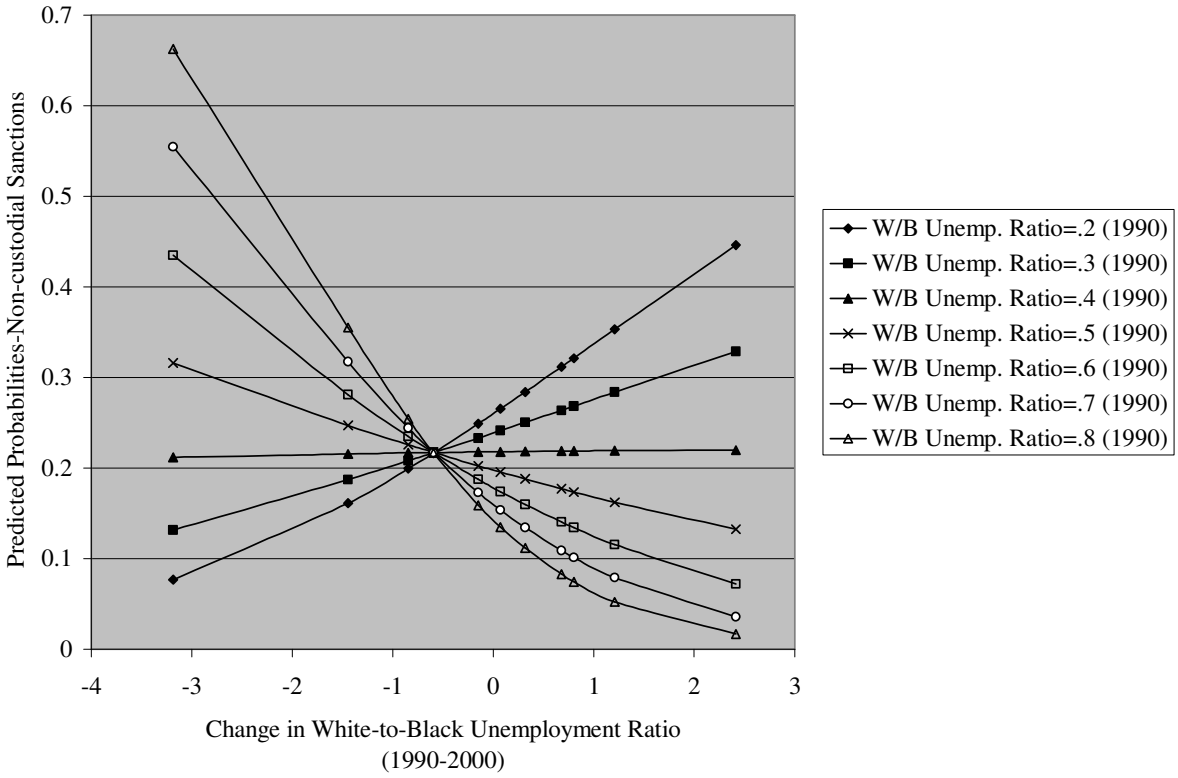

Figure 6.5. Predicted Probabilities of Receiving a Non-custodial Sanction, Given Different Change and Baseline Levels of White-to-Black Unemployment Ratio

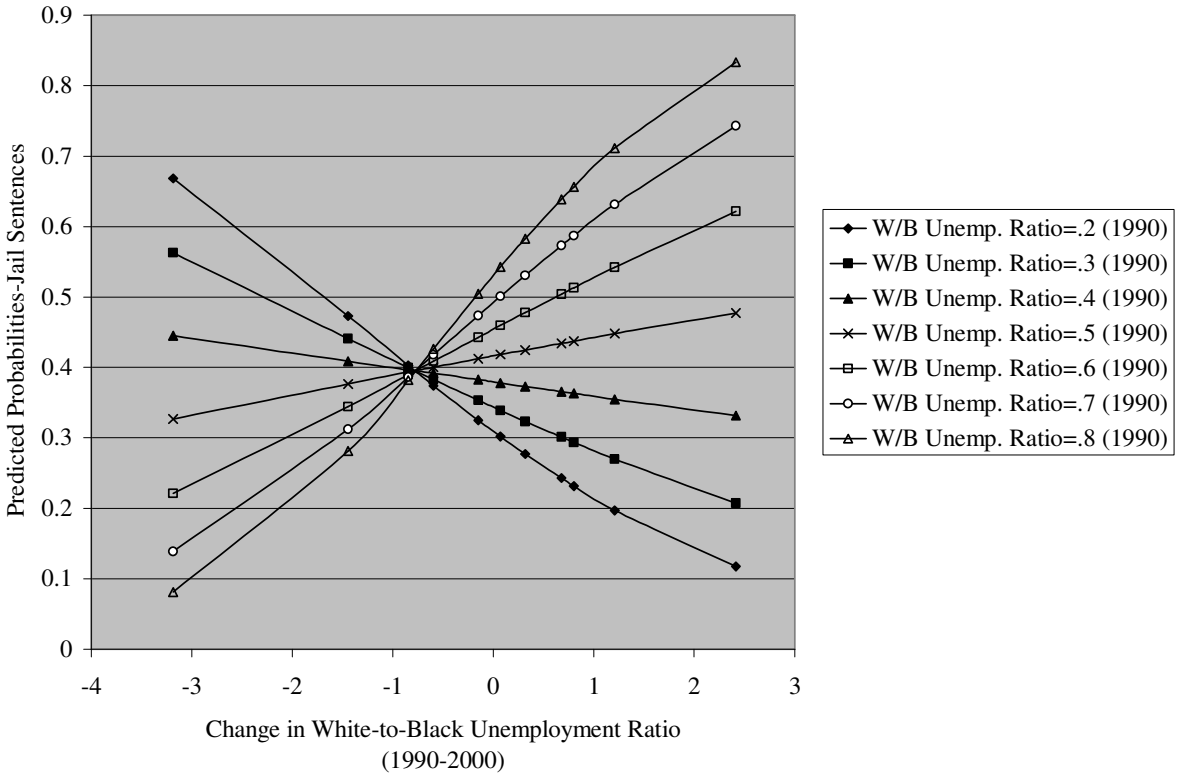

Figure 6.6. Predicted Probabilities of Receiving a Jail Sentence, Given Different Change and Baseline Levels of White-to-Black Unemployment Ratio

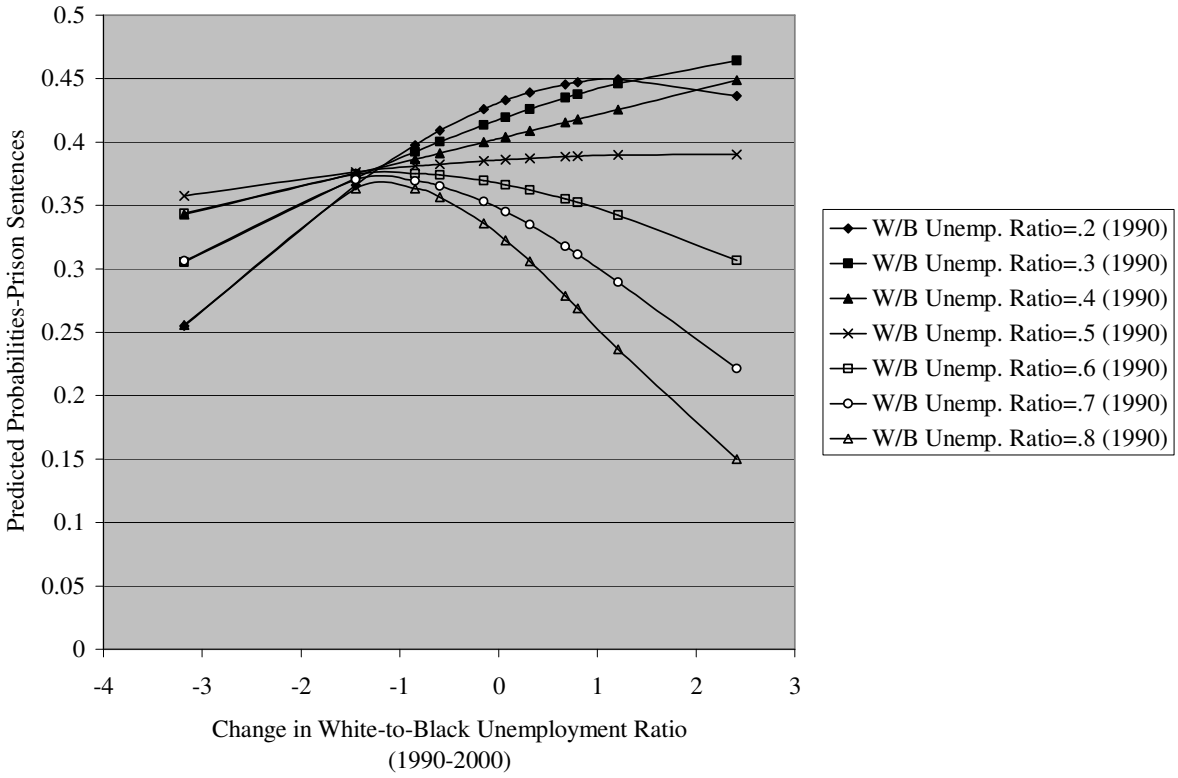

Figure 6.7. Predicted Probabilities of Receiving a Prison Sentence, Given Different Change and Baseline Levels of White-to-Black Unemployment Ratio

These figures suggest that the degree of changes in black economic threat has differential effects on non-custodial, jail, and prison outcomes. For example, as black economic threat increases, the probability of receiving a non-custodial sanction decreases most dramatically in counties with the highest initial level of black economic threat in 1990. By contrast, with respect to prison sentences—the most punitive criminal sanction type—change in black economic threat is first positively associated with a modest increase in the probability of prison sentencing at the highest initial level of black economic threat, and then the effect of changes in black economic threat on prison sentences levels off and becomes negative as black economic threat continually increases. Notably, increases in black economic threat in places with higher baseline levels of such threat result in more jail sentences, but less use of prison and non-custodial sanctions. By contrast, changes in black economic threat in places with lower baseline levels of such threat

appear to lead to more use of prison and non-custodial sanctions and less use of jail sentences. The finding for the association between prison sentences and changes in black economic threat is supportive to Blalock's (1967) argument regarding a decelerating effect for black economic threat. In the conclusion section, I will discuss the findings in great detail.

Hypothesis Four—Social Threat

Table 6.5 provides a test of the interaction effect between changes in ecological measures of social threat and baseline levels of these measures. Among all four social threat measures, only the percent foreign born model yields a statistically significant interaction between changes in percent foreign born between 1990 and 2000 and percent foreign born in 1990. Here, again, to show graphically what the interaction terms indicate, figures 6.8, 6.9, and 6.10 present the predicted probabilities of receiving a non-custodial, jail, and prison sentence when percent foreign born in 1990 is 5%, 10%, 20%, 30%, 40%, and 50%, setting all the covariates at their mean.

Table 6.5. Hierarchical Multinomial Logistic Regression Models of the Interactive Effect of County-Level Social Threat (Change and Level) on the Decision to Incarcerate

	Pct. foreign born		Pct. below poverty		Racial inequality		Ethnic inequality	
	For jail	For prison	For jail	For prison	For jail	For prison	For jail	For prison
Intercept	.40*	.53**	.40*	.53**	.39*	.53**	.40*	.53**
	(.16)	(.13)	(.17)	(.13)	(.17)	(.13)	(.15)	(.13)
Threat—change (1990-2000)	.72*	.17	-.31	-.21	.13	.03	-1.04*	-.50
	(.33)	(.23)	(.62)	(.35)	(.59)	(.46)	(.38)	(.38)
Threat—level (1990)	5.27**	.80	-6.76	1.09	-.45*	-.30	-.37	-.06
	(1.80)	(1.49)	(4.34)	(2.84)	(.20)	(.16)	(.22)	(.19)
Threat—change x level	-5.09*	-2.03	4.02	2.43	-.07	-.03	.19	.18
	(2.18)	(1.04)	(3.53)	(1.87)	(.17)	(.14)	(.14)	(.13)
Sentencing guideline states	.17	-.68*	-.47	-.77*	-.27	-.76*	-.62	-.82*
	(.33)	(.29)	(.38)	(.34)	(.35)	(.31)	(.39)	(.31)
Southern counties	-.62	.20	-.05	.33	-.47	.18	-.11	.22
	(.43)	(.35)	(.40)	(.34)	(.48)	(.37)	(.39)	(.37)
Resource deprivation (2000)	-.30	-.02			-.62*	-.18	-.40	.03
	(.25)	(.16)			(.27)	(.20)	(.25)	(.18)
Crime rates (1998-2002)	-.00	-.00	.00	-.00	.00	-.00	-.00	-.00
	(.00)	(.00)	(.00)	(.00)	(.00)	(.00)	(.00)	(.00)
County jail capacity (for jail) (2000)	.21		.01		.05		.03	
	(.18)		(.14)		(.17)		(.12)	
State prison capacity (for prison) (2000)		.35		.76		.82		.64
		(1.13)		(1.04)		(1.00)		(1.03)
Density (ln) (2000)	-.22	.12	-.20	.04	-.10	.14	-.16	.08
	(.16)	(.12)	(.19)	(.11)	(.20)	(.13)	(.18)	(.11)
Random effect								
Intercept, τ_{00}	1.51**	1.08**	1.75**	1.04**	1.81**	1.06**	1.56**	1.07**
χ^2	1,654	1,096	1,584	991	2,010	1,128	1,972	1,082

*p<.05 **p<.01 (N=17,440 within county; N=60 between county)

Notes:
1. The outcome measure being modeled, the decision to incarcerate, has three outcomes—non-custodial sanctions, jail, and prison sentences. In the model presented here, non-custodial sanctions is the omitted category.
2. Models also included all individual-level variables presented in table B.1; however, the model estimates for the individual-level variables remained virtually unchanged so I present only the results for the effects of county-level factors.

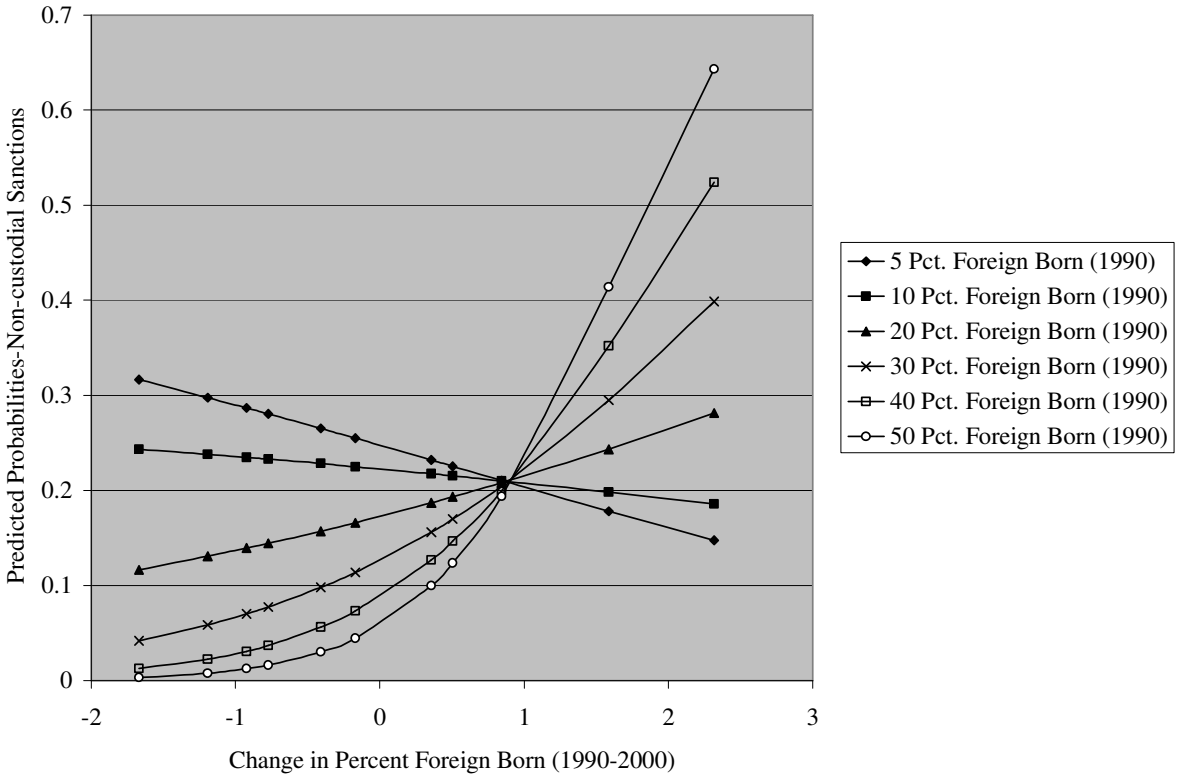

Figure 6.8. Predicted Probabilities of Receiving a Non-custodial Sanction, Given Different Change and Baseline Levels of Percent Foreign Born

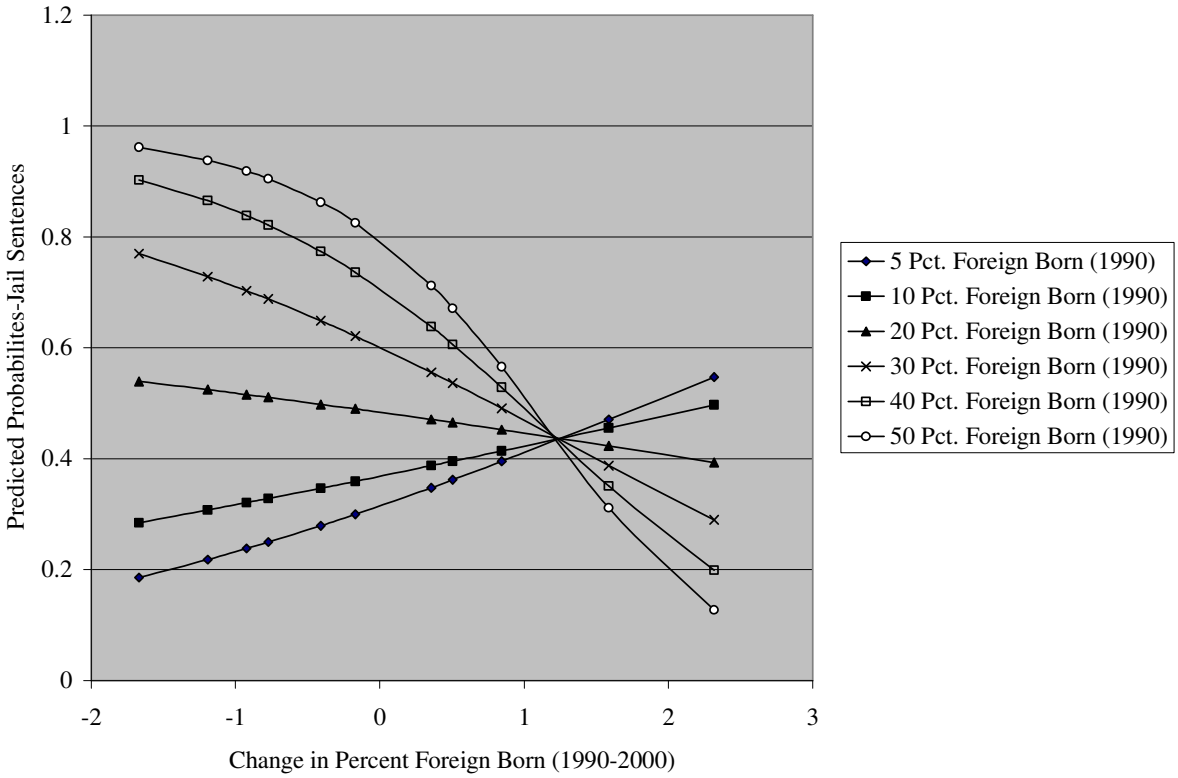

Figure 6.9. Predicted Probabilities of Receiving a Jail Sentence, Given Different Change and Baseline Levels of Percent Foreign Born

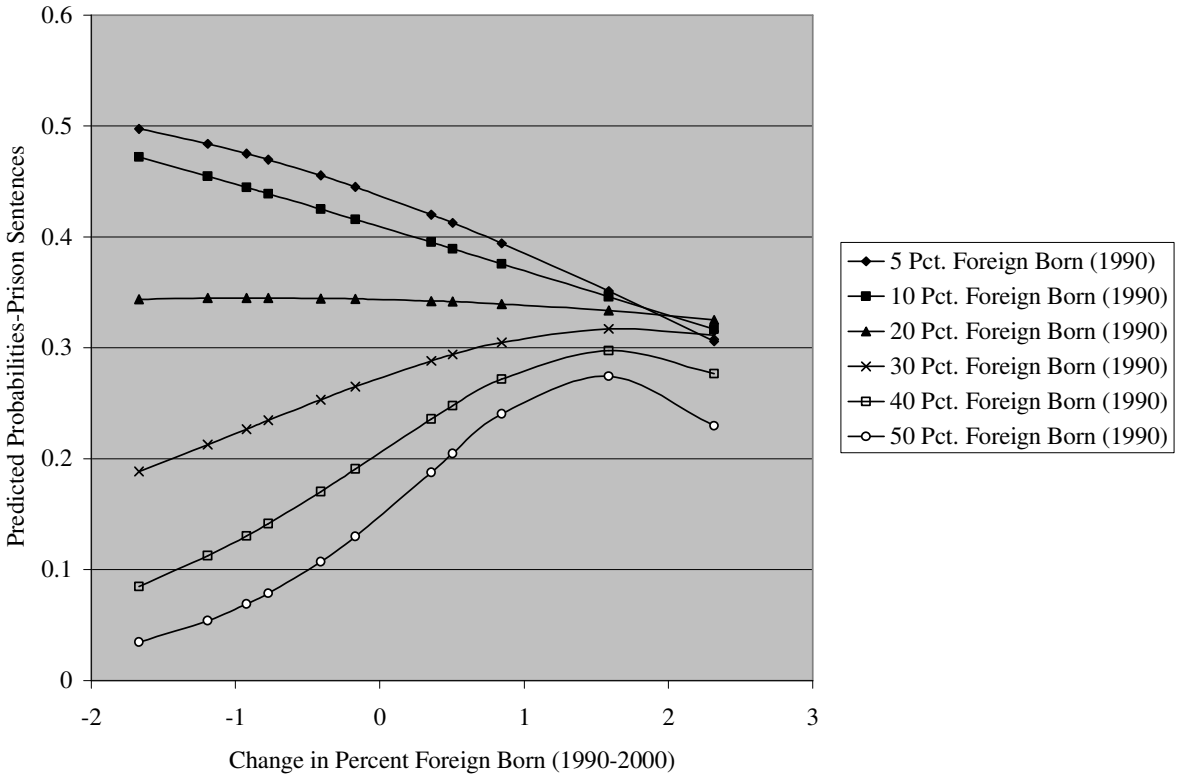

Figure 6.10. Predicted Probabilities of Receiving a Prison Sentence, Given Different Change and Baseline Levels of Percent Foreign Born

Visual inspection of these figures indicates that different patterns concerning the effect of changes in percent foreign born emerged for different baseline levels of percent foreign born for non-custodial vs. jail vs. prison outcomes. Of central interest is the interaction effect between changes in percent foreign born between 1990 and 2000 and baseline levels of percent foreign born on prison sentences. Specifically, when the foreign-born population size is at or lower than 20% in 1990, a greater increase in foreign-born population size is associated with lower probabilities of receiving prison sentences. When the foreign-born population constitutes more than 20% or the county's population in 1990, a comparable increase is associated with greater probabilities of receiving prison sentences. When the foreign-born population size is as high as 50%, a greater increase is associated with a greater probability of prison sentences, but this effect

levels off and then diminishes when the amount of the increase is largest. Inspection of figure 6.9 suggests that in places with smaller foreign-born population sizes in 1990, a comparable increase in percent foreign born results in greater use of jail sentences.

Hypothesis Five

Combining all the findings related to changes in social context on the decision to incarcerate, I found that the effect of changes in minority threat and social threat on prison sentences differs from its effect on jail sentences. As predicted, the expected effect of change in threat appears to be most pronounced in prison sentences as opposed to jail sentences. In some cases, it is also associated with greater use of non-custodial sanctions. One possibility is net-widening: counties that have experienced a growth in ecological measures of minority threat and social threat are more punitive overall because convicted felons may receive some sentences when previously they may not.

Discussion and Conclusion

Recent sentencing studies have made an important advance by incorporating social context to investigate individual-level sentencing decisions. These studies have examined a variety of social contextual measures and their influence on sentencing severity. Yet, what remains unknown is how and to what extent changes in social context may affect courtroom decision-making, because these studies have almost entirely focused on the static and contemporaneous social conditions. Heeding calls for testing the threat perspective with changes in social ecology (Green et al., 1998; King and Wheelock, 2007; Olzak, 1992) and calls for contextual analyses of sentencing (e.g., Britt, 2000; Fearn, 2005; Ulmer and Johnson, 2004), this study contributes to the emerging literature on multilevel sentencing research by examining changes in social context and their potential interaction with baseline levels of social conditions.

Building off of prior research, I developed five hypotheses: (1) changes in ecological measures of minority threat (i.e., racial and ethnic threat) will be associated with greater probabilities of receiving a prison or jail sentence; (2) changes in ecological measures of social threat (i.e., number of immigrants, disadvantaged economic conditions, and racial/ethnic economic inequality) will be associated with greater probabilities of receiving a prison or jail sentence; (3) the effect of changes in minority power threat will be more pronounced in places with higher baseline levels of minority power threat, whereas the effect of changes in minority

economic threat will be smaller in areas with higher baseline levels of minority economic threat; (4) the effect of changes in ecological measures of social threat will be more pronounced in jurisdictions characterized by lower baseline levels of social threat; and (5) across all of the above, the effect of changes in minority and social threat will be more pronounced on prison sentences as opposed to jail sentences. These hypotheses were tested by analyzing the State Court Processing Statistics data in combination with a range of county-level data.

In support of the first hypothesis, I found that changes in percent black, black economic threat, and percent Hispanic did not produce any statistically significant effect on the decision to incarcerate. With respect to the second hypothesis for direct effects of changes in ecological measures of social threat, I found some support for changes in ethnic inequality. As expected, change in ethnic inequality was positively associated with greater probabilities of receiving a prison sentence and non-custodial sanctions, but not a jail sentence. This finding, in contrast to the null finding on the effect of changes in Hispanic population size, suggests that the disproportionate increase on Hispanic poverty—not the Hispanic population growth alone—may generate a higher level of fear among middle- and upper-class Americans, and in turn tough sanctioning.[34]

With respect to the third hypothesis regarding interaction effects between changes in ecological measures of minority threat and baseline levels of the minority threat measures, I found support for Blalock's (1967) argument with regard to the racial threat perspective. More specifically, the positive association between changes in black power threat and probabilities of receiving a prison sentence was more pronounced in jurisdictions characterized by higher baseline levels of black power threat, as measured by the black population size in 1990. By contrast, the positive association between changes in black economic threat and probabilities of receiving a prison sentencing was less pronounced in areas with higher baseline levels of black economic threat. However, no such interaction effect was identified for changes in ethnic threat, measured by changes in the Hispanic population size between 1990 and 2000.

With respect to the fourth hypothesis that argues that there will be an interaction effect between changes in the ecological measures of social threat and baseline levels of such measures, I found that only changes in percent foreign born revealed significant interaction effects with

[34] This finding could be viewed as consistent with Holms et al. (2008) who found that ethnic inequality was positively associated with police size, which further indicates that relatively poor Hispanics living in the United States are perceived as posing a threat.

percent foreign born in 1990. Specifically, the positive association between changes in percent foreign born and probabilities of receiving prison sentences was more pronounced in jurisdictions marked by higher baseline levels of the foreign-born population in 1990.

Finally, concerning hypothesis 5, I found that the identified effect of changes in threat did have a more pronounced effect on prison sentences as opposed to jail sentences. It bears mention that the patterns in the effect of changes in minority and social threat on prison sentences and non-custodial sanctions were similar, but opposite to the pattern for its effect on jail sentences. Why do courtroom actors rely on greater use of prison and non-custodial sanctions in a threat situation? On the one hand, prison sentences and non-custodial sanctions may be more likely to be used in a threat situation because of the increasing punitiveness in counties that experience growth in minority and social threat: whereas prisons are a more punitive type of criminal sanction, non-custodial sanctions may be used more often to those who may not be given any sentence otherwise. On the other hand, compared to jail sentences, these two sanction types may be more viable to use for controlling the threatening population. As discussed earlier, it is possible that for many counties, jail is a finite resource, whereas non-custodial sanctions (e.g., probation, fine) and prison may be less so. For example, jail capacity cannot be easily expanded. By contrast, probation caseloads can be increased relatively easily and, unless the state correctional system imposes constraints, counties are relatively free to send increasing numbers of convicted felons to state prisons.

It bears mention that in jurisdictions characterized by higher baseline levels of black economic threat, probabilities of receiving non-custodial sanctions and a prison sentence decreased as black economic threat increased, but probabilities of receiving a jail sentence increased. One plausible explanation is that in jurisdictions where blacks have more economic power, a continuing growth of this power contributes to a stronger tax base for county jails and more support for less punitive criminal sanctions, thereby generating greater probabilities of receiving jail sentences for convicted felons.

Based on this study, what do we know about the effect of changes in social context on individual-level sentencing decisions? First, changes in social context appear to have no direct effects on the decision to incarcerate. The only exception is change in ethnic inequality, which, as expected, was associated with increased probabilities of receiving a prison sentence. Second, there is evidence for interaction effects of changes and baseline levels of threat such that changes

do alter the probabilities of receiving a non-custodial, jail, and prison sentence depending on baseline levels. The precise pattern of the interaction varies, however, depending on the threat measure examined.

These findings have implications for the minority threat and social threat perspectives on several fronts. First, the minority threat and social threat perspectives imply a "change" logic, which suggests that changes in social conditions reflecting minority threat and social threat may have significant effects on social control. The results do not support that view when direct effects of changes in minority and social threat were examined. When we consider interaction effects, however, there are change effects. One important avenue for future research is to find the tipping point at the baseline level of threat when changes will produce an effect.

These findings have implications for sentencing research. One question is related to the generalizability of these findings. Data used in this study reflect sentencing practices in 60 urban counties, so we do now know whether changes would produce differential effects on sentencing decisions in rural counties. That issue is of particular relevance for studies of immigrant threat and sentencing. Although immigrants, largely Hispanics, are heavily concentrated in urban areas in the U.S., the Hispanic and immigrant population grew at a faster rate in rural than in urban areas between 1990 and 2000 (Fennelly and Federico, 2008). In this historical context, Fennelly and Federico (2008) found that rural Americans are more likely to support restrictive immigration policies than their counterparts in urban and suburban communities. Therefore, an influx of immigrants may have more pronounced effects in the everyday life of people who reside in rural counties, and may generate a greater demand for crime control in rural counties as opposed to urban areas. Consequently, future research should explore how demographic and socioeconomic changes in rural counties influence crime control. Second, due to data availability on all the minority and social threat measures, I used changes in social conditions that occurred between 1990 and 2000. A valid question, in turn, is whether short-term changes (e.g., changes within one year or two years) and long-term changes (e.g., changes that occurred within 10 years) would produce differential effects, and, if so, which has more pronounced effects on sentencing.

Third, changes were operationalized as the difference between the two measures between 1990 and 2000 in this study. One may argue that change rate, rather than change, produces greater effects. In addition, the effect of changes may vary across eras. For example, changes in

black economic and power threat may have greater effects in the 1960s when race was a really charged issue. Future research should explore this possibility.

It is not clear whether these findings would directly lead to policy implications. However, given that this study found that there were change effects and the change effects were largely contingent on baseline levels of threat, all the findings center on the issue of fairness. In principle, sentencing decisions are supposed to be affected by legally relevant variables only, and the finding that changes in social context may produce tougher sanctioning should signal concerns among policy-makers about potentially unfair sentencing practices.

Overall, the conclusions from this study suggest that the failure to consider changes in social ecology and their effects on sentencing severity has been a limitation of prior multilevel sentencing research. Correcting this limitation may yield a more adequate understanding of the effects of social context on courtroom decision-making and other social outcomes, in general.

CHAPTER 7

STATE-LEVEL SOCIAL CONTEXT AND SENTENCING[35]

Introduction

Sentencing disparity has been one of the most studied topics in criminological research. Most prior sentencing research has focused on individual-level factors, especially age, race/ethnicity, and sex, and their influence on sentencing decisions. More recently, sentencing studies have incorporated social context in studying such decisions. These studies have focused almost exclusively on county-level contextual measures. This line of research has identified a number of county-level factors—such as racial and ethnic composition, unemployment rate, political party identification (e.g., Britt, 2000; Fearn, 2005; Ulmer and Johnson, 2004)—that may influence courtroom decision-making. One unresolved question—the focus of this study—is whether there also may be state-level effects on sentencing. More specifically, it remains unknown whether state-level social context affects sentencing decisions, whether this effect is conditioned by county-level social context, and whether county- and state-level contextual effects are greater for some groups (e.g., blacks and Hispanics) than others (e.g., whites).

A focus on state-level effects is indicated for at least four reasons. First, sentencing laws and other factors related to sanctioning, such as the organization of correctional systems and parole boards, are organized at the state level. Second, many scholars have suggested that state-level effects on sentencing decisions may exist. Eisenstein and Jacob (1977), for example, long ago argued that state laws and context influence case outcomes. More recently, Greenberg and West (2001) argued that a range of state-level factors may influence imprisonment rates. The authors argued that state-level variation in incarceration resulted from a range of factors, including crime, criminal justice resources, and political culture. Third, several scholars have begun to examine the idea that states may affect sentencing (e.g., Fearn, 2005; Helms and Jacobs, 2002; Weidner, Frase, and Schultz, 2005). Fourth, substantive overlap exists in some of the arguments presented for county-level and state-level effects. In particular, a number of studies

[35] This chapter builds off of the prior chapter. Here, however, the focus is on state-level effects. For this reason, there will be some parallels in my discussions of the minority threat perspective and the data and methods.

suggest that minority threat effects may operate at both levels. Notably, however, studies of county-level effects focus primarily on sentencing while studies of state-level effects focus primarily on incarceration rates. Underlying both bodies of work is the emphasis on racial and ethnic threat effects. A logical extension of such work is, therefore, to combine them and, in particular, to focus attention on how state-level threat effects may influence individual-level sentencing decisions, as well as how such effects may be modified by county-level context.

Below, I begin by discussing prior sentencing research, emphasizing its implications for a focus on state-level effects on sentencing. Then I turn to the minority threat perspective that is used to develop hypotheses about the direct and amplification effects of state-level racial and ethnic context on sentencing. After describing the hypotheses and the data and methods, I present the findings and discuss the study's implications for theory, research, and policy.

Background

For several decades, research on sentencing disparities has focused almost exclusively on individual-level characteristics. More recently, sentencing research has turned to a focus on contextual factors and their influence on sentencing decisions. This new direction has its roots in the court community perspective. According to this perspective, courtroom decision-making varies across different contexts (Eisenstein, Flemming, and Nardulli, 1998; Eisenstein and Jacob, 1977; Ulmer, 1997). The challenge to date has been identifying what contextual factors influence courtroom decision-making. In general, extant studies have primarily focused on county-level factors. That is not surprising. According to the court community perspective, for example, judges' attitudes toward defendants, crime, and criminal justice have at least some correspondence with local political attitudes and culture, regardless of how the judges are selected (Eisenstein and Jacob, 1977: 45). In addition, because counties are responsible for building and maintaining court houses and other physical facilities for courts, courtroom actors must work together to compete for scarce resources and they must learn how to adapt to each other. Judges, for example, may need to adapt to pressures from prosecutors and defense attorneys; prosecutors may need to adapt to pressures from the police, and so on (Eisenstein and Jacob, 1977). These and other such factors argue not only for courtroom effects (i.e., effects arising from the precise constellation of forces at play in a given courtroom), but also for county-level effects and, as discussed below, state-level effects.

Motivated by this perspective and a growing literature that has highlighted the importance of assessing contextual effects on a range of individual-level outcomes (Sampson, Morenoff, and Gannon-Rowley, 2002), an increasing number of researchers have begun to examine county-level factors that influence individual-level sentencing decisions (e.g., Britt, 2000; Fearn, 2005; Helms and Jacobs, 2002; Johnson, 2006; Ulmer and Johnson, 2004; Ulmer and Bradley, 2006; Weidner et al., 2005). At the same time, these researchers have increasingly called for multilevel studies of sentencing. However, there has been minimal attention to state-level contextual effects.

State-level effects should not be neglected for at least four reasons. First, criminal justice policies and laws are set predominately at the state level. Department of corrections, parole boards, and sentencing commissions are state-level agencies. And sentencing laws are typically set at the state level. In addition, proposals for sentencing reforms, most of which are designed to reduce or eliminate sentencing disparities and judicial discretions, typically occur at the state level (Shane-DuBow et al., 1985). In a similar vein, states vary in their state court organization. The court organization is controlled and regulated through statewide agencies. Notably, states have different systems for selecting trial court judges (Rottman et al., 2002). For example, trial judges are sometimes selected by partisan elections, or by nonpartisan selections, or appointed by governors.

Second, studies of covariates in state incarceration rates point to a number of factors that may influence courtroom decision-making. In this vein, Greenberg and West (2001: 618) argued that state-level imprisonment rates are "produced by decisions made by different agencies and actors (e.g., legislatures, governors, police, prosecutors, judges and juries, and parole boards) with different agendas, constituencies, incentives, and constraints." Along with other scholars, Greenberg and West have claimed that such factors as state crime rates, racial composition, unemployment, poverty, and political culture may influence incarceration rates (e.g., Arvanites and Asher, 1995; Beckett and Western, 2001; Greenberg and West, 2001; McGarrell, 1993; Michalowski and Pearson, 1990; Oitmet and Tremblay, 1996; Stucky, Heimer, and Lang, 2005). Similarly, Eisenstein and Jacob (1977: 300) have argued that "differences in procedures and case outcomes result from the combined effects of structures and rules mandated by state law, local political and cultural values, the structure and policies of sponsoring organizations, and the characteristics of courtroom workgroups." In short, a number of scholars have called attention to the potential salience of state-level context for the individual-level courtroom decision-making.

Third, a number of scholars have focused explicitly on state-level factors that may affect individual-level sentencing decisions. In each instance, however, the central idea has been that state-level effects need to be controlled in county-level studies (e.g., Fearn, 2005; Helms and Jacobs, 2002; Weidner et al., 2005). Thus, beyond controlling for state-level effects through the use of state dummies (e.g., Helms and Jacobs, 2002) or controlling for states that have sentencing guidelines (e.g., Fearn 2005; Weidner et al., 2005), the few studies to date have not investigated how theoretically relevant factors, such as the minority threat perspective, might influence individual-level sentencing decisions.

Fourth, there is substantial overlap in some of the theoretical perspectives examined for county-level and state-level effects. One avenue of research, in particular, has been studies that have examined the minority threat perspective. For example, a few studies have found that county-level minority population sizes are associated with individual-level sentencing decisions (e.g. Britt, 2000; Myers and Talarico, 1987; Weidner et al., 2005; but see Helms and Jacobs, 2002; Kautt, 2002; Ulmer, 1997; Ulmer and Johnson, 2004), and several studies have found that minority population sizes explain variation in incarceration rates across states (e.g., Arvanites and Asher, 1995; Greenberg and West, 2001; but see Stucky et al., 2005). Notably, studies of county-level minority threat effects have focused primarily on individual-level sentencing decisions, whereas studies of state-level minority threat effects have focused primarily on state-level incarceration rates. Despite that, these studies collectively suggest that minority threat effects may operate at both county and state levels. In addition, some scholars have underscored the importance of multilevel contextual analyses of racial and ethnic context (Blalock, 1984; Huckfeldt and Sprague, 1995; Liu, 2001). This recommendation is of particular relevance for sentencing research because courtroom actors live in different levels of contexts simultaneously. For example, courtroom actors may live in a predominately black county that is part of a largely white-dominated state. Therefore, extending prior research in county-level effects and state-level effects and heeding calls for multilevel contextual analyses of racial and ethnic context, I examine whether state-level minority threat effects may indeed influence individual-level sentencing decisions, and whether such effects may be modified by county-level threat effects.

Theorizing Minority Population Size and Sentencing Severity

The minority threat perspective has been used to argue for the link between minority population size and sentencing severity. According to this perspective, a higher level of minority population density may produce a higher level of perceived minority threat among whites and, therefore, a higher level of social control. Blalock (1967) first theorized minority threat and argued that a growing racial and ethnic minority population poses a threat to white majorities. He asserted that the source of perceived minority threat can assume two distinct forms: economic and power threat. As a result of both forms of minority threat, whites may intensify social control to maintain their dominance in economic and political arenas. Blalock argued that the relationship between minority threat and social control should be nonlinear—economic threat should produce a decelerating slope and power threat should produce an accelerating slope. The minority threat perspective suggests that as the relative size of racial and ethnic minority group increases, members of the majority group—in this case, whites—may perceive a growing threat, and, in turn, take actions to reduce the threat (Blalock, 1967). By extension, this perspective suggests that the greater the minority presence, the greater the sentencing severity. This is the threat effect hypothesis.

Another school of scholars, however, has proposed a competing perspective, which argues that higher levels of minority presence lead whites to interact more frequently with minority groups, which, in turn, may facilitate positive racial attitudes and racial tolerance (Carsey, 1995; Liu, 2001; Voss, 1996). From this perspective, sentencing severity should be negatively associated with minority presence in an area. This is the tolerance effect hypothesis.

In short, these perspectives view racial and ethnic context as a factor that either increases conflict between racial and ethnic groups or enhances integration between them. This dichotomous view of racial and ethnic context may be incomplete, however. It misses an important third possibility: *the effects of minority threat and racial tolerance may both occur, but one may be more pronounced than the other at different levels of minority presence.* I anticipate that—up to some tipping point—greater minority presence will be associated with less severe sanctioning and that, after that tipping point has been reached, greater minority presence will be associated with more severe sanctioning. In short, I expect that there will be a U-shaped relationship between minority population size and sentencing severity. Put differently, I first expect a tolerance effect and then, past a certain tipping point, a threat effect.

The underlying idea here is that in predominately white areas, minorities may be perceived as a threat, in turn, leading to tougher sanctioning. However, as increased numbers of minorities enter these areas, greater contact with minorities may lead to increased racial integration and interactions, thus enhancing tolerance and tempering sentencing severity. But this same process may have a reverse effect at higher concentrations of minority presence. Past a certain tipping point, for example, the perception may arise among whites, and possibly minorities as well, that a need for intensified social control exists. In such situations, it may be that residents feel that the greater level of minority presence signals an existing or incoming threat to community order and safety (Sampson and Raudenbush, 2004), in turn, not only reducing tolerance but also increasing calls for concerted efforts, including "get tough" sentencing, to restore order and safety.

It bears emphasizing that this hypothesis accords with the theoretical arguments put forth by proponents of threat and tolerance perspectives, respectively. In addition, it is suggested by some prior studies. For example, Green, Strolovitch, and Wong (1998) reported that racially motivated crimes are less likely to occur in integrated areas than in the white predominant areas in New York City. One reason, according to the authors, is that integration "gradually undermines the extent to which whites regard a given area as their territory" (p. 397). Soss, Langbein, and Metelco (2003: 411) found that "as the black percentage of a county's population rises, racial prejudice becomes a much powerful predictor of whether a white person will strongly favor state executions."

Hypotheses

As discussed above, multilevel sentencing research has investigated county-level racial and ethnic context, but there has been little research, if any, that empirically examines state-level racial and ethnic context and its effect on sentencing severity. Heeding calls from researchers for multilevel contextual analyses of the minority threat and social contact perspectives (Blalock, 1984; Huckfeldt and Sprague, 1995; Liu, 2001), this study is designed to fill this gap. More specifically, building off of the prior discussions, I develop hypotheses aimed at teasing out the effect of state-level context on individual-level sentencing decisions.

Although the primary focus here is on state-level effects on individual-level sentencing, a logical first step is to include county-level effects given prior theory and research. Thus, I begin

with hypotheses about county-level effects and then develop a parallel set of hypotheses about state-level effects. In both cases, I present three hypotheses, one derived from the threat perspective, one derived from the tolerance perspective, and one derived from the integration of the two perspectives. I then develop hypotheses about the interaction of state and county contexts and, in turn, how the two may interact with individual-level factors to influence individual-level sentencing decisions.

Hypothesis 1A (H1A): County-level minority population size will be positively associated with more severe sentencing. This hypothesis flows directly from the logic of the minority threat perspective (see, e.g., Britt, 2000; Helms and Jacobs, 2002; Ulmer and Johnson, 2004).

Hypothesis 1B (H1B): County-level minority population size will be negatively associated with sentencing severity. This hypothesis flows directly from the logic of the tolerance perspective (see, e.g., Carsey, 1995; Liu, 2001; Voss, 1996).

Hypothesis 1C (H1C): County-level minority population size will be negatively associated with sentencing severity, but this relationship will become positive after county-level minority population size crosses some threshold level. It is not clear what percentage threshold will constitute the tipping point, just that there may be such a threshold level. That said, some prior research has suggested that roughly 25% black may be particularly salient (Schelling, 1971; Sampson and Raudenbush, 2004). Other studies suggest that we might anticipate that it will be when county minority populations are 30 percent or higher. That expectation was derived from studies of Giles, Cataldo, and Gatlin (1975) and Valenty and Sylvia (2004). Giles et al. (1975) found that when a school district had 30% black, white transfer rates significantly increased. Valenty and Sylvia (2004) found that when the Hispanic populations constituted over 30%, voters were more likely to vote for racially and ethnically charged propositions.

A parallel logic is used to develop the hypotheses for state-level effects.

Hypothesis 2A (H2A): State-level minority population size will be positively associated with more severe sentencing.

Hypothesis 2B (H2B): State-level minority population size will be negatively associated with sentencing severity.

Hypothesis 2C (H2C): State-level minority population size will be negatively associated with sentencing severity, but this relationship will become positive after state-level minority population size crosses some threshold level.

Hypothesis 3A (H3A): Any positive association between county-level minority population size and individual-level sentencing will be more pronounced in states characterized by greater minority presence. Here, the argument is that county-level effects may be amplified by state-level context. The logic accords with that of the minority threat perspective. Specifically, according to this perspective, communities take symbolic, "get tough" measures to control crime. Accordingly, if counties operate in a larger "threat" environment, they should be even more likely to adopt such measures. That is, the very nature of a threat effect is one that calls for disproportionately repressive responses to a perceived threat. Thus, it stands to reason that this disproportionately repressive response would be amplified by larger social contexts in which similar threats exist.

Hypothesis 3B (H3B): Any negative relationship between county-level minority population size and sentencing severity will be more pronounced in states marked by higher levels of minority presence. Here, a similar logic exists. Namely, if increased interracial social contact and racial integration promotes more positive racial attitudes and higher levels of racial tolerance, then, especially in a country where racial divisions have been prominent, we can expect that the effects of racial integration and interaction at multiple levels—in this case county and state—might be amplified.

Hypothesis 3C (H3C): The negative association between county-level minority population size and sentencing severity will be more pronounced in states with smaller minority presence; after county-level minority population size crosses some threshold level, the positive association between county-level minority population size and sentencing severity will be more pronounced in states with greater minority presence. In essence, the main difference from the hypothesized direct effects (H1C and H2C) is that the downward tolerance slope and the upward threat slope will be steeper. Thus, instead of a U-shaped curve, I expect to observe more of a V-shaped pattern, one where the downward and upward slopes are more pronounced.

Finally, hypotheses 4A, 4B, and 4C (below) assess whether any identified interaction effect between county- and state-level minority population sizes has differential effects on minority offenders vs. white offenders. Steffensmeier, Ulmer, and Kramer (1998: 789) have argued that "researchers who simply test for the direct effect of defendant's race may miss the subtle and potentially more interesting interactive effects . . . They also may discount the continuing significance of race in American society . . . . " Thus, building off of that observation,

I test a logical extension of previous hypotheses. In each instance, the underlying idea is simple—any individual-level threat effect should be amplified by county- and state-level minority context.

Hypothesis 4A (H4A): Minority defendants will receive tougher criminal sanctioning in counties and states characterized by larger minority population sizes.

Hypothesis 4B (H4B): Minority defendants will be punished less harshly in counties and states marked by larger minority population sizes.

Hypothesis 4C (H4C): Minority defendants will be punished less harshly in counties and states with larger minority population sizes before county- and state-level minority population size reaches a threshold level; after county- and state-level minority population size crosses the threshold level, minority defendants will be punished more harshly in counties and states with larger minority population sizes.

Data and Methods

I test the four sets of hypotheses using a combination of individual-level sentencing data and county- and state-level contextual data. The criminal sentencing data came from the State Court Processing Statistics for 1998, 2000, and 2002, which include 17,440 convicted felon offenders in 60 urban counties across 23 states. This dataset is unique in that it includes individual cases from 23 states, making it one of the best available data sources for studying the effect of state-level social context on sentencing. In addition, this dataset has information about individual offender and offense characteristics. I excluded offenders who were not identified as non-Hispanic white, non-Hispanic black, or Hispanic.

The second level consists of county-level characteristics. County-level data were obtained from various sources. The 2000 U.S. Census data were used to capture county-level variations in percent black, percent Hispanic, and levels of resource deprivation. County-level index crime rates were obtained from the Uniform Crime Reports.

The third level of analysis, the focus of this study, consists of information concerning state-level black population size and Hispanic population size, which were obtained from the 2000 U.S. Census. The National Center for State Courts was used to construct the sentencing guideline information. Collectively, these three levels of data, after being merged, provide resources for examining social context at different levels and its effects on criminal sentencing.

Below, I describe each variable in the analyses. Table 7.1 provides the means and standard deviations for all the study variables.

Table 7.1. Descriptive Statistics

	Mean	SD
Outcome measure		
Incarceration (N=17,440)	.76	.43
Ln sentence length (Natural log, N=13,179)	2.45	1.56
Offender Level (N=17,440)		
Black	.42	.49
Hispanic	.25	.43
Male	.83	.38
Age	31.02	10.05
Age²	1,063.44	706.40
Criminal justice status	.38	.49
Criminal history scale	1.93	1.50
Multiple arrest charge	.59	.49
Violent offense	.17	.38
Property offense	.32	.47
Drug offense	.39	.49
Detention	.53	.50
Plea bargaining	.95	.22
Year 1998	.34	.47
Year 2000	.32	.46
County Level (N=60)		
Racial threat		
Pct. black	.16	.13
Ethnic threat		
Pct. Hispanic	.17	.15
Controls		
Resource deprivation	.00	1.00
Crime rates	5,126.55	1,853.69
State Level (N=23)		
Racial threat		
Pct. black	.12	.08
Ethnic threat		
Pct. Hispanic	.09	.09
Control		
Sentencing guideline states	.39	.50

Dependent Variables

Since Wheeler, Weisburd, and Bode (1982), sentencing research has broken down the sentencing decision into two distinct but related stages: the decision to incarcerate and the decision regarding length of sentence if incarcerated. This study follows that practice. The incarceration variable was coded 1 if the offender was sentenced to any length of confinement in a county jail or state prison and 0 if the offender was sentenced to any combination of non-incarceration options (i.e., probation, restitution, fines, suspended sentence, and so forth). Among these convicted felons in the sample, 76% were sentenced to a county jail or state prison. For those incarcerated, the sentence-length variable was coded as the natural log of the months of incarceration in a county jail or state prison due to extreme skew.[36] After the transformation, the skewness statistic is -.728, significantly lower compared to 8.131 before the transformation.

Racial and Ethnic Context at County- and State Levels

In this study, I investigate the contextual effects of racial and ethnic context separately in the analyses. At the county and state level, I use percent black to reflect racial context, and percent Hispanic to represent ethnic context. To evaluate the possible nonlinear effects of racial and ethnic context, I consider both the linear and squared versions of these variables in the analysis.

Control Variables

To reduce the likelihood that any identified effect concerning racial and ethnic context is spurious, I included a number of control variables at individual, county, and state levels. A broad range of individual-level controls were incorporated into the analyses. I included the convicted felon's race (1=non-Hispanic black; 0=otherwise) and ethnicity (1=Hispanic; 0=otherwise). Because Steffensmeier et al. (1995) found that the age-sentencing association is an inversed U-shaped curve, I included both the linear and squared versions of age (in years). Prior sentencing research also consistently showed that offenders' criminal history and offense severity affect sentencing outcomes. For this reason, following the lead of Demuth and Steffensmeier (2004), I constructed the following measures. First, I obtained a criminal history scale by adding up four dummy variables that reflect an offender's prior contact with the criminal justice system,

[36] Of the 17,440 convicted felons, 13,260 were sentenced to a county jail or state prison. However, 83 were missing the sentence length variable. Two among the 83 offenders had valid values on the suspended jail months variable, so I kept these two cases, and removed the other 81 cases. In addition, one offender was sentenced to the death penalty, and 60 were sentenced to the life imprisonment. I assigned the maximum sentence length (960 months) to these 61 felons.

including prior felony arrest, prior felony conviction, prior jail incarceration, and prior prison incarceration (Cronbach's alpha=.800). Second, I included criminal justice status (1=yes; 0=no) to reflect whether the convicted felon's criminal justice status at the time of arrest was active or not. Third, I included multiple arrest charges (1=yes; 0=no). To control for the offense severity, I included three dummy variables to capture the most serious offense type for which the offender was convicted: violent offense (1=yes; 0=no), property offense (1=yes; 0=no), and drug offense (1=yes; 0=no), holding other offense as the reference category (see Johnson, 2006). Prior research also revealed that the conviction mode and pre-trial outcome affect sentencing severity (e.g., Albonetti, 1986; Fearn, 2005; Ulmer and Johnson, 2004), thus I controlled for plea bargaining (1=conviction resulting from plea bargaining; 0=otherwise) and detention (1=detained prior to trial; 0=otherwise). In addition, since the defendants were processed in the state courts in years 1998, 2000, and 2002, there might be cohort differences that should be assessed due to changes in laws, policies, and law enforcement and court practices from year to year. As a result, I created dummy variables for years 1998 and 2000, holding year 2002 as the reference year.

Because sentence-length models include only those cases that received an incarceration sentence, I used the Heckman two-stage model to control for potential selection bias when predicting sentence length (see Berk, 1983; Bushway, Johnson, and Slocum, 2007). Specifically, I first ran a probit model to predict those who have valid sentence length values. Second, following Bushway et al. (2007: 161), I constructed the Inverse Mill's Ratio for each case that was included in sentence length models. Third, this Inverse Mill's Ratio was included as a covariate in the sentence-length model to correct for selection bias. It bears mention that multicollinearity between this correction factor and other individual-level controls can be a concern when using the Heckman two-stage model. However, the variance inflation factors and condition indices indicated acceptable levels of collinearity (Hair et al., 1998: 220).

A range of county- and state-level contextual measures were included in the analyses. At the county level, I controlled for local crime rates (the average index crime rates per 100,000 from 1998-2002, Cronbach's alpha=.969) and resource deprivation. The resource deprivation measure was created by performing a principal components analysis on the following variables: median family income, median household income, percent receiving public assistance, percent below poverty, percent unemployed in civilian populations above 16 years old, and per capita income (λ=4.768, the absolute factor loading>.810, Cronbach's alpha=.734). Finally, sentencing

practices may vary due to laws and state-level policies, so I included a dummy variable which indicates counties that are located in a state that has sentencing guidelines.[37]

Analytic Strategy

Due to the nature of the data—convicted felons were sentenced in 60 counties across 23 states, I used three-level hierarchical modeling, which incorporates a unique random effect into the statistical model for each county and state, thereby producing more robust standard errors than non-hierarchical models allow (Raudenbush and Bryk, 2002: 100). In addition, I used three-level hierarchical generalized linear modeling (HGLM) for the incarceration decision and hierarchical linear modeling (HLM) for the sentence-length decision. Further, to assess the moderating effect of the state-level measures of racial and ethnic context on the county-level measures of racial and ethnic context and their interaction effect with the offender's race or ethnicity, cross-level interaction techniques were employed. I used HLM 6.0 for all the analyses.

Below, all the models assessing the direct and moderating effects of state-level racial and ethnic context included individual-level controls. In appendix B.2, I present the incarceration decision model and the sentence-length decision model with results for individual-level variables. It bears mention that the models that generate the results for state effects also included the individual-level control variables, but I omitted them from the tables to conserve space and because their effects were virtually identical to those shown in the appendix.

Results

Hypotheses 1A, 1B, and 1C

Models 1a and 1b in table 7.2 examine whether county-level black population size is associated with the decision to incarcerate and the sentence-length decision.[38] Inspection of model 1a for the incarceration outcome shows that the relationship between county-level black population size and the incarceration outcome is nonlinear, indicated by the statistically significant quadratic term. This finding supports H1C which anticipated a U-shaped curve

[37] Sentencing guideline states include Florida, Maryland, Michigan, Missouri, Ohio, Pennsylvania, Utah, Virginia, and Washington. There are 21 counties that are located in these 9 states.

[38] Different model specifications, including controls for density, southern states, county jail capacity, and state prison capacity, were estimated. Since none of these control variables was statistically significant and the model estimates for county- and state-level racial and ethnic concentrations were almost identical with or without these variables, I only controlled for county-level resource deprivation and crime rates, and state-level sentencing guideline dummy to conserve degrees of freedom for all the analyses.

between county-level black population size and individual-level sentencing.[39] Recall the idea was that we would first expect a tolerance effect where greater minority presence will be associated with less severe sanctioning; past a certain tipping point, we would expect a threat effect where greater minority presence will be associated with more severe criminal sanctioning. However, inspection of model 1b for the sentence-length decision does not reveal any direct effect of county-level black population size.[40]

[39] To check whether the observed nonlinear finding between county-level percent black and the in/out decision is an artifact resulting from the outlier counties, I excluded the outlier county that has over 60% blacks in preliminary analyses, and found that the results regarding this association were substantively similar. In 9 of the 60 counties, over 30 percent of the population was black; in 7 of them, over 35 percent of the population was black; and in 6 of them, over 40 percent of the population was black. This distribution, together with the preliminary analyses, lends support to the view that the observed U-shape curve between county-level black population size and the incarceration decision is relatively robust.

[40] The squared term of county-level black population size was not statistically significant for the sentence-length models. I thus removed the squared term when sentence length was examined.

Table 7.2. Hierarchical Regression Models of the Effect of State-Level Racial Threat on Sentencing Decisions

	Incarceration			Ln sentence length		
	Model 1a	Model 2a	Model 3a	Model 1b	Modes 2b	Model 3b [a]
Intercept	1.08**	1.19**	1.21**	2.98**	2.98**	3.02**
	(.15)	(.20)	(.20)	(.12)	(.14)	(.15)
Black	.19**	.19**	.29**	-.02	-.02	-.10
	(.04)	(.05)	(.07)	(.04)	(.03)	(.05)
County pct. black	-4.10	-3.09	-3.50	.62	.57	.66
	(2.92)	(4.12)	(4.08)	(.66)	(.91)	(.92)
County pct. black²	12.19*	7.65	8.64			
	(5.06)	(8.52)	(8.45)			
State pct. black	-5.13	-4.38	-4.18	4.83*	4.80*	4.73*
	(2.74)	(3.10)	(3.07)	(1.92)	(2.09)	(2.16)
State pct. black x county pct. black		-78.31	-74.98		1.15	-2.23
		(39.62)	(39.29)		(6.62)	(7.09)
State pct. black x county pct. black²		130.59*	113.19			
		(64.28)	(64.09)			
Black x state pct. black			3.10**			-.32
			(1.04)			(.82)
Black x county pct. black			-3.48*			-.52
			(1.73)			(.33)
Black x county pct. black²			4.41			
			(3.47)			
Black x state pct. black x county pct. black			-41.15			10.69*
			(21.83)			(4.13)
Black x state pct. black x county pct. black²			72.49			
			(41.45)			
Random effect						
Level-1 intercept	--	--	--	1.63	1.63	1.63
Level-2 intercept	.52**	.47**	.46**	.14**	.14**	.15**
χ^2	759.98	681.08	667.87	593.39	592.59	540.73
Level-3 intercept	.37**	.34**	.33**	.30**	.29**	.31**
χ^2	67.40	67.14	66.85	147.68	147.30	142.25

*p<.05 **p<.01 (N=17,440 defendants for incarceration decision models or 13,179 for sentence-length decision models; N=60 counties; N=23 states)

a. The black slope was allowed to vary across counties and states, because the variance was statistically significant.

Models 1a and 1b in table 7.3 investigate whether county-level Hispanic population size is related to sentencing severity. Inspection of both models for the incarceration and sentence-length decisions suggests no direct effect of county-level Hispanic population size on sentencing severity, thus suggesting no support for H1A, H1B, or H1C for ethnic threat.

Table 7.3. Hierarchical Regression Models of State-Level Ethnic Threat on Sentencing Decisions

	Incarceration			Ln sentence length		
	Model 1a	Model 2a	Model 3a	Model 1b	Model 2b	Model 3b [a]
Intercept	.97**	1.03**	1.06**	3.04**	2.96**	2.95**
	(.16)	(.19)	(.25)	(.14)	(.18)	(.18)
Hispanic	.24*	.24*	.18	-.04	-.04	.06
	(.11)	(.11)	(.12)	(.02)	(.03)	(.09)
County pct. Hispanic	-1.69	-1.19	-1.26	.11	-.49	-.57
	(1.18)	(1.29)	(1.80)	(.84)	(1.00)	(.96)
State pct. Hispanic	4.77*	4.51	4.37	-3.89*	-3.57*	-3.67*
	(2.17)	(2.27)	(2.16)	(1.44)	(1.68)	(1.67)
State pct. Hispanic x county pct. Hispanic		-3.66	-2.37		4.51	5.75
		(7.37)	(10.00)		(5.92)	(5.68)
Hispanic x state pct. Hispanic			1.48			-.38
			(.76)			(.50)
Hispanic x county pct. Hispanic			-2.56**			-.26
			(.73)			(.59)
Hispanic x state pct. Hispanic x county pct. Hispanic			5.94			.98
			(4.42)			(3.35)
Random effect						
Level-1 intercept	--	--	--	1.63	1.63	1.63
Level-2 intercept	.65**	.64**	.64**	.14**	.14**	.13**
χ^2	794.14	776.67	775.96	605.02	587.42	474.27
Level-3 intercept	.20**	.22**	.21**	.31**	.30**	.31**
χ^2	40.65	42.13	41.52	105.52	102.94	125.07

*p<.05 **p<.01 (N=17,440 defendants for incarceration decision models or 13,179 for sentence-length decision models; N=60 counties; N=23 states)

a. The Hispanic slope was allowed to vary across counties, because the variance for the slope was statistically significant.

Hypotheses 2A, 2B, and 2C

Models 1a and 1b in table 7.2 also examine whether state-level black population size, not just county-level black population size, is associated with the decision to incarcerate and the sentence-length decision. The incarceration model does not yield a significant effect for state-level black population size. By contrast, the sentence length model reveals a significant and positive effect for state-level black population size. This finding supports H2A (the threat effect hypothesis).

In a similar vein, models 1a and 1b in table 7.3 assess whether state-level Hispanic population size is associated with sentencing severity. Whereas state-level Hispanic population size is significantly associated with the decision to incarcerate in a positive direction, it is significantly associated with sentence length in a negative direction. Therefore, H2A is supported for the incarceration outcome (the threat effect hypothesis), but H2B is supported for the sentence-length outcome (the tolerance effect hypothesis).

Hypotheses 3A, 3B, and 3C

Models 2a and 2b in table 7.2 provide a test of the third set of hypotheses related to the interaction between county- and state-level racial contexts. Review of model 2a in table 7.2 for the incarceration outcome indicates that the interaction of state-level black population size and the quadratic term of county-level black population size is statistically significant. To facilitate the discussion of this interaction effect, I present the predicted probabilities of receiving a jail or prison sentence, setting the covariates at their means, in figure 7.1.

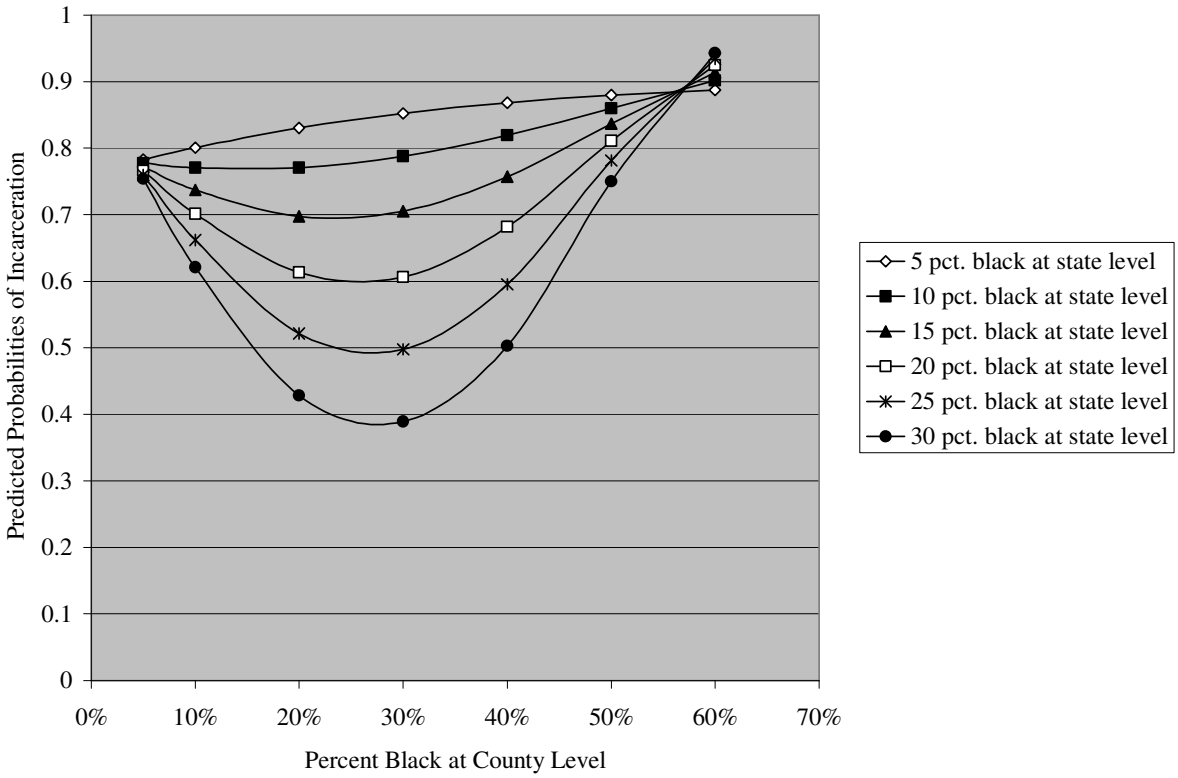

Figure 7.1. Predicted Probabilities of Receiving a Jail or Prison Sentence, Given Different Levels of Percent Black at County and State Levels

With respect to the interaction effect between county- and state-level black population sizes, figure 7.1 indicates that state-level black population size does indeed amplify the effect of county-level black population size. More specifically, as state-level percent black increases, the nonlinear pattern between county-level black population size and the probability of receiving a jail or prison sentence becomes more pronounced as compared with lower levels of state-level percent black—that is, the tolerance and threat slopes become steeper. This finding supports H3C (the tolerance-then-threat effect hypothesis). However, state-level black population size does not amplify the effect of county-level black population size on sentence length. In addition, models 2a and 2b in table 7.3 suggest that state-level Hispanic population size does not amplify the effect of county-level Hispanic population size on sentencing severity. Therefore, there is no indication

of interaction effects when examining the effect of state-level Hispanic population size on sentencing decisions.

Before proceeding, it bears mention that figure 7.1 also provides a test of hypothesis 2A, 2B, and 2C. More specifically, figure 7.1 suggests that as state-level black population size increases, the probabilities of receiving a jail or prison sentence decrease. This negative association between state-level black population size and the probabilities of receiving a jail or prison sentence lends support to H2B, which posits that state-level percent black will be negatively associated with sentencing severity (the tolerance effect hypothesis). However, there is a caveat. In general, there are no states where the percent black population exceeds 35 percent. Nonetheless, the county-level pattern of findings raises the interesting question of whether, were some states in fact to have a higher percentage of black populations (as occurs at the county level), they, too, would exhibit the pattern found in the county-level analyses. That is, one might find that there is a curvilinear tolerance-then-threat effect where, as percent black increases, the level of tough sanctioning declines, but after percent black exceeds some tipping point, tougher sanctioning occurs. At the county level, the tipping point was roughly 30 percent, which is almost the maximum percent black observed among the states in this study.[41] Thus, it remains an open question whether state-level effects might parallel those at the county level or whether they operate according to different dynamics.

Hypotheses 4A, 4B, and 4C

Models 3a and 3b in tables 7.2 and 7.3 assess the fourth set of hypotheses, which suggests that the interaction effect between county- and state-level minority population sizes will be more pronounced for minority defendants as opposed to white defendants. Inspection of model 3b in table 7.2 reveals a statistically significant three-way interaction between the defendants' race, county- and state-level percent black for the sentence-length decision, but no significant three-way interaction surfaced for ethnic context (see models 3a and 3b in table 7.3). I present the predicted sentence length in months, setting the covariates at their means, at different levels of county- and state-level percent black for blacks and whites in figures 7.2 and 7.3, respectively.[42]

[41] The predicted probabilities of receiving a jail or prison sentence in 25%-black counties at different levels of state-level black presence were computed. They were similar to those in 30%-black counties. Therefore, the tipping point in this study is roughly between 25% and 30%.

[42] I took the exponential of the predicted values obtained from model 3b in table 7.2 because all the variables were regressed on the natural log of sentence length in months.

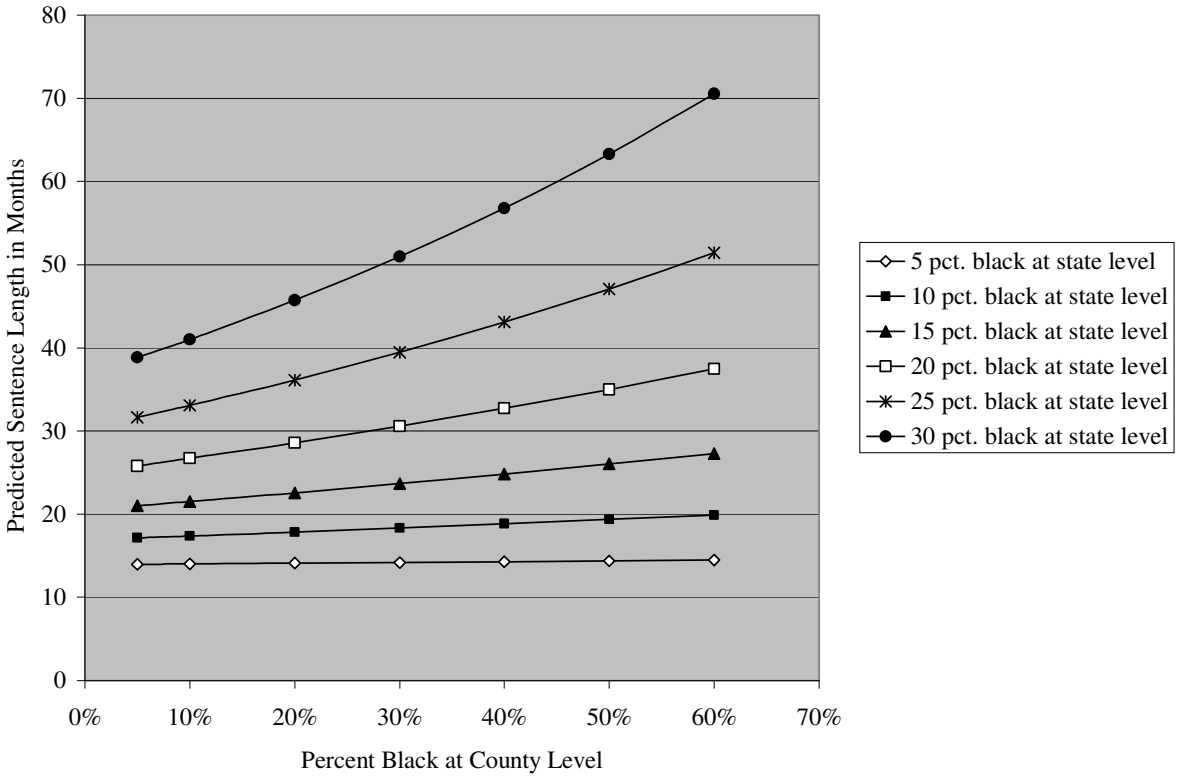

Figure 7.2. Predicted Sentence Length in Months for Convicted Black Felons, Given Different Levels of Percent Black at County and State Levels

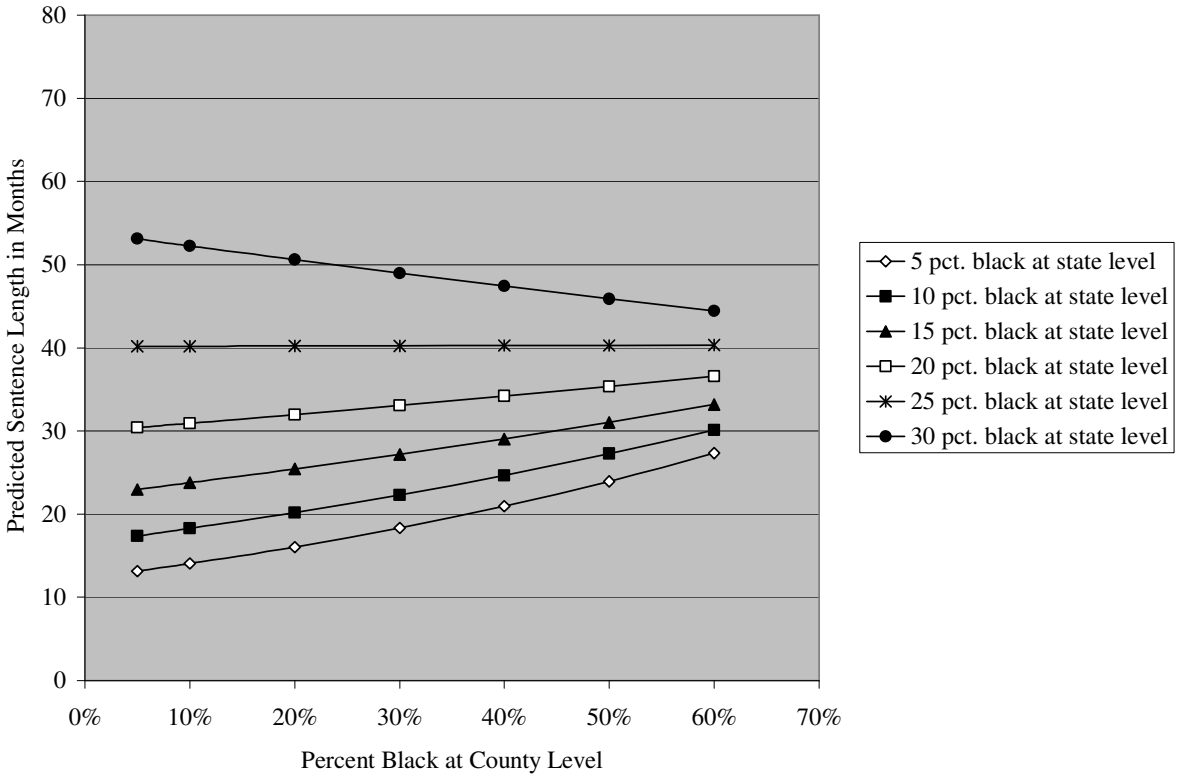

Figure 7.3. Predicted Sentence Length in Months for Convicted White Felons, Given Different Levels of Percent Black at County and State Levels

Of particular relevance is figure 7.2, which suggests that for black felons, county-level black population size is positively associated with sentence length, and this positive association is significantly amplified by state-level black population size. This finding supports hypothesis 4A (the threat effect hypothesis), and indicates that the black offenders will receive longer sentences in counties and states characterized by greater black presence. By contrast, for whites, there is less pronounced effect for state-level conditioning effects. It is also notable that for both groups, there is no appreciable state-level conditioning effect until state-level percent black reaches 25%. Put differently, in 25%- and 30%-black states, I observe more salient differences between blacks and whites in terms of predicted sentence length. For example, the most remarkable difference between blacks and whites in predicted sentence length occurs in a 60%-

black county and a 30%-black state: convicted black felons receive 70.56 months, as opposed to 44.44 months convicted white felons receive. Therefore, there are more marked race effects in states that have as high as 30% black population.

Discussion and Conclusion

Recent sentencing studies have made an important advance by incorporating social context to investigate individual-level sentencing decisions. These studies have examined a variety of contextual measures and their influence on sentencing severity. Yet, it remains unknown how and to what extent state-level social context may affect courtroom decision-making, because these studies have almost entirely focused on county-level social conditions. Heeding calls for multilevel contextual analyses of the minority threat perspective (Blalock, 1984; Liu, 2001) and calls for contextual analyses of sentencing (e.g., Britt, 2000; Fearn, 2005; Ulmer and Johnson, 2004), this study contributes to the emerging literature on multilevel sentencing research by examining state-level racial and ethnic threat and their potential interaction with individual- and county-level racial and ethnic threat.

Building off of prior research, I developed four sets of hypotheses with respect to the direct and interactive effects of county- and state-level minority population size. Within each of the four set of hypotheses, three sub-hypotheses were proposed regarding the effect of minority population size—one was derived from the traditional minority threat perspective, another was derived from the tolerance hypothesis, and the third anticipated a U-shaped curvilinear pattern which reflects a tolerance effect first and then a threat effect. The first set of hypotheses focused on the direct effect of county-level minority population size, and the second set focused on the direct effect of state-level minority population size. The third set argued that state-level minority population size would amplify the effect of county-level minority population size on sentencing severity. Finally, the fourth set of hypotheses anticipated that the interaction between state- and county-level minority population sizes would be more pronounced for minority felons as opposed to white felons. These hypotheses were tested by analyzing the State Court Processing Statistics data in combination with a range of county- and state-level data.

In support of the first set of hypotheses, I found that the relationship between county-level black population size and the probability of receiving a jail or prison sentence was nonlinear, suggesting support for a curvilinear U-shaped relationship (the tolerance-then-threat effect)—that

is, greater levels of minority presence would be associated with less severe criminal sanctioning; after a threshold level is crossed, greater levels of minority presence would be related to tougher sanctioning. With regard to the second set of hypotheses, I found that state-level black population size was positively associated with sentence length, suggesting support for the threat effect hypothesis. In addition, state-level Hispanic population size was positively associated with the decision to incarcerate, also supporting the threat effect hypothesis. However, state-level Hispanic population size was negatively associated with sentence length, supporting the tolerance effect hypothesis. With respect to the interaction between county- and state-level minority population sizes, I found that state-level black population size amplified the effect of county-level black population size by intensifying the slopes of the tolerance and threat parts of the U-shaped pattern. This interaction also revealed that at higher levels of state-level black population size, the probability of receiving a jail or prison sentence decreased, supporting the tolerance effect.

With respect to the fourth set of hypotheses—a three-way interaction between individual-, county-, and state-level racial and ethnic threat—I found some support only when racial threat was examined for the sentence-length decision. More specifically, the interaction between county- and state-level black population sizes was more pronounced for black offenders—black felons were sanctioned most harshly in counties and states with larger black population sizes. That effect, in turn, supports the threat effect hypothesis.

Based on this study, what do we know about the effect of state-level social context on individual-level sentencing decisions? First, state-level social context, racial and ethnic context in particular, matters in predicting sentencing severity. However, state-level racial context appears to exert differential effects on the incarceration decision vs. the sentencing-length decision. More specifically, the tolerance effect was more pronounced for the decision to incarcerate, but the threat effect was more evident for the sentence-length decision. This finding suggests that black threat may be more relevant when judges consider sentence length. The opposite pattern arose when state-level ethnic context was examined—that is, the threat effect was more pronounced for the decision to incarcerate, but the tolerance effect was more evident for the sentence-length decision. Future research should examine why the pattern is different for racial context vs. ethnic context. At a minimum, this study highlights the salience of separating blacks from Hispanics in examining minority threat effects.

Second, state-level racial context amplified the effect of county-level racial context for both incarceration and sentence-length decisions. Specifically, state-level racial context amplified the tolerance-then-threat effect of county-level racial context, and state-level racial context exacerbated sentencing disparities for black offenders in counties marked by greater black presence. States with higher levels of percent black amplified the effect of percent black at the county level. Not the least, this effect appears to be more pronounced for black vs. white felons. Black felons appear to experience an equivalent "perfect storm" of threat effects—they would receive longer sentences not only because of their race, but also because they reside in a county with larger percentages of blacks and a state with larger percentages of blacks.

These findings have implications for the minority threat perspective. First, within a multilevel framework, especially when we consider more than one level of context, theories may need to provide a greater understanding for the interaction of individual-, county-, and state-level racial threat. Second, minority threat and tolerance arguably should be viewed as complementary, not competing perspectives. At a minimum, it appears that each type of effect may be activated at different levels of minority presence and at different courtroom decision-making stages.

These findings also have implications for sentencing research. This study underscores the importance of using multilevel models. Future sentencing research should continue to focus on contextual measures and their influence on sentencing decisions. More importantly, future research should incorporate multilevel contexts, such as neighborhoods, cities, counties, and states. In addition, this study highlights the importance for testing the interaction effects in examining the minority threat perspective, especially interactions among different levels of threat effects.

From a policy perspective, sentencing decisions are only supposed to be affected by legally relevant factors. The fact that state-level racial and ethnic context was found to directly affect individual-level sentencing decisions, net of controls for county-level racial and ethnic context, should signal concerns about the fairness of sentencing practices among policy-makers at county, state, and federal levels. In addition, the identified effect for state-level racial and ethnic contexts has some implications for state-level sentencing guideline systems because the effect of state-level racial and ethnic context arose even after controlling for sentencing guideline systems. This finding may indicate that sentencing guideline systems have failed to remove disparities stemming from county- and state-level racial and ethnic context.

CHAPTER 8

CONCLUSION

Summary

Sentencing decisions stand at the heart of the criminal justice system and for that reason sentencing disparity is the most-studied topic in criminological studies of the criminal justice system. Overall, prior sentencing studies have almost exclusively focused on individual-level factors that may influence sentencing severity. More recently, an increasing number of sentencing studies have examined contextual measures (e.g., racial and ethnic composition, economic conditions, and political party identification) and their influence on individual-level sentencing decisions (e.g., Britt, 2000; Fearn, 2005; Helms and Jacobs, 2002; Johnson, 2006; Ulmer and Johnson, 2004; Weidner, Frase, and Schultz, 2005). Collectively, this body of research has established that sentencing decisions may vary across counties, and some contextual measures may affect individual-level sentencing decisions, net of controls for offender-level factors.

One avenue of research that has garnered particular attention in sentencing research has been studies that have examined the minority threat perspective. Here, the focus has been on identifying whether levels of minority presence in an area are associated with individual-level sentencing decisions (e.g., Britt, 2000; Fearn, 2005; Helms and Jacobs, 2002; Ulmer and Johnson, 2004). Although an important advance, these studies provide mixed evidence regarding this link, with some finding a positive association and others finding none. In addition, several questions and issues remain unknown. For example, researchers have yet to determine whether different dimensions of minority threat will have differential effects on sentencing severity. Also, because most studies that have examined the contextual measures and their effect on sentencing decisions are cross-sectional, little known is whether changes in ecological measures of threat will be associated with tougher criminal sanctioning. In addition, much less is known regarding whether state-level ecological measures of minority threat will influence individual-level sentencing decisions, because the existing body of contextual analyses of sentencing has primarily focused on county-level social context.

Building off of prior work, and heeding calls for testing the minority threat perspective within a multilevel framework (Stolzenberg, D'Alessio and Eitle, 2004), for contextual analyses of sentencing (Britt, 2000; Fearn, 2005; Ulmer and Johnson, 2004; Weidner et al., 2005), and for multilevel contextual analyses of the minority threat perspective (Blalock, 1984; Liu, 2001), this dissertation developed hypotheses to systematically examine social context and its effect on individual-level sentencing decisions through three different prisms—one prism is level effects of social context (different dimensions of minority threat in particular), one prism is change effects, and the third is state-level effects.

The main perspective examined is the minority threat perspective, which argues that the relative size of racial and ethnic minority members in an area will be associated with the level of perceived threat, which, in turn, increases demand for various aspects of formal social control among majority members (Liska, 1992). Consequently, the demand leads to a higher level of crime control, with "get tough" criminal sentencing being one particular form of crime control. In Chapter 6, I also tested several contextual measures of social threat, including the number of immigrants, poverty, racial and ethnic economic inequality. Collectively, this dissertation contributes to the emerging literature in contextual analyses of criminal sentencing first by unpacking the direct and conditioning effects of different conceptualizations of racial and ethnic threat on sentencing, second by investigating change effects, and third by assessing the direct and moderating effects of state-level racial and ethnic context on sentencing decisions. To this end, this dissertation used the State Court Processing Statistics for 1998, 2000, and 2002, which include 17,440 convicted felons in 60 urban counties across 23 states. The individual-level sentencing data were merged with county-level data (and state-level data for Chapter 7). Below, I briefly discuss the findings that emerged in chapters 5, 6, and 7.

Chapter 5 examined different dimensions of racial and ethnic threat and explored whether they exert differential effects on prison and jail sentences. By and large, the findings lend support for the racial threat perspective. Specifically, black and Hispanic males had greater probabilities of receiving prison sentences than other race/ethnicity and sex groups. Also, higher levels of black population size and black power threat were associated with higher probabilities of receiving prison sentences supports the racial threat perspective. Finally, the ecological effects of racial threat—black population size and black power threat (but not black economic threat)—amplified the effect of an offender's race on prison sentences. By contrast, higher levels Hispanic

population size and Hispanic power threat were associated with a decreased probability of receiving prison sentences. The association between probabilities of receiving jail sentences and Hispanic population size and Hispanic power threat, however, was an inversed U-shape curve. Also unexpected was the fact that at higher levels of ethnic threat, offenders were more likely to receive non-custodial sanctions than any forms of incarceration. One possible explanation is drawn from the benign neglect perspective (Liska and Chamlin, 1984; Stolzenberg et al., 2004), which states that crimes, especially violent crimes, are more likely to occur within the same minority groups in communities with a large percentage of minorities, therefore there is less pressure from the majority group on the criminal justice system for crime control.

Whereas Chapter 5 focused on the static and contemporaneous social conditions, Chapter 6 investigated how and to what extent changes in social context may affect individual-level sentencing decisions. Specifically, I tested hypotheses relevant to the effect of changes in minority threat and social threat and the interaction effects of changes and baseline levels in ecological measures of such threat. I found that changes in social context appeared to have no direct effects on the decision to incarcerate. The only exception was the finding that changes in ethnic inequality were associated with increased probabilities of receiving a prison sentence. In addition, changes appeared to alter the probabilities of receiving a non-custodial, jail, and prison sentence depending on baseline levels. The precise pattern of the interaction varied, however, depending on the threat measure examined. Specifically, the positive association between change in black power threat and probabilities of receiving a prison sentence was more pronounced in jurisdictions characterized by higher baseline levels of black power threat, as measured by the black population size in 1990. By contrast, the positive association between changes in black economic threat and probabilities of receiving a prison sentencing was less pronounced in areas with higher baseline levels of black economic threat. I also found that the positive association between changes in percent foreign born and the probabilities of receiving prison sentences was more pronounced in jurisdictions marked by higher baseline levels of the foreign-born population in 1990. Overall, the findings from Chapter 6 suggest that the failure to consider changes in social ecology and their effects on sentencing severity has been a limitation of prior multilevel sentencing research. The effect of changes in social ecology merits investigation, which may, in turn, yield a more adequate understanding of the effects of social context on courtroom decision-making and other social outcomes in general.

I turn attention to state effects in sentencing in Chapter 7 which examined state-level racial and ethnic threat and their potential interaction with individual- and county-level racial and ethnic threat. It bears emphasizing that in developing hypotheses concerning the effect of county- and state-level racial and ethnic context, I proposed three sub-hypotheses—one was derived from the traditional minority threat perspective, another was derived from the tolerance perspective, and the third incorporated the threat and tolerance perspectives by anticipating a U-shaped curve which reflects a tolerance-then-threat effect. The findings suggest that state-level racial and ethnic context appeared to influence individual-level sentencing decisions, net of controls for individual- and county-level predictors of sentencing. However, state-level racial context appeared to have differential effects on the incarceration decision vs. the sentence-length decision. Specifically, the tolerance effect was manifested in the incarceration decision, but the threat effect was manifested in the sentence-length decision, which indicates that black threat may be more relevant when judges consider sentence length. By contrast, when state-level ethnic context was examined, the threat effect was underlined in the incarceration decision, but the tolerance effect was observed in the sentence-length decision. In addition, it is worth highlighting that state-level racial context exacerbated sentencing disparities for black offenders in counties marked by greater black presence—that is, the three-way interaction between offenders' race, county- and state-level racial context indicates that black felons would receive longer sentences if they reside in a county and in a state with greater minority presence.

Implications

Theory Implications

This dissertation has explored nuances of the minority threat perspective.[43] For example, Chapter 5 assessed different dimensions of minority threat; Chapter 6 investigated the direct and interactive effect of changes in minority threat measures with baseline levels of such threat; Chapter 7 examined different levels of racial and ethnic context and their interaction effects in affecting sentencing decisions. Collectively, these three sets of analyses contributed to a more adequate understanding of how and to what extent social context—racial and ethnic context in particular—may affect individual-level sentencing decisions.

[43] In examining change effects, Chapter 7 also assessed changes in social threat measures, such as number of immigrants, poverty, and economic inequality between racial and ethnic groups.

The findings obtained from these three sets of analyses have implications for the minority threat perspective on several fronts. First, the fact that different findings emerged for ethnic threat, as opposed to racial threat, may suggest that the minority threat perspective may not apply to minority groups other than blacks, "due to the unique history of impetuous race relations between blacks and whites in the United State" (Stults and Baumer, 2007: 539). Therefore, it is not clear whether the minority threat perspective holds for other minority groups other than blacks.

Second, minority threat and tolerance have been treated as competing perspectives in most research. However, as identified in this dissertation, Chapter 7 in particular, the minority threat and tolerance perspectives may be complementary, instead, in explaining the association between racial and ethnic context and individual-level sentencing decisions. In other words, the threat and tolerance effect may both occur, and each type of effect may be activated at different levels of minority presence, or different stages of courtroom decision-making, or for minority groups other than blacks.

Third, although the minority threat perspective implies that changes in social conditions reflecting minority threat may intensify social control, significant effects of changes in minority threat measures did not appear when its direct effects were examined. The expected change effects only appeared when the interaction between changes and baseline levels of minority threat measures was assessed. Therefore, changes in minority threat measures—such as changes in minority presence—appeared to produce significant effects only when baseline levels of minority presence crossed a certain threshold level. The idea of a threshold level (or a tipping point) was also raised when the tolerance effect of minority presence elicited the threat effect in Chapter 7. These findings combined suggest that one important avenue for future research may be to identify the threshold or tipping point at which changes will produce an effect or greater minority presence will produce a threat effect.

Research Implications

The findings from the three sets of analyses presented in chapters 5, 6, and 7 have implications for sentencing research on several fronts. The first is related to the generalizability of these findings. Because data used in this dissertation reflect sentencing practices in 60 urban counties across 23 states, we do not know whether the identified findings would produce differential effects on sentencing decisions in rural counties. Several researchers have argued that

different sentencing practices may exist in urban courts and rural courts (Chambliss and Seidman, 1971; Hagan, 1977; Myers and Talarico, 1986). Therefore, it remains unknown whether social context, racial and ethnic context in particular, will produce significant effects on individual-level sentencing decisions in rural counties. This issue is of particular relevance for studies of ethnic threat because the Hispanic population grew at a faster rate in rural than in urban areas between 1990 and 2000 (Fennelly and Federico, 2008). Because greater Hispanic presence in rural counties may have more pronounced effects in the everyday life of people—especially whites—who reside in rural counties and in turn my generate a greater demand for crime control, the association between ethnic threat and sentencing severity may be more notable in rural counties than urban counties.

Second, as established by the findings in Chapter 5 and Chapter 6, it may be important to separate prison sentences from jail sentences in modeling the decision to incarcerate. The effect of both individual-level and contextual-level racial threat (levels and changes) appeared to be manifested in prison sentences, but less so in jail sentences. As a result, combining prison and jail sentences may mask the significant effect of contextual measures of racial threat on sentencing severity.[44]

Third, this dissertation underscores the importance of using multilevel models and investigating multiple levels of race and ethnicity. Future research should continue to examine the effect of individual-, county-, and state-level race and ethnicity on sentencing. In addition, this study highlights the importance of testing the interaction effects in assessing the minority threat perspective, especially interactions among different levels of threat effects. For example, although the direct effect of offenders' race did not produce any significant effect on sentence length, the significant three-way interaction between offenders' race, county- and state-level minority population sizes suggests that black offenders were indeed sanctioned for longer sentences, but only in a county and in a state with greater minority presence.

Fourth, ethnicity appears to have different implications for sentencing severity, as opposed to race. In all three sets of analyses, racial threat and ethnic threat were examined separately, and different patterns of findings emerged for racial threat vs. ethnic threat. More specifically, ecological measures of racial threat largely produced tougher sanctioning, thereby

[44] Chapter 7 assessed state effects on combined prison and jail sentences because of the modest number of counties and states and technical difficulty involved in three-level hierarchical multinomial logistic regression models in HLM 6.0.

supporting the racial threat perspective, whereas ecological measures of ethnic threat generated less support for the ethnic threat perspective. For that reason, the research practice of combining blacks and Hispanics as minority threat (e.g., percent nonwhite) may mask the effect of racial threat and, in turn, produce mixed or null findings related to the minority threat perspective.

Policy Implications

Because sentencing decisions are only supposed to be affected by legally relevant factors, the characteristics of the county and the state where offenders reside in should not produce any discernible effect on courtroom decision-making. However, this dissertation suggests that social context has significant effects on individual-level sentencing decisions. For example, Chapter 7 documented that states not only appeared to have direct effects on sentencing severity, but also appeared to operate differently with county-level context and individual-level factors. This finding should signal concerns about the fairness of sentencing practices among policy-makers at county, state, and federal levels because few states have agencies that monitor these effects stemming from social context. Therefore, policy-makers may need to develop consciousness of contextual effects on sentencing decisions and set up agencies to monitor such effects.

In addition, it bears emphasizing that the identified effects of county-level social ecology (levels and changes) and state-level context emerged, net of a control for state-level sentencing guideline systems. This observation has particular implications for the effectiveness of state-level sentencing guidelines. Although counties that are located in a state with sentencing guidelines are less likely to send convicted felons to state prisons, overall, state-level sentencing guideline systems may have failed to remove sentencing disparities stemming from social context. Therefore, the findings obtained from this dissertation may contribute to the current policy discussions and debates about the effectiveness of sentencing guidelines in eliminating sentencing disparities.

Future Directions

Building off of the research presented in this dissertation, I intend to pursue several future lines of research. First, the next logical step is to identify the intervening mechanism between ecological measures of minority threat and sentencing severity. Using survey measures of economic, power, and criminal threat, I may be able to identify whether this observed association

is the result of the perceived threat by majority whites, thus providing a more complete test of the minority threat perspective in sentencing research.

Second, this dissertation has largely focused on the minority threat perspective, because this avenue of research has garnered considerable attention in multilevel sentencing research. I intend to explore other avenues and perspectives, such as political conservatism and religious ideology, and their effects on individual-level sentencing decisions. For example, sociological research has identified that religious ideology is related to support for corporal punishment for children, the death penalty, and punitive attitudes, but there has been almost no research that has examined the effect of religious ideology on sentencing severity (see Fearn, 2005). Studying political and cultural dimensions of social context may further enhance our knowledge of what aspects of social context may have a more pronounced effect on criminal sanctioning.

Third, the observation that convicted black female felons had the lowest predicted probabilities of receiving a prison sentence—as identified in Chapter 5—is somewhat unexpected. One possibility to account for the most lenient treatment for black females is that single-headed households are disproportionately more common among black females as compared with Hispanic and white females, which leads courtroom actors less likely to send black females to state prisons. I intend to test this hypothesis in future research.

Overall, this dissertation contributes to the emerging literature in multilevel sentencing research by examining the effects of differential dimensions of minority threat, changes in ecological measures of threat, and state-level social context on individual-level sentencing decisions. The findings highlight the significance of social context and its nuanced effect on sentencing severity, thereby echoing Eisenstein and Jacob's (1977) observation:

> *Courtroom workgroups decide defendants' fates. But to understand their functioning we must also examine the environment in which they operate. Workgroups are not autonomous organizations totally isolated from the outside world and impervious to its pressures. On the contrary, they are highly dependent on their environment; they depend on decisions made by others for their very existence.*
>
> — Eisenstein and Jacob (1977: 40)

Appendix A

Bivariate Correlations

Table A.1. Bivariate Correlations for Contextual Measures (Chapter 5)

	X1	X2	X3	X4	X5	X6	X7	X8	X9	X10	X11	X12
X1 pct. black	--	--	--	--	--	--	--	--	--	--	--	--
X2 white-to-black unemp. ratio	-.38**	--	--	--	--	--	--	--	--	--	--	--
X3 black-to-white voting ratio	.89**	-.20	--	--	--	--	--	--	--	--	--	--
X4 pct. Hispanic	-.28*	.26*	-.01	--	--	--	--	--	--	--	--	--
X5 white-to-Hispanic unemp. ratio	-.16	.55**	-.14	.06	--	--	--	--	--	--	--	--
X6 Hispanic-to-white voting ratio	-.07	.16	.20	.85**	.01	--	--	--	--	--	--	--
X7 sentencing guideline states	.14	.02	.06	-.36**	.13	-.14	--	--	--	--	--	--
X8 southern counties	.28*	-.05	.22	.08	.13	.18	.25	--	--	--	--	--
X9 resource deprivation	.53**	-.02	.65**	.36**	-.03	.48**	-.08	.04	--	--	--	--
X10 crime rates	.49**	-.31*	.39**	-.06	.14	.04	.23	.39**	.43**	--	--	--
X11 county jail capacity	.13	.12	.09	-.21	.17	-.13	.14	.32*	-.06	.05	--	--
X12 state prison capacity	.00	-.06	-.02	-.28*	-.01	-.17	.14	-.42**	-.02	-.10	-.18	--
X13 density (ln)	.39**	-.29*	.46**	-.10	-.44**	.05	-.02	-.14	.21	-.12	-.05	.15

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

Table A.2. Bivariate Correlations for Contextual Measures (Chapter 6)

	X1	X2	X3	X4	X5	X6	X7	X8	X9	X10
X1 change in pct. black (1990-2000)	--	--	--	--	--	--	--	--	--	--
X2 pct. black (1990)	.21	--	--	--	--	--	--	--	--	--
X3 change in white-to-black unemp. ratio (1990-2000)	.27*	.11	--	--	--	--	--	--	--	--
X4 white-to-black unemp. ratio (1990)	-.19	-.38**	-.64**	--	--	--	--	--	--	--
X5 change in pct. Hispanic (1990-2000)	-.23	-.26*	-.16	.28*	--	--	--	--	--	--
X6 pct. Hispanic (1990)	-.44**	-.19	-.56**	.57**	.56**	--	--	--	--	--
X7 change in pct. foreign born (1990-2000)	-.37**	-.13	-.23	.29*	.56**	.33*	--	--	--	--
X8 pct. foreign born (1990)	-.51**	-.16	-.57**	.50**	.27*	.71**	.49**	--	--	--
X9 change in pct. below poverty (1990-2000)	.10	-.16	-.11	.40**	.13	.07	.21	.35**	--	--
X10 pct. below poverty (1990)	-.10	.62**	-.22	-.02	.05	.46**	-.10	.13	-.32*	--
X11 change in racial inequality (1990-2000)	-.56**	-.08	-.38**	.27*	.35**	.63**	.25	.52**	-.02	.24
X12 racial inequality (1990)	.29*	.17	.46**	-.79**	-.28*	-.67**	-.33*	-.58**	-.29*	-.25
X13 change in ethnic inequality (1990-2000)	-.11	-.21	-.23	.21	.13	.31*	-.01	.08	-.24	.01
X14 ethnic inequality (1990)	.00	.07	.16	-.32*	-.06	-.27*	-.08	-.20	.10	-.16
X15 sentencing guideline states	.47**	.06	.16	-.09	-.26*	-.35**	-.19	-.27*	-.06	-.15
X16 southern counties	.23	.25	-.00	-.03	.23	.04	.17	-.11	-.29*	.16
X17 resource deprivation (2000)	.07	.55**	-.13	.08	.06	.40**	-.18	.09	.01	.89**
X18 crime rates (2000)	.08	.50**	.19	-.37**	.07	-.09	-.10	-.27*	-.50**	.49**
X19 county jail capacity (2000)	.36**	.07	.20	-.05	-.21	-.19	-.20	-.17	.00	-.10
X20 state prison capacity (2000)	.04	-.01	.19	-.17	-.29*	-.25	-.21	-.19	.07	-.07
X21 density (ln) (2000)	-.09	.43**	-.28*	-.03	-.38**	-.03	.10	.33*	.17	.28*

Table A.2—continued.

	X11	X12	X13	X14	X15	X16	X17	X18	X19	X20
X11 change in racial inequality (1990-2000)	--	--	--	--	--	--	--	--	--	--
X12 racial inequality (1990)	-.45**	--	--	--	--	--	--	--	--	--
X13 change in ethnic inequality (1990-2000)	.53**	-.22	--	--	--	--	--	--	--	--
X14 ethnic inequality (1990)	.03	.48**	-.31*	--	--	--	--	--	--	--
X15 sentencing guideline states	-.29*	.18	-.09	-.21	--	--	--	--	--	--
X16 southern counties	-.03	.07	.17	-.16	.25	--	--	--	--	--
X17 resource deprivation (2000)	.07	-.28*	-.16	-.17	-.08	.04	--	--	--	--
X18 crime rates (1998-2002)	-.14	.19	-.18	-.15	.23	.39**	.43**	--	--	--
X19 county jail capacity (2000)	-.10	-.11	.07	-.19	.14	.32*	-.06	.05	--	--
X20 state prison capacity (2000)	-.11	.15	-.04	.10	.14	-.42**	-.02	-.10	-.18	--
X21 density (ln) (2000)	.17	-.05	-.05	.07	-.02	-.14	.21	-.12	-.05	.15

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

Appendix B

Hierarchical Regression Models of Individual-Level Variables on Sentencing Decisions

Table B.1. Hierarchical Multinomial Logistic Regression Models of Individual-Level Variables on the Decision to Incarcerate (Chapter 6)

	Model 1: Main effects		Model 2: Race/ethnicity and sex interaction		Model 3: Race and sex interaction	
	For jail	For prison	For jail	For prison	For jail	For prison
Intercept	.40*	.51**	.40*	.51**	.40*	.51**
	(.18)	(.14)	(.18)	(.14)	(.18)	(.14)
Offender Level						
Black	.21**	.15*	-.05	-.19	-.02	-.16
	(.05)	(.07)	(.12)	(.11)	(.10)	(.11)
Hispanic	.28**	.21**	.17	.13	.30**	.23**
	(.08)	(.08)	(.17)	(.12)	(.08)	(.08)
Male	.21**	.54**	.05	.34**	.09	.37**
	(.06)	(.06)	(.09)	(.10)	(.08)	(.09)
Black x male			.35*	.43**	.30*	.40**
			(.15)	(.14)	(.13)	(.13)
Hispanic x male			.16	.12		
			(.18)	(.13)		
Age	.02*	.01	.02*	.01	.02*	.01
	(.01)	(.02)	(.01)	(.02)	(.01)	(.02)
Age²	-.00*	-.00	-.00*	-.00	-.00*	-.00
	(.00)	(.00)	(.00)	(.00)	(.00)	(.00)
Criminal justice status	.14	.26**	.14	.26**	.14	.26**
	(.07)	(.08)	(.07)	(.08)	(.07)	(.08)
Criminal history scale	.10*	.61**	.10*	.61**	.10*	.61**
	(.05)	(.03)	(.05)	(.03)	(.05)	(.03)
Multiple arrest charge	.14*	.44**	.14*	.44**	.14*	.44**
	(.06)	(.07)	(.06)	(.07)	(.06)	(.07)
Violent offense	-.09	.54**	-.08	.55**	-.08	.55**
	(.15)	(.13)	(.15)	(.13)	(.15)	(.13)
Property offense	-.33**	-.35**	-.32**	-.34**	-.32**	-.34**
	(.11)	(.12)	(.11)	(.12)	(.11)	(.12)
Drug offense	-.48**	-.52**	-.49**	-.53**	-.49**	-.53**
	(.15)	(.19)	(.15)	(.19)	(.15)	(.19)

Table B.1—continued.

	Model 1: Main effects		Model 2: Race/ethnicity and sex interaction		Model 3: Race and sex interaction	
	For jail	For prison	For jail	For prison	For jail	For prison
Detention	.71**	1.57**	.71**	1.57**	.71**	1.57**
	(.10)	(.08)	(.10)	(.08)	(.10)	(.08)
Plea bargaining	.31	-.57*	.32	-.57*	.32	-.57*
	(.25)	(.22)	(.25)	(.22)	(.25)	(.22)
Year 1998	.55*	.50	.55*	.51	.55*	.51
	(.23)	(.28)	(.23)	(.28)	(.23)	(.28)
Year 2000	.19	.22	.19	.22	.19	.22
	(.15)	(.15)	(.15)	(.15)	(.15)	(.15)
Random effect						
Intercept, τ_{00}	1.89**	1.12**	1.90**	1.13**	1.89**	1.13**
χ^2	2,229	1,472	2,235	1,482	2,233	1,481

*p<.05 **p<.01 (N=17,440 within county; N=60 between county)

Note: The outcome measure being modeled, the decision to incarcerate, has three outcomes—non-custodial sanctions, jail, and prison sentences. In the model presented here, non-custodial sanctions is the omitted category.

Table B.2. Hierarchical Regression Models of Individual-Level Variables on Sentencing Decisions (Chapter 7)

	Incarceration		Ln sentence length	
	b	s.e.	b	s.e.
Intercept	1.12**	.16	2.94**	.16
Offender Level				
Black	.19**	.04	-.02	.04
Hispanic	.24*	.11	-.04	.03
Male	.33**	.05	.20**	.02
Age	.02	.01	-.01	.01
Age ^{2}	-.00**	.00	.00	.00
Criminal justice status	.20*	.08	.04	.06
Criminal history scale	.33**	.06	.17**	.06
Multiple arrest charge	.28**	.06	.21**	.03
Violent offense	.20	.15	.78**	.15
Property offense	-.33**	.09	.17	.13
Drug offense	-.50	.26	.24*	.10
Detention	1.09**	.10	.54**	.11
Plea bargaining	-.20	.18	-.84**	.25
Year 1998	.54	.36	-.08	.07
Year 2000	.18	.24	-.00	.05
Selection bias correction factor			-.99**	.25
Random effect	Variance	χ^2	Variance	χ^2
Level-1 intercept	--	--	1.63	--
Level-2 intercept	.62**	774.07	.17**	804.89
Level-3 intercept	.42**	71.32	.43**	163.36
N	17,440		13,179	

*p<.05 **p<.01 (N=17,440 defendants for incarceration decision models or 13,179 for sentence-length decision models; N=60 counties; N=23 states)

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BIOGRAPHICAL SKETCH

Xia Wang received her Bachelor of Arts degree in law from Peking University in China in 2001. That same year, she began her graduate education at Florida State University. She received a Master's degree in Criminology in 2003, and a Master's degree in Applied Statistics in 2005. She is joining the Arizona State University faculty as an Assistant Professor in fall 2008.