ABSTRACT

Title: ARE IMMIGRANTS CRIME PRONE? A MULTIFACETED INVESTIGATION OF THE RELATIONSHIP BETWEEN IMMIGRATION AND CRIME IN TWO ERAS

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Are immigrants crime prone? In America, this question has been posed since the turn of the 20th century and more than 100 years of research has shown that immigration is not linked to increasing crime rates. Nevertheless, as was true more than a century ago, the myth of the criminal immigrant continues to permeate public debate. In part this continued focus on immigrants as crime prone is the result of significant methodological and theoretical gaps in the extant literature. Five key limitations are identified and addressed in this research including: (1) a general reliance on aggregate level analyses, (2) the treatment of immigrants as a homogeneous entity, (3) a general dependence on official data, (4) the utilization of cross-sectional analyses, and (5) nominal theoretical attention.

Two broad questions motivate this research. First, how do the patterns of offending over the life course differ across immigrant and native-born groups? Second, what factors explain variation in offending over time for immigrants and does the influence of these predictors vary across immigrant and native-born individuals? These questions are examined using two separate datasets capturing information on immigration and crime during two distinct waves of immigration in the United States. Specifically, I

use the *Unraveling Juvenile Delinquency* data and subsequent follow-ups to capture early 20th century immigration and crime, while contemporary data come from the National Longitudinal Survey of Youth, 1997.

Three particularly salient conclusions are drawn from this research. First, patterns of offending (i.e., prevalence, frequency, persistence and desistance) are remarkably similar for native-born and immigrant individuals. Second, although differences are observed when examining predictors of offending for native-born and immigrant individuals, they tend to be differences in degree rather than kind. That is, immigrants and native-born individuals are influenced similarly by family, peer, and school factors. Finally, these findings are robust and held when taking into account socio-historical context, immigrant generation, immigration nationality group, and crime type. In sum, based on the evidence from this research, the simple answer to the question of whether immigrants are crime prone is no.

ARE IMMIGRANTS CRIME PRONE?
A MULTIFACETED INVESTIGATION OF THE RELATIONSHIP BETWEEN IMMIGRATION AND CRIME IN TWO ERAS

by

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Dissertation submitted to the Faculty of the Graduate School of the
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DEDICATION

For his unwavering support, faith, and encouragement,

I dedicate this dissertation to the memory of my grandfather,

Donald (Boomphie) Withee.

Thank you for *always* believing in me.

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Although the capstone of an individual's graduate career, the dissertation is often symbolic of the confluence of support, encouragement, and guidance of a great many people. This is certainly true in my case. Without my family, friends, various members of the faculty at the University of Maryland, and a host of support staff this dissertation would not have come to fruition.

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CHAPTER 1 INTRODUCTION

> *Once I thought to write a history of the immigrants in America. Then I discovered that the immigrants were American History.* (Handlin 1951:3)

The notion that America is a "nation of immigrants" is a complex adage. On the one hand, the fact that most American's have ancestors who immigrated to this nation (Passel and Edmonston 1994) makes the adage true by definition. On the other hand, beneath the melting pot ideology burns a fire fueled by, at minimum, trepidation, and at worst, xenophobic beliefs, nativism,[1] and stereotypical views regarding the inferiority and dangerousness of foreign-born individuals (Brimelow 1995; Higham 1955; Martinez 2007; Sánchez 1999; Tonry 1997). Perhaps nowhere are these beliefs and views more pronounced than in discussions of the immigration-crime nexus.

Public concern regarding the consequences of the increasing numbers of immigrants on crime is of course not a new phenomenon. In fact, interest in the relationship between immigration and crime (i.e., immigration-crime nexus) has permeated public debate for more than a century (see Abbott 1926; Chavez 2001; Simon 1985). Beginning in the 1880s and lasting through the 1920s the United States experienced simultaneously a massive influx of immigrants and unprecedented high levels of crime with many suggesting immigration as a key ingredient in the etiology of the crime problem (Hall 1908; Immigration Commission 1910; Laughlin 1922; Orebaugh 1929). Contrary to public opinion and concern regarding the excessive criminality of

[1] Nativism is often confused with racism in the extant literature (Higham 1999). My reference to nativism follows Higham's (1955:4) definition: an intense opposition to an internal minority on the ground of its foreign (i.e., "un-American") connections. This definition is consistent with the definition from Merriam-Webster's Dictionary: a policy of favoring native inhabitants as opposed to immigrants.

immigrant groups, much of the research at the turn of the 20th century indicated that immigrants were less criminal than native-born whites (Immigration Commission 1910; Industrial Commission 1901; Wickersham Report 1931). Importantly, although crime was not found to be problematic among first generation immigrants, there was evidence that the children of immigrants displayed levels of criminal involvement that were significantly greater than their parents, perhaps even surpassing the rates of the native-born (Industrial Commission 1901; Wickersham Report 1931).

Although research on the immigration-crime nexus was prominent at the turn of the 20th century, interest on the topic waned during the mid-part of the century as immigration levels greatly decreased and explanations of crime shifted to an individual level focus. Today amidst a new wave of immigration, public discourse and debate about the relationship between immigration and crime has reemerged in the general populace, the media, and politics (see Chavez 2001). Immigrants from Latin America, the Caribbean, and Asia have entered the United States in increasing numbers over the last three decades (Gerstle and Mollenkopf 2001). As the immigrant population grows, so do public fears regarding escalating crime and violence brought on by the so-called "dangerous classes" (Lapinski et al. 1997). Similarly, there has been a resurgence of empirical research on the immigration-crime nexus in recent years. The impetus for this resurgence is remarkably similar to that of the early 20th century. That is, since the mid-1960s, the United States has experienced an exponential increase in crime (Blumstein and Beck 1999; Eckberg 1995). Shortly after the passage of the Immigration and Naturalization Act of 1965[2] which abolished the immigrant quota restrictions based on

[2] Also known as the Hart-Cellar Act. For consistency purposes, I refer to this Act as the Immigration and Naturalization Act throughout this document.

national origin established in 1924, rates of immigration also dramatically increased (Carter and Sutch 1998; Gerstle and Mollenkopf 2001; National Research Council 1996). The co-occurrence of these two trends has generated a resurgence of interest on the link between increasing immigration and crime (Gurr 1993; Martinez and Lee 2000; Sampson 2006)[3] and also produced a nationalistic reaction aimed once again at restricting the flow of immigrants into the United States (Portes and Rumbaut 2006).

Furthermore, today's immigrants face additional challenges concerning issues of their legal or documented entry. Allegations of a massive influx of dangerous *illegal* immigrants surfaced in contemporary American society effectively augmenting the immigration-crime causal story (see Dunn 1996; Inda 2006; Nevins 2002).[4] That is, in addition to bringing their high criminal propensities with them when they migrate, the mere act of crossing the border is often a crime itself. As a result, individuals immigrating in the current context face an additional challenge as their status of immigrant, regardless of their legality, is deemed "intrinsically delinquent" (Sayad 2004:282-283).[5] Although the assumptions and allegations heralded by the public suggesting a causal relationship between immigration and crime are profuse, many argue

[3] Despite the fact that crime rates have dropped to historic lows since the early 1990s, the general public continues to perceive crime as a major problem with the majority of Americans believing that crime rates have been increasing during this same time (Roberts and Stalans 2000).

[4] Notably, although the allegations surrounding immigrant related crime often herald the consequences of illegal immigration, the linkage of illegal and Mexican ancestry is so strong that many Mexican Americans and Latino citizens are presumed to be illegal (Perea 1996:2). Moreover, the overwhelming perception among Americans since the mid-1980s is that most people enter this country illegally (Lapinski et al. 1997). Commenting on the link between immigration and crime, Horowitz stated "In recent years it has become difficult to avoid perceiving immigrants, *legal or not*, as overwhelming this country with serious crime" (2001:7, emphasis added).

[5] It is worth noting that the issue of illegal immigration to the United States is not unique to contemporary immigration. The problems associated with illegal immigration formed an important discussion in the Industrial Commission's report in 1901 (see also Wilson 1914). The alleged "ease" of crossing the border illegally today has resulted in the greater attention afforded to this issue in the current context.

that few of these statements are supported by empirical fact (see e.g., Mears 2001; Rumbaut et al. 2006).

Interestingly, recent research on the immigration-crime nexus has largely arrived at the same conclusions that early 20th century scholarship did. Specifically, most of the evidence from contemporary research indicates that immigrants are less criminal than their native-born counterparts. In the aggregate, immigration has not resulted in an increase in crime rates (Alaniz, Cartmill and Parker 1998; Butcher and Piehl 1998; Lee and Martinez 2002; Lee, Martinez and Rosenfeld 2001; Martinez 2000; Martinez, Stowell and Cancino 2008; Nielsen, Lee and Martinez 2005; Reid et al. 2005). In addition, at the individual level, immigrants have not been found to be more criminal than their native-born counterparts (Bui 2009; Bui and Thongniramol 2005; Butcher and Piehl 1998; Harris 1999; Hickman and Suttorp 2008; Rumbaut et al. 2006; Sampson, Morenoff and Raudenbush 2005).

STATEMENT OF THE PROBLEM

Despite the consistency in findings in the extant literature, the call for caution in the interpretation of the relationship between immigration and crime has echoed throughout the 20th century and can still be heard today (cf. Horowitz 2001; Taft 1933). In a recent report from the Center for Immigration Studies focusing on immigration and serious crime, Horowitz (2001) criticizes past evidence and argues that immigrants pose a far greater criminal threat than many researchers are willing to admit. His argument is largely based on the contention that much of the crime committed by immigrants is underreported or not reported at all. Drawing on evidence from the National Crime

Victimization Survey, observations by the police, and case studies of immigrants, Horowitz (2001) asserts that the underreporting of crime among immigrants is due to a variety of factors including: (1) a reluctance among immigrants to call the police for help due to a fear of deportation, (2) problems with official reporting measures such that the Uniform Crime Report does not break down data by national origin, and (3) drawing on the work of Sampson and colleagues (see Sampson, Raudenbush and Earls 1997) Horowitz argues that immigrants tend to concentrate in low-income neighborhoods that often lack informal social controls that help ward off problems including crime. Notably, research also finds evidence of a lack of formal social control in these disadvantaged neighborhoods as resident's reports of police non-response or under-policing are widespread (see Anderson 1999; Kubrin and Weitzer 2003).

Moreover, given the extensive history of interest on the immigration-crime nexus, it is surprising how limited in depth our understanding of this relationship is. The similarity of findings emerging from the extant literature masks important gaps in the research on immigration and crime. That is, although a century's worth of research in this area yields consistent evidence that immigration does not lead to increases in crime, this research suffers from a number of important limitations which hamper the ability to draw robust conclusions. I review five significant limitations here including: (1) a general reliance on aggregate level analyses, (2) the treatment of immigrants as a homogeneous entity, (3) a general reliance on official data, (4) the utilization of cross-sectional analyses, and (5) nominal theoretical attention.

First, most analyses have been conducted at the macro level and assess the influence of immigration rates on crime rates. Although informative, aggregate level

relationships do not indicate an individual level relationship. As Hagan and Palloni (1998) note, in an absolute sense, immigration likely does increase crime because immigration inherently increases the size of the total population.[6] A more valuable question therefore is not whether aggregate level trends in immigration are associated with crime rates, but rather whether immigrants are differentially involved in more crime than their native-born counterparts (e.g., prevalence and frequency of involvement in delinquency and crime, seriousness of criminal involvement). Few studies have captured the necessary information at the individual level needed to assess the latter question. As a result, we know very little about the differences and similarities in the general offending patterns of immigrants compared to native-born individuals.

Second, the majority of research has analyzed immigration as a whole and therefore treats immigrants as a homogeneous group (National Research Council 1996). The significance of this classification strategy becomes evident upon recognition that the motivations for immigration and the experiences encountered during the immigration process differ dramatically across nationality groups (Rumbaut et al. 2006; Tonry 1997; Waters 1999). This heterogeneity poses an important challenge to previous research as the potential for aggregation bias is likely which may result in inaccurate interpretations of the findings. Specifically, disaggregating by nationality group allows for the examination of whether the records of "bad" immigrant groups are being offset by the records of "good" immigrant groups (see Taft 1936). Neglecting to take into account this heterogeneity could result in the erroneous interpretation that all immigrants are less criminal than native-born individuals. The handful of studies that have examined

[6] After adjusting for age and sex, aggregate level studies comparing rates of immigration and rates of crime do not find a relationship between immigration and crime (see, i.e., Hagain and Palloni 1999).

criminal involvement by nationality group find evidence of considerable variation within the global "immigrant" category. That is, certain nationality groups evidence greater rates of criminal involvement compared to other nationality groups as well as in comparison to their native-born counterparts (Industrial Commission 1901; Rumbaut et al. 2006; Schneider 1980; Stowell and Martinez 2007; Taft 1936; Waters 1999). The call for greater attention to the heterogeneity within the immigrant population has recently gained increased attention (see e.g., Hagan and Palloni 1999; Rumbaut et al. 2006; Tonry 1997; Waters 1999).

The third limitation is not unique to immigration related crime research; however, it poses a particularly important challenge to the research in this area. Specifically, most research investigating the immigration-crime nexus has relied solely on official data. The potential biases that exist in official data have long been recognized in criminology (Black 1970; Hindelang, Hirschi and Weis 1979; Gove, Hughes and Geerken 1985; Sutherland 1924, 1934). The biases associated with official data present a unique challenge to research on the immigration-crime nexus although it is unclear what direction this bias would take. That is, not only are official data subject to important reporting and classification biases, but these limitations and biases are compounded when examining immigration-related crime as research has shown that immigrants suffer differential treatment in the process of the administration of the law (Hagan and Palloni 1998; Sellin 1938; Sutherland 1924, 1934). As such, the crime committed by immigrants may be exacerbated in official reports. Conversely, some have questioned whether official data capture the majority of immigrant crime due to the underreporting of crime among immigrants (see Horowitz 2001; Taft 1933). Based on this view, the crime

committed by immigrants captured in official data is a conservative estimate of their actual rate of criminal involvement. Few studies investigating the immigration-crime nexus have examined alternative measures of crime such as self-reported involvement in crime. Although subject to their own list of limitations – especially regarding the reporting of serious offending (see Hindelang et al. 1979; Mosher, Miethe and Phillips 2002) – a comparison of criminal involvement across alternative measures of crime would allow for an assessment of the generalizability of the findings from research utilizing official reports.

Fourth, much of what we know regarding immigrant criminal behavior is limited to cross-sectional assessments. Cross-sectional studies are snapshots cemented in time and only offer a static picture of human development. For nearly 20 years criminology has shifted its focus from static explanations of criminal behavior to dynamic explanations that take into account continuity and change in offending patterns over time (see e.g., Loeber and Le Blanc 1990; Moffitt 1993; Sampson and Laub 1993). This shift in focus has lagged behind in studies on immigration and crime. Therefore, a central question regarding the immigration-crime nexus is whether immigrants display developmental patterns of offending over the life course (e.g., persistence in and desistance from crime) similar to those of the general population (Mears 2001). Moreover, the possibility of variability in within-individual offending patterns has yet to be explored. Accordingly, longitudinal analyses of the immigration-crime nexus are needed in order to examine patterns of developmental stability and change over time.

Finally, there has been limited investigation into theoretical explanations of the immigration-crime nexus. Much of the contemporary work on immigration and crime

looks to the past for theoretical guidance. The result of this strategy has been somewhat disappointing as the findings from contemporary research suggest that the immigration-crime relationship is much more complicated than traditional theories can account for. While there appears to be evidence of variation in delinquency between immigrants and their native-born counterparts, and also across immigrant generations, an understanding of the factors (e.g., individual, family, peer, school, neighborhood) that contribute to this variation is lacking (Mears 2001). Although recent studies have begun to delve into this question, the evidence to date is minimal and often limited to one ethnic group (see Bui 2009) or to non U.S. immigration (see Dinovitzer, Hagan and Levi 2009; Yeager 1997). The lack of theoretical inquiry has been called "unfortunate" (Mears 2001:14) and the call for greater theoretical attention has been increasingly emphasized as of late (see e.g., Hagan, Levi and Dinovitzer 2008; Mears 2001).

CURRENT RESEARCH AIMS

More than 80 years ago, Sutherland (1927) posed a simple yet significant question: "Is there undue crime among immigrants?" After a careful dissection of the evidence, Sutherland (1927:579) concluded that "immigrants do not commit an undue proportion of crimes or of serious crime." Yet, as the discussion above demonstrates, the relationship between immigration and crime remains a controversial issue. Although the general theme from empirical studies seemingly dispels the myth of immigrant criminality, the body of work examining immigration and crime is plagued by a number of important methodological and theoretical limitations.

As it stands today, researchers have only begun to disentangle the complexities inherent to the immigration-crime nexus. With this dissertation I aim to add to the growing body of literature examining the relationship between immigration and crime. My overarching goal is an examination of the developmental patterns of offending among immigrants. Specifically, I ask:

RQ 1: How do the patterns of offending over the life course differ across immigrant and native-born groups, across immigrant generations, and across specific immigrant nationality groups?

Moreover, in response to the shortage of theoretical exploration in the literature, I utilize the age-graded theory of informal social control as my theoretical framework for explaining involvement in crime among immigrants. Specifically, I ask:

RQ 2: What factors explain variation in offending over time for immigrants and native-born individuals?

2a. Do social bonds in childhood/early adolescence contribute to the variation in offending patterns over time for immigrants?

2b. Do social bonds mediate the influence of structural variables on offending for immigrants?

2c. Does the influence of social bonds in childhood/adolescence on offending over time differ across native-born and immigrant youth, across immigrant generations, and across specific immigrant nationality groups?

OUTLINE OF THE DISSERTATION

Discussions of immigration tend to focus on the periods of marked flows of immigrants to the United States. During the time period covered in this project there were two distinct waves of immigration. In order to clearly distinguish the bodies of literature on immigration and crime during these two waves I discuss the research in two separate chapters. In Chapter 2, I summarize the findings from research on early 20th century immigration and discuss the theoretical explanations of the immigration-crime nexus offered at the time. In Chapter 3, I review the research on the immigration-crime nexus in a contemporary context. I begin by summarizing the empirical aggregate and individual level research. Attention is also given to two important complexities inherent in the study of the immigration-crime nexus including generational and nationality issues. Unlike the theoretical attention garnered in the early 20th century, contemporary explanations of the immigration-crime nexus have been minimal and as a result much of the recent research continues to drawn upon traditional theories. In this dissertation I employ the age-graded theory of informal social control as a framework for investigating the immigration-crime nexus.[7]

Details regarding the research questions, data, measures, and analytic strategies are presented in Chapter 4. For this study I draw upon two separate datasets capturing information on immigrants, native-born individuals, and criminal involvement gathered during two important periods of immigration to the United States. The first dataset I use is the *Unraveling Juvenile Delinquency* data with its subsequent follow-ups which were collected by Sheldon and Eleanor Glueck in their classic study of 500 delinquent and 500

[7] Justification for the use of this theory is presented in Chapter 3.

non-delinquent boys in Boston born between 1924 and 1932 (for details see *Unraveling Juvenile Delinquency*, Glueck and Glueck 1950; *Delinquents and Non-Delinquents in Perspective*, Glueck and Glueck 1968). These data were reconstructed and supplemented by Sampson and Laub (see *Crime in the Making: Pathways and Turning Points through Life,* 1993). This study sought to document the causes of delinquency and contains a wealth of information regarding delinquency and crime, family, school, peer and individual factors. The Gluecks' research team conducted three interviews with the boys capturing information spanning from childhood to young adulthood. Average ages at each data collection period were 14, 25, and 32 for waves 1, 2, and 3, respectively. Data from all three waves along with the supplemented criminal histories (see Sampson and Laub 1993) will be analyzed. Immigration status was determined for 484 delinquent boys of which 204 were native-born and 280 were second generation immigrants. Using these data allow for the examination of criminal involvement among the children of immigrants who migrated to the United States during the turn of the 20th century.

The second dataset comes from the National Longitudinal Survey of Youth 1997 (NLSY97). The NLSY97 is a survey conducted on a nationally representative sample of individuals living in the United States in 1997 who were born during the years 1980-1984 and were 12 to 16 years of age during the initial wave in 1997. These youth were followed and interviewed annually. This dataset includes an array of information on family dynamics, structural factors, individual characteristics, and delinquent/criminal involvement. Of the 8,984 youth surveyed in the first wave, immigrant status could be calculated for 7,918 youth of which there were 6,418 native-born youth, 532 first generation immigrants, and 968 second generation immigrants. Data from the 1997 to

2005 waves will be analyzed. This dataset captures information pertaining to the criminal involvement of immigrants in a contemporary context.

The results of this study are presented in Chapters 5 through 7. The final chapter concludes with a summary and discussion of the research findings, limitations of the study, implications, and future research directions.

CHAPTER 2 IMMIGRATION AND CRIME AT THE TURN OF THE 20TH CENTURY

> *Pauperism and crime are the inevitable results of foreign immigration.* (Busey 1856:126)
>
> *The immigration to the United States which should be cut down [are]… those of whatever race who are defective or who, even if they appear normal themselves, are the seed of multiplying numbers of defective children, to become through disease and crime a heavy public charge and a widely vitiating strain in the nation.* (Wilson 1914:387)

As the statements above make clear, the concerns over the social ills associated with foreign immigration are long-standing. A professed inevitability of crime and lawlessness caused by immigration echoes throughout the history of the United States. A fundamental question, however, is whether the empirical evidence on the immigration-crime nexus supports the public discourse trumpeting the dangerousness of the foreign-born. In this chapter, I begin by summarizing the findings from research on early 20th century immigration. In the next chapter I review the findings from contemporary research. Aggregate patterns of immigration and crime were an important concern at the turn of the century and as a result a number of government sponsored commissions assessed the influence of the influx of immigrants on crime rates during this time. In addition, two contemporary research studies exploiting recent improvements in data accuracy and advancements in methodology reinvestigated early 20th century immigration and crime trends. I conclude with a discussion of the theoretical explanations of the immigration-crime nexus put forth in the early 20th century.

LITERATURE REVIEW

At the turn of the 20th century, an understanding of the relationship between immigration and crime was a principal concern among social scientists (e.g., Sellin 1938; Shaw and McKay 1942; Sutherland 1924, 1934; Thomas and Znaniecki 1918). Before reviewing the early 20th century literature on immigration and crime it is important to understand the historical context of this era by providing a brief history of U.S. immigration. Dating back to the earliest estimates of the influx of foreign-born people to the United States in 1850, the United States has experienced a perpetual flow of immigrants every decade (U.S. Bureau of the Census 2006). Although this flow of migrants into the United States has been continuous, there has also been great variation in migration trends when looking at the absolute numbers of immigrants in the United States and the percentage of the U.S. population comprised by the foreign-born. The dramatic variation in U.S. immigration rates over time has engendered the use of "waves" to describe these trends. There have been at least four documented waves of immigration to the United States; two of these waves have occurred within the span of the last 100 years (Hagan and Palloni 1998; National Research Council 1996).

One of the largest waves of immigration to the United States occurred from the 1880s to the 1920s. In terms of the percent of the total U.S. population, the foreign-born comprised the largest percentage of the population during this wave. Specifically, during this time, the percentage of individuals residing in the United States who were foreign-born ranged between 13 and 14 percent of the total population (U.S. Bureau of the

Census 2006).[8] Importantly, the influx of immigrants at the turn of the 20th century occurred alongside another important social trend; increasing crime rates (Eckberg 1995; Gurr 1989; Zahn 1989).[9] The coincident increase in immigration and crime at the turn of the 20th century naturally led to discussions that the two trends were causally related (see e.g., Hall 1908; Orebaugh 1929).

Empirical Evidence

Early empirical accounts of the relationship between immigration and crime were fraught with methodological limitations. By the end of the 19th century and beginning of the 20th century, accurate documentation regarding demographic factors and crime counts were just beginning to emerge. Although the first U.S. Census began in 1790, indicators of place of birth among the foreign-born were not documented until 1850 (U.S. Bureau of the Census 2006). Moreover, an accurate account of crime at the national level did not emerge until the 1930s with the inception of the Uniform Crime Reports. As a result, the history of immigration-crime research is characterized by a succession of criticisms of preceding reports as better data became available. Many of the earliest reports on crime among the immigrant population reported that immigration and crime were associated (see Wines 1896; Hall 1908). Compared to their percentage in the general population, findings indicated that the foreign-born comprised a disproportionately higher percentage of the prison population compared to native-born whites[10] (Wines 1896:11).

[8] Compared to estimates from 2000 where the foreign-born comprised just over 11 percent of the total U.S. population.

[9] Although national statistics generally relied upon by social scientists to document crime trends, such as the Uniform Crime Reports, are not available for this time period, an estimation of the U.S. homicide rate can be obtained dating back to 1900 by using information garnered from death registration data (see Eckberg 1995).

[10] Throughout this chapter the category native-born refers to the native-born white population unless otherwise noted. Due to the relatively high rates of criminal involvement among native-born black

Shortly after the publication of these early reports came strong criticisms charging that they did not take into account the fact that immigrants were significantly more likely to be male and of young adult age - both of which are closely related to criminal involvement (see e.g., Industrial Commission 1901). Noting the neglect of the differential age distribution in the population for foreign-born and native-born persons, the Industrial Commission reanalyzed data from the U.S. Census Report on Crime, Pauperism, and Benevolence. Whereas the earlier report found disproportionately higher rates of immigrants in prison, after taking into account the relative number of foreign-born and native-born at various ages the Industrial Commission (1901) found that the crime rates among the foreign-born were slightly lower than those of the native-born. Clearly, accounting for differential age distributions demonstrated to be of importance.

Although the Industrial Commission results indicated that rates of crime among immigrants were not greater than those of the native-born, this study did not address whether immigration fundamentally changed the nature of crime committed in the United States. That is, it was possible that immigrants were more likely to be involved in crimes of violence. As a result immigration may not influence the total crime rate, but the severity of crime may increase due to immigration. For instance, the increase in violence in the United States during the early 20th century was often traced to the influx of immigrants from southern Europe, particularly those from Italy (Immigration Commission 1910). Using an array of data from court records, records of penal institutions, and arrest data from police in various cities, the Immigration Commission[11] investigated whether immigrants were disproportionately involved in certain crime types

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individuals, most early 20th century immigrant-related crime research tends to compare the foreign-born crime rate with the native-born white crime rate.

[11] Also known as the Dillingham Report.

including: gainful offenses (e.g., burglary, larceny, robbery), personal violence (e.g., assault, homicide, rape), offenses against public policy (e.g., drunkenness, vagrancy), and offenses against chastity (e.g., prostitution). Initial analyses compared all immigrants with native-born individuals. The findings indicated that the native-born were much more likely to commit offenses of personal gain, whereas immigrants evidenced greater involvement in personal violence crimes and offenses against public policy (Immigration Commission 1910). Notably, the pattern became much more complex in analyses that accounted for patterns of crime among immigrant children, distinct nationality groups, or among alien or un-naturalized immigrants. Overall, this report demonstrated initial support for the hypothesis that immigrants were more involved in certain crimes mainly those of a more serious nature.

Utilizing a mixed methodological approach, the National Commission on Law Observance and Enforcement's Report on Crime and the Foreign Born[12] sought to amass a comprehensive source of information on immigration and crime (Bowler 1931). In addition to the official crime data obtained from police records for 34 cities with a population greater than 100,000 (with detailed crime counts obtained from the state of New York and the city of Chicago), the quantitative portion of this report used data from U.S. attorney offices, correctional institutions for petty offenders, and federal and state prisons. Overall, in proportion to their numbers in the general population, the findings from this report revealed that the foreign-born commit less crime compared to the native-born.[13] When disaggregated by crime type, immigrant and native-born crime rates

[12] Also known as the Wickersham Report. For consistency purposes, I refer to this report as the Wickersham Report throughout the remainder of this document.
[13]Native-born crime rates were broken down into white and black subgroups. Notably, when compared to the white native-born group, the lower crime rate for the foreign-born population still held true.

approached convergence for violent crimes, whereas immigrants had a significantly lower rate of property crime compared to the native-born. In order to go beyond a mere statistical analysis, personal interviews with various law personnel, social workers, immigration officials, and nearly 500 foreign-born prisoners were also conducted. The commission's interviews substantiated the quantitative findings as police officials explained that crimes among the foreign-born were often of a personal nature, often in response to the dishonoring of oneself or one's family. Moreover, criminal justice officials were in near universal agreement that "it was not the immigrants themselves but their sons that constituted the big crime problem" (Bowler 1931:157).

Despite evidence to the contrary, the belief that immigration and crime were causally related permeated U.S. society and influenced public policy. In 1921, the Emergency Quota Act was passed limiting the number of immigrants admitted annually to the United States from any one country to 3 percent of the population from that country already living within the United States based on 1910 census figures. The passage of this act was quickly superseded by the passage of the Immigration Act in 1924 which resulted in an even greater restriction on the admittance of immigrants. With the passage of the 1924 act, the number of immigrants admitted annually to the United States from any one country was reduced to 2 percent of the population from that country already living within the United States based on 1890 census estimates. These two acts significantly reduced the number of immigrants admitted to the United States, particularly the allegedly "undesirable" immigrants from Southern and Eastern Europe (Eckerson 1966; Van Vechten 1941).[14]

[14] Restrictions on immigration from Asian countries were enforced much earlier with the passage of the Chinese Exclusion Act of 1882, the Gentlemen's Agreement with Japan in 1907, and the Immigration Act

Perhaps providing justification for the government's apparent dismissal of the findings from research on immigration and crime conducted at the turn of the 20th century was the inadequacy of the studies characteristic of that period. The analyses in these early reports fell victim to important problems which may have led to erroneous interpretations (see e.g., Gillman 1924; Sutherland 1927; Taft 1933; Van Vechten 1941). Specifically, Taft (1933) identified a number of important alternative interpretations of the finding of lower crime rates among immigrant groups. First, Taft (1933) argued that comparisons between the foreign-born and native-born tended to lump the children of the foreign-born into the native-born group. Because the children of the foreign-born evidenced greater involvement in crime than their parents, this grouping strategy could inflate the crime estimates of the native-born population and lead to the interpretation that crime rates were lower among the foreign-born group. Second, Taft (1933) asserted that it was likely that much of the crime committed by immigrants did not result in an arrest and because most studies relied on official crime data, a significant portion of immigrant crime could be missing from the analyses. Finally, the aggregating of different nationalities into a single "immigrant" group may have confounded the results. That is, "the bad record of nationalities with especially difficult problems of adjustment might be offset by the good record of immigrants with less adjustment problems" (Taft 1933:74).

As was already pointed out with the reanalysis of the U.S. Census Report on Crime, Pauperism, and Benevolence by the Industrial Commission (1901), one of the most damning limitations of the early reports on immigration and crime was the neglect to control for the influence of age in the estimates of crime rates among immigrants and

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of 1917 all of which barred the immigration of particular national or racial groups rather than individuals (Eckerson 1966).

the native-born (Sutherland 1927; Van Vechten 1941). The influence of age was particularly important for immigration research for two key reasons. First, most immigrants crossing the United States borders were young males. Second, because the inflow of immigrants to the United States was highly variable over time, the proportion of the immigrant population in any particular age group differed dramatically depending upon the year from which the population estimates were taken. For example, the number of immigrants between the ages of 15 and 25 was much higher in 1910 during the height of the early 20th century wave of immigration compared to the number of immigrants aged 15 to 25 in 1930 after the passage of the immigration quota restriction act. Consequently, estimates of commitment rates that did not account for these differences in the immigration population composition offered an inaccurate account of crime among the foreign-born.

Using 1940 Census data, Van Vechten (1941) compared the commitment rates of foreign-born and native-born males paying particular attention to the influence of differential age distributions. Specifically, two improvements were made over previous studies. First, unlike prior research that examined large age groups (i.e., those aged 15 and older), Van Vechten disaggregated the age distribution into small age groups (i.e., 15-19 years old, 20-24 years old, 25-29 years old, and so on). Second, population estimates were used that took into account the disproportionate distribution of immigrants across the age groups. These two modifications served to correct for the fact that immigrants tended to dominate the older age groups (i.e., 30 years of age and older).[15]

[15] Although young males dominate the population of migrating individuals, the data used in Van Vechten's study refer to population estimates from 1940. Therefore, these population figures are affected by the reduction of immigrants due to the quota restrictions of 1921 and 1924. The distribution of first generation immigrants in the United States in the 1940s reflects an aging immigrant population.

Computations controlling for the influence of age revealed statistically insignificant differences between the commitment rates of immigrants and their native-born counterparts (Van Vechten 1941:143). In sum, greater attention to the differential age distribution of immigrants in the general population resulted in greater support for the finding that as a group, immigrants pose no greater criminal threat than the native-born population.

Given the inadequacies of early research on the immigration-crime nexus, two contemporary studies exploiting improvements in data accuracy and advancements in methodology, sought to re-investigate the relationship between early 20th century immigration and crime. The first study involved a comparison of 203 immigrant and 133 native-born father-son pairs residing in impoverished areas in Cambridge and Somerville, Massachusetts between 1935 and 1945 (McCord 1995). Analyses were conducted looking at four officially recorded types of crime including: violent crimes, property crimes, drunkenness, and misdemeanors. Consistent with previous research from this era, McCord found no evidence that immigrants were more likely to be convicted of any of the four types of crime compared to their native-born counterparts. Moreover, unlike prior studies McCord found no evidence that the sons of immigrants were more likely to be convicted of violent crimes, property crimes, or crimes related to drunkenness than their native-born counterparts (there was a slight, but unreliable finding of more misdemeanor convictions among the sons of immigrants).

In the second contemporary study that analyzed immigration and crime in the early 20th century, Moehling and Piehl (2008) re-analyzed data used previously in the Immigration Commission and Wickersham Commission reports. Noting the fact that

these early reports were often harshly criticized on the basis of their quality and interpretation of the data, Moehling and Piehl took a number of cautionary steps to bolster the reliability and validity of their findings. First, the authors supplemented the data files used by the commissions with additional, more detailed population data available today including information from the census and microdata samples of census records (see Moehling and Piehl 2008 for a detailed discussion of the supplemented data files). Second, the authors paid close attention to differences in the age distribution across immigrant and native-born populations. The findings from this re-analysis indicated that the relationship between immigration and crime is much more complex than previously thought. Over the period from 1904 to 1930, Moehling and Piehl found three notable trends. First, looking at minor crimes[16] (e.g., possession of stolen goods, drunkenness, disorderly conduct), immigrants were more likely to be incarcerated compared to the native-born. The authors emphasized that these findings should be interpreted cautiously as minor offenses are more prone to biases by law enforcement officials. Second, when looking at serious crimes (e.g., homicide, assault, rape, robbery, offenses against chastity, arson, counterfeiting, forgery) the difference in commitment rates between immigrants and their native-born counterparts changed dramatically and by 1930 the findings indicated that the foreign-born were significantly less likely than the native-born to be incarcerated for serious crimes. This difference in the incarceration rate for serious crimes was due almost entirely to the lower rate of immigrant involvement in non-violent serious crimes as the incarceration rate for violent crimes was similar across foreign-born and native-born groups. Third, the divergent trend in incarceration rates

[16] The authors note the changing definition of minor versus major or serious crimes across the 1904, 1923, and 1930 Prison Censuses. In general, major offenses include all person offenses and serious property and "chastity" offenses while minor offenses include all other offenses.

over time was due to an increase in incarceration rates among the native-born; the incarceration rate for the foreign-born over this same time period remained stable. The authors noted that the differences found in this study compared to the findings of the Dillingham and Wickersham Commissions illustrate the problems arising from aggregation bias (i.e., not accounting for disproportionate age distributions; see also Van Vechten 1941) and the absence of accurate population data.

In general, research assessing crime among 20th century immigration found that in the aggregate immigrants were no more criminal than the native-born (notable exception Moehling and Piehl 2008). Furthermore, in some cases the evidence indicates that immigrants were less criminal than their native-born peers. A frequent observation yet rarely empirically studied theme of this time period was the greater criminal involvement of the children of immigrants. However, much of the early 20th century theoretical attention was aimed at trying to explain this pattern of increasing involvement in crime across successive generations of immigrants.

Traditional Theory, Immigration, and Crime

In the early 20th century, three popular explanations emerged regarding the criminality of immigrant groups including: the theory of racial differences, cultural theories, and social disorganization. One of the earliest explanations (i.e., theory of racial differences) of the immigration-crime nexus theorized that there was a direct causal connection between immigration and crime such that immigration (or rather immigrants) caused crime (Hall 1908; Immigration Commission 1910; Laughlin 1922; Orebaugh 1929). By the 1920s and 1930s, this popular misperception was replaced by more complex models (i.e., cultural theories, social disorganization) which took into account

the persistent finding that first generation immigrants were significantly less criminal than native-born individuals and that successive generations of immigrants were seemingly more criminal than their parents (Immigration Commission 1910; Industrial Commission 1901; Wickersham Report 1931). Aspects of these theories continue to be popular in contemporary explanations of the immigration-crime nexus.

Theory of Racial Differences.

The first explanation of immigrant related crime involved the theory of racial differences which aligned closely with the eugenics movement of the late 19th and early 20th centuries (Hagan and Palloni 1998; Sellin 1938). Drawing heavily on the dramatic shift in the racial composition of immigrants entering the United States beginning in the 1880s, the theory of racial differences did not perceive all immigration as inherently bad, but instead viewed the immigration of certain nationality groups as problematic. Whereas "old" immigrant groups predominantly from Nordic areas were characterized as morally, superior individuals, "new" immigrant groups tended to be from Southern and Eastern Europe – regions allegedly characterized by immorality, biological degeneracy, and crime. As such these new immigrants were branded to be of inferior, sub-human stock (Baltzell 1965; Laughlin 1922; Roberts 1996).

Support for this view often came from the findings that literacy rates for individuals migrating from Western Europe (e.g., Scandinavia, Finland, Scotland, and Great Britian) were significantly higher than the literacy rates of those from Eastern and Southern European countries such as Italy, Poland, Croatia, and Slovakia (Industrial Commission 1901). Moreover, these new immigrants were often found to be physically and mentally diseased, thereby introducing new contagions to the United States (Abbott

1926; Industrial Commission 1901; Laughlin 1922). Hence, when these new immigrants entered the United States, they brought with them their social ills effectively polluting the purer "American Blood" (Baltzell 1965:106; see also Orebaugh 1929). The warnings regarding the deterioration of the American population due to unrestrained immigration reached as far as the upper echelons of the United States Government. While presenting a bill to the President aimed at creating a new class of excluded immigrants based upon racial differences between old and new immigrating groups, Senator Henry Cabot Lodge affirmed:

> …there is a limit to the capacity of any race for assimilating and elevating an inferior race; and when you begin to pour in unlimited numbers of people of alien or lower races of less social efficiency and less moral force, you are running the most frightful risk that a people can run. The lowering of a great race means not only its own decline, but that of civilization. … [We] are exposed to but a single danger, and that is by changing the quality of our race and citizenship through the wholesale infusion of races whose traditions and inheritances, whose thoughts and beliefs are wholly alien to ours, and with whom we have never assimilated or even been associated in the past. The danger has begun. … There lies the peril at the portals of our land; there is pressing the tide of unrestricted immigration. The time has certainly come, if not to stop, at least to check, to sift, and to restrict those immigrants. (1909:264-266, *The Restriction of Immigration*)

Furthermore, just prior to taking office President Coolidge wrote:

> Biological laws tell us that certain divergent people will not mix or blend. The Nordics propagate themselves successfully. With other races, the outcome shows deterioration on both sides. Quality of mind and body suggests that observance of ethnic law is as great a necessity to a nation as immigration law. (1921:14, *Whose Country is This?* Good Housekeeping Magazine)

In large part, theories of racial differences in criminal propensity based upon various constitutional explanations have been empirically invalidated due to the simple fact that "there are more variations *within* any race or ethnic group than *between* them" (Sampson and Lauritsen 1997:331, *emphasis in original*). Yet today, warnings about the criminally prone or inferior immigrant continue to be voiced (Brimelow 1995; Malkin 2002).

Cultural Theories

Cultural theories represent the second class of theories commonly used to explain the relationship between immigration and crime. Unlike theories based on racial differences, cultural theories were not premised on the idea that certain nationality groups were more criminally prone than others. Instead, cultural explanations of immigrant related crime emphasized the conflict between conduct norms or "cultural codes" between the old and new worlds (see e.g., Sellin 1938; Shaw and McKay 1942; Sutherland 1924, 1934). Specifically, as individuals migrate to new areas, they bring with them sets of rules, norms, and mores unique to their homelands. These values are often different from and sometimes in opposition to the dominant values in the areas to which immigrants relocate to. As a result, the areas in which most immigrants initially settle are characterized by volatility as groups of individuals – each group acting in accordance with its own set of rules – come in contact with one another. The social and cultural heterogeneity generated by the mixture of different individuals due to immigration engenders conflict which Sellin (1938) argued was a natural outgrowth of processes of social differentiation.

Similarly, in early versions of his text *Principles of Criminology*, Sutherland (1924, 1934) argued that immigration did not directly cause crime; rather, exposure to forces of acculturation into American society caused immigrants to become more like their native-born peers in all ways including their involvement in crime. While immigrant parents tended to be hard-working and conformist in nature, their children were caught between two worlds – that of their family and the "old" world and the interaction with the "new" world via schools and the larger community – exposed to

conflicting cultures and norms (Sutherland 1924). Sutherland (1924:132) argued that this double standard resulted in "family friction" for the children of immigrants likely resulting in a rejection of family controls and the acceptance of the cultural traditions displayed in the surrounding environment. The cultural conflict experienced by second generation immigrants explains the pattern where first generation immigrants have low crime rates whereas their children evidence greater involvement in crime with rates resembling those of their native-born counterparts. Overall, the effect of immigration and experiences with cultural heterogeneity appear to be much more detrimental for the children of immigrants (Sutherland 1934).

This heterogeneity in cultural values was also noted by Shaw and McKay (1942) in their study of the distribution of juvenile delinquency across Chicago neighborhoods. Like other disadvantaged groups (i.e., African Americans), immigrants tend to initially settle in environments characterized by Shaw and McKay (1942) as impoverished, disorganized, and often inhabited by a large number of criminals. The concentration of immigrants in areas with a disproportionately high rate of criminals resulted in the exposure of immigrant youth to adult criminals and the "criminal way of life" (Shaw and McKay 1942:173). Shaw and McKay argued that as a consequence of the spatial clustering of immigrants and criminals, traditions of delinquency (e.g., techniques of crime, values, attitudes) were easily transmitted through successive generations of youth.

Social Disorganization

The third explanation that emerged during the early 20th century was social disorganization theory[17] (Shaw and McKay 1942; see also Thomas and Znaniecki 1918). With massive numbers of immigrants flocking to urban centers, neighborhoods experienced a dramatic and rapid transformation. For instance, over a period of just ten years (1910 to 1920), the population in Chicago increased more than 23% (Shaw and McKay 1942:23). Much of this increase in population was due to newly arriving immigrants who tended to settle in areas located near the center of the city where factors such as poverty, ethnic heterogeneity, and residential instability flourished.[18]

The neighborhoods where immigrants settled were not only characterized by social disorganization (i.e., poverty, ethnic heterogeneity, and residential instability), but they were also areas characterized by disproportionately high crime rates. The concentration of immigrants in these high crime locations often led to the conclusion that immigration and crime were causally related. Systematically, Shaw and McKay (1942) documented the delinquency rates by neighborhood in Chicago over three decades (roughly 1900, 1920, and 1930). What they found was evidence of remarkable stability of delinquency in certain neighborhoods regardless of the composition of the population residing in the neighborhood at any particular time. Summarizing this trend, Shaw and McKay (1942:374) noted

> … one European ethnic group after another moved into areas of first settlement, which were for the most part inner-city areas, where their children became delinquent in large numbers. As these groups became assimilated and moved out of the inner-city areas their descendants disappeared from the Juvenile Court and

[17] Shaw and McKay's theory advanced in 1942 was a mixed theoretical model containing elements of control and cultural deviance theories (see Kornhauser 1978). As a result, aspects of their theory fall under cultural theories as well as social disorganization.

[18] See Handlin (1951:146-150) for a colorful description of newly arriving immigrant settlement areas.

> their place was taken by offenders from the groups which took over the areas which had been vacated. … During the first decades of this century a large proportion of the delinquents were children of German or Irish immigrants. Thirty years later a large proportion of the offenders were the children of the Polish and Italian immigrants who replaced the German and the Irish in the inner-city areas.

Although immigrants initially took up residence in high crime areas, over time, as they became more enmeshed and acculturated into mainstream American society, they would migrate out of these disorganized areas and away from high crime neighborhoods. In conjunction with this relocation was a decline in delinquency regardless of immigrant status or nationality group. Stated simply, crime was a characteristic of an area, not a characteristic of an individual.

SUMMARY

Despite both theoretical expectations and conventional expectations rooted in stereotypes about immigrants, the empirical evidence from research examining the early 20th century immigration-crime nexus in general failed to substantiate the claim that immigration increased crime (cf. Moehling and Piehl 2008). Although noteworthy for its consistency, immigration is a fluid process not only influencing the social context, but also influenced by the social context. As a result, immigration today differs in important ways from the immigration process of a century ago (Portes and Zhou 1993; Zhou 1997a). In fact, unlike the successful outcomes of many early 20th century immigrants and their families, many suggest that the economic and social context of today will result in detrimental outcomes for contemporary immigrants (Borjas 1985; Gans 1992; Portes and Zhou 1993; Zhou 1997a). Given these differences, a central question is whether the insignificant effect of immigration on crime found in earlier periods still holds today.

Specifically, Sutherland's (1927) question of the early 20th century immigrants continues to be relevant today: is their undue crime among immigrants?

CHAPTER 3 IMMIGRATION AND CRIME AT THE END OF THE 20TH CENTURY

> *For well over a century newcomers have brought with them a criminal element who, however unrepresentative of their nationalities, have turned their communities into zones of lawlessness.* (Horowitz 2001:9)

After a period of relative obscurity in the mid-part of the 20th century, in the last few decades there has been a resurgence of research on the immigration-crime nexus. Consistent with early 20th century research, a number of studies addressed the relationship between immigration and crime at the aggregate level. Moreover, a handful of contemporary studies have assessed rates of criminal involvement among immigrants at the individual level. I begin this chapter with a review of the empirical aggregate and individual level research and then discuss two unique complexities inherent in research on immigration and crime, namely generational and nationality issues. Although much of this research was couched in traditional theoretical explanations, in this dissertation I expand upon the theoretical base by utilizing a life course perspective – specifically, the age-graded theory of informal social control – as a framework for examining the immigration-crime nexus.

LITERATURE REVIEW

The impetus for the contemporary resurgence of research on immigration and crime parallels that of the early 20th century. That is, since the mid-1960s and 1970s, the United States has experienced an exponential increase in crime rates (Blumstein and Beck 1999; Gurr 1989; Zahn 1989) while at the same time experiencing a dramatic increase in immigration rates (Carter and Sutch 1998; Gerstle and Mollenkopf 2001;

National Research Council 1996). The increase in the flow of immigrants to the United States in recent decades is largely attributable to the Immigration and Naturalization Act of 1965 which effectively terminated the quota restrictions from the Immigration Act in 1924. Although preference was given to immigrants who already had family in the United States, characteristics including race, religion, and nationality were no longer used as determinants in the immigrant selection process. In the 1960s, the U.S. government was particularly optimistic about opening America's gates wider in order to welcome more immigrants to the country (Simon 1985).[19]

The positive immigrant fervor displayed by the U.S. government upon passage of the Immigration and Naturalization Act was not reflected among the concerns of the general populous (Simon 1985:40). Although the concerns among the public regarding immigration were similar to those of the early 20th century, they contained an added level of intensity due to the shift in the geographic origins of the contemporary immigrant population. Rather than traverse the Atlantic Ocean, today many immigrants can "simply" walk across the border. As such, newly arriving immigrants face additional challenges and biases involving their legal or documented entry (Perea 1996). Today, allegations of a massive influx of the dangerous *illegal* immigrant permeate American society and have helped foster growing concerns of a link between immigration and crime (see Dunn 1996; Inda 2006; Nevins 2002). While public debate concerning immigrant related crime has grown, Rumbaut and colleagues (2006) note that remarkably

[19] This optimism exhibited by the government with the passage of the Immigration and Naturalization Act in 1965 was not aimed directly at the welcoming of massive waves of new immigrants to the United States, but was instead aimed at the symbolism it held in denouncing past U.S. discriminatory policies. In fact, many government officials claimed that by abolishing the quota restrictions, there would be no noticeable change in the flow of immigrants to the United States (Center for Immigration Studies 1995; see also Alba and Nee 2003; Brimelow 1995).

limited contemporary scholarly attention has focused on the connection between immigration and crime. As a result, many of the policies and practices regarding immigration and crime are shaped by limited knowledge and stereotypes about immigrant behavior (Rumbaut et al. 2006).

Empirical Evidence

Despite the passage of nearly a century of time and the presence of contextual and practical differences regarding the immigration process that have taken place over this period of time, research on the contemporary immigration-crime nexus has largely arrived at the same conclusion that early 20th century scholarship did. Specifically, the evidence from contemporary research indicates that immigration does not lend way to increases in crime. This pattern holds true in aggregate level studies (Alaniz et al. 1998; Butcher and Piehl 1998; Lee and Martinez 2002; Lee et al. 2001; Martinez 2000; Martinez et al. 2008; Nielsen et al. 2005; Reid et al. 2005), individual level studies (Bui 2009; Butcher and Piehl 1998; Harris 1999; Sampson et al. 2005), and in investigations of lethal violence (Lee et al. 2001; Martinez 2000; Nielsen et al. 2005; Reid et al. 2005; Sampson et al. 2005), property crime (Reid et al. 2005), juvenile delinquency/crime (Alaniz et al. 1998; Bui 2009; Bui and Thongniramol 2005; Harris 1999), and recidivism (Hickman and Suttorp 2008). In the following sections I review the aggregate level research before moving to the individual level literature.

Aggregate Level Studies

Reminiscent of early 20th century research, aggregate level studies examining the relationship between immigration and crime ask whether immigration affects the crime rate at the national, state, city, or neighborhood level. Much of the aggregate level

research assesses the relationship between immigration and crime across a small number of cities characterized by their high levels of immigration, importance as United States points of entry for immigrants, and/or diverse ethnic compositions. These studies found no relationship between: immigration and homicide in El Paso, Miami, or San Diego (Lee et al. 2001), immigration and expressive or instrumental homicide in Miami or San Diego (Nielsen et al. 2005), immigration and youth violence across three northern cities in California (Alaniz et al. 1998), and recent immigration and homicide in northern Miami (Lee and Martinez 2002) and San Antonio (Martinez et al. 2008). Moreover, an assessment of the influence of recent immigration has found that recent immigration significantly *reduced* homicide in San Diego (Martinez et al. 2008).

A handful of studies have also examined the immigration-crime nexus using samples drawn from the general U.S. population (Butcher and Piehl 1998; Reid et al. 2005). Reid and colleagues (2005) investigated the immigration-crime nexus using a stratified, random sample of 150 Metropolitan Statistical Areas and Primary Metropolitan Statistical Areas. The authors accounted for the possibility of heterogeneity across nationality groups. Additionally, unlike much of the immigration-related crime research which tends to be limited to examinations of homicide only, Reid and colleagues assessed how immigration affects rates of both violent and property crime. Across all models, the authors failed to find an association between immigration and crime. Notably, in some analyses they found that immigration was associated with a decrease in crime (Reid et al. 2005).

Butcher and Piehl (1998) have conducted some of the most analytically exhaustive research on the relationship between immigration and crime. The authors

used data from 43 metropolitan areas and examined overall, violent, and property crime rates. Their findings were two-fold. First, in the cross-section, they found that cities with high crime rates tended to have a large number of immigrants. Second, after controlling for a number of metropolitan area characteristics, they found that recent immigration (the immigration rate in the previous year) had no effect on crime rates. The authors conducted a number of extensive robustness checks which revealed further support for their findings. Overall, Butcher and Piehl found no evidence to suggest that immigrants (total or recent arrivals) affected the crime rate.

In sum, consistent with the findings of early 20th century research, contemporary studies conducted at the aggregate-level indicated that immigration was not related to an increase in crime, particularly violent crime. Rather, the relationship may be just the opposite as there is a growing body of evidence indicating that immigration may be related to a *decrease* in certain crimes. Finally, studies examining the impact of recent immigration on crime also found an insignificant effect on crime. This finding of lower levels of criminal activity among the most recent immigrant cohorts is particularly noteworthy. More so than their predecessors, recent immigrant cohorts come to the United States lacking labor force and educational skills. These deficits, working in tandem with a changing economic environment, lend way to expectations of increasingly detrimental outcomes among recent immigrant cohorts (Borjas 1985; Gans 1992).

Although immigration per se does not appear to be related to crime, this research did not answer the question of whether or not immigrant individuals are more crime prone than their native-born peers. In the next section, I review the research examining the relationship between immigration and crime at the individual level.

Individual Level Studies

Individual level analyses are a contemporary addition to research on the relationship between immigration and crime. As such, individual level research is much more sparse than aggregate level research. Rather than asking whether immigration is related to the crime rate, individual level analyses inquire about differences in criminal involvement comparing immigrant individuals with native-born individuals (see e.g., Butcher and Piehl 1998; Hickman and Suttorp 2008; Sampson 2006).[20]

In one of the earliest individual level studies of the immigration-crime nexus, Butcher and Piehl (1998) examined differences in immigrant and native-born criminal propensities using data from the National Longitudinal Survey of Youth 1979 survey - a sizable general population sample. The authors assessed a range of self-reported measures of involvement in crime and contacts with the criminal justice system. They found that immigrant men and women were less criminally active than native-born men and women in regards to self-reported crime, being stopped by the police, being charged with a crime, and having contact with a criminal justice agency. This pattern of lower levels of criminal activity among immigrants compared to the native-born held in models controlling for key background characteristics including a variety of educational, employment, and family history measures.

Recently, Sampson (2006) suggested that immigration was associated with a reduction in crime and may even account for a portion of the crime drop of the 1990s. Analyzing data on nearly 3,000 males and females 8 to 25 years of age from 180 Chicago

[20] Some individual level studies also compare levels of criminal involvement across immigrant nationality groups and immigrant generations (see e.g., Bui 2009; Bui and Thongniramol 2005; Harris 1999; Morenoff and Astor 2006; Rumbaut et al. 2006). These studies will be reviewed below in the section on complexities in immigration related crime research.

neighborhoods over an eight year period, Sampson, Morenoff, and Raudenbush (2005) found that Mexican Americans evidenced a significantly lower rate of violence compared to blacks and whites. The difference in rates of violence among Mexican Americans was largely accounted for by immigrant generation and the concentration of immigrants living in an individual's neighborhood. That is, Mexican Americans tended to be first generation immigrants who were more likely to exhibit lower levels of violence. Moreover, Mexican Americans were more likely to live in areas characterized by high levels of concentrated immigration which was found to be directly associated with lower levels of violence. Notably, these findings held controlling for a number of factors including poverty and immigration status (Sampson 2006; Sampson et al. 2005). Contrary to popular opinion and stereotypical expectations, these findings suggested that immigrants were less criminal than their native-born counterparts.

Finally, Hickman and Suttorp (2008) compared the recidivism rates of 517 deportable immigrants (those who entered the United States illegally and never obtained legal residency or who entered legally but remained without renewing legal permission or stayed when residency was terminated) with 780 non-deportable immigrants (including both legal immigrants and naturalized US citizens) all released from the Los Angeles County Jail within a 30 day period in 2002. This study is particularly noteworthy as the authors were able to address concerns regarding the criminal behavior of illegal residents in the United States. Hickman and Suttorp found no difference between deportable (i.e., illegal) and non-deportable immigrants in terms of occurrence, frequency, or timing of re-arrest during the year following release from prison.

Overall, the findings from individual level studies investigating the immigration-crime nexus were consistent with those from aggregate level analyses. Specifically, research has yet to show that immigrants are more criminally active than their native-born counterparts. Notably, much of the extant research treated immigrants as a homogeneous entity. In the section that follows, I review two important complexities in immigration related crime research which may challenge the consistent pattern evidenced in the review of research in the preceding paragraphs.

Complexities in Immigration Related Crime Research

A number of complexities inherent in research on the immigration-crime nexus have been recognized since the earlier part of the 20th century. I discuss here two particularly important concerns influencing the current study. The first concern involves the differences in experiences and behaviors across immigrant generations. The second concern addresses the importance of recognizing the diversity that exists within the global "immigrant" group.

Second Generation Immigrants and Crime

The "not the foreign born but their children" idiom affirmed by the Wickersham Commission characterizes much of the research on immigration and crime (Tonry 1997:20). Specifically, one of the recurrent themes in this body of literature is that crime increases with the residence of successive generations in the United States (Harris 1999; Immigration Commission 1910; Industrial Commission 1901; Morenoff and Astor 2006; Rumbaut et al. 2006; Sampson et al. 2005; Stofflet 1941; Sutherland 1934; Wickersham Report 1931). Although newly immigrated individuals (i.e., first generation immigrants) evidence low levels of criminal involvement, their children and grandchildren (i.e.,

second and third generation immigrants, respectively) tend to be significantly more involved in crime and eventually demonstrate levels of criminal involvement that resemble those of native-born individuals. This pattern of increasing crime among the children of immigrants was first observed early in the 20th century (Immigration Commission 1910; Industrial Commission 1901; Wickersham Report 1931). For example, in a special report generated by the Industrial Commission, it was documented that although the foreign-born were less criminal compared to their native-born counterparts, a considerably large portion of native-born prisoners had foreign-born parents (1901:288).

Despite the long standing awareness of the importance of generational differences on immigrant behavioral patterns, contemporary research has just begun to delve into the complex relationship between immigrant generation and crime (see Bui 2009; Driscoll, Russell and Crockett 2008; Harris 1999; Morenoff and Astor 2006; Rumbaut et al. 2006).[21] Using data from the National Longitudinal Study of Adolescent Health, a nationally representative study of adolescents in grades 7 through 12 in the United States, Harris (1999) compared the health outcomes and behaviors of immigrants (first generation), children of immigrants (second generation), and native-born youth (third-plus generation). Harris examined three domains of health outcomes including physical health, emotional health, and health risk behaviors (e.g., risky sexual behavior, delinquency, violence, substance use). A consistent pattern emerged across all health outcomes where increasing time in the United States was associated with a greater

[21] A small body of literature has investigated the relationship between deviant behavior and acculturation typically captured utilizing measures of generation and linguistic ability (e.g., Gonzales et al. 2006; Losoya et al. 2008; McQueen, Getz and Bray 2003; Pasch et al. 2006; Perez, Jennings and Gover 2008; Samaniego and Gonzales 1999; Smokowski and Bacallao 2006; Sullivan et al. 2007); however, systematic assessments comparing delinquent behavior across immigrant generations and with native-born peers remain sparse.

likelihood of poorer health outcomes. That is, foreign-born youth had fewer physical, emotional, and health risk behaviors compared to children of immigrants and native-born youth controlling for a variety of family and neighborhood context factors. Moreover, the findings indicated that family and neighborhood context mattered most for native-born youth. Specifically, immigrant youth (i.e., first and second generation) appeared to be "protected" from deleterious family and neighborhood environments, particularly family poverty status. In sum, Harris (1999) found that with each successive immigrant generation born and socialized in the United States, health problems grow and within two generations levels of health problems closely approximate the levels found within the general U.S. native-born population.

In a more recent study, Rumbaut and colleagues (2006) called attention to a glaring gap in the immigration and crime literatures. Specifically, the authors noted that although research on immigration and research on crime and imprisonment in particular have increased exponentially over the past few decades, they have done so largely independent of each other. In an effort to address this significant gap, Rumbaut and colleagues (2006) used national and local level data (i.e., Public Use Microdata Sample of the 2000 census and the Children of Immigrants Longitudinal Study, respectively) to assess the relationship between nationality, ethnicity, and generational status and incarceration. Given the disproportionate concentration of immigrants living in central cities in impoverished circumstances in addition to their low educational and employment levels, the authors hypothesized that immigrants would have higher rates of incarceration compared to their native-born peers. Nevertheless, the authors found that regardless of unit of analysis and ethnicity, the incarceration rate among the native-born was nearly

four times greater than the incarceration rate among the foreign-born (Rumbaut et al. 2006). Moreover, they found evidence of a swift increase in the rate of incarceration with each successive increase in immigrant generation for most ethnic groups (see also Rumbaut 2005). That is, as was true 100 years ago, incarceration rates were the lowest among first generation immigrants.

In a detailed analysis of immigrant generational differences, Morenoff and Astor (2006) investigated the pattern whereby greater assimilation into the U.S. mainstream is associated with higher crime rates. Using data from the Project on Human Development in Chicago Neighborhoods Longitudinal Cohort Study, the authors compared violent offending rates of first, second, and third generation immigrants. The authors note that previous research investigating differential behavioral patterns across immigrant generations has been limited due to problems with selection bias. That is, the argument goes that individuals who decide to migrate (first generation immigrants) may be selectively less crime prone compared to the successive immigrant generations and the general population. These individuals knowingly take on the challenges inherent in the immigration process with great ambition as they strive for long-term goals such as self and family advancement. As a result the findings of increasing criminal behavior across successive immigrant generations may be an artifact of a selection effect. Morenoff and Astor modeled exposure time, linguistic acculturation, and neighborhood contextual effects in an effort to control for some forms of selection bias. Overall their findings run counter to the selection argument. For example, they found that individuals who migrated at six years of age or younger had significantly higher probabilities of violence compared to their peers who first entered the United States at seven years of age and

older. Therefore, it appears that factors such as exposure time in the United States rather than generation specific immigration processes may be responsible for the differential rates of criminal behavior evidenced across immigrant generations.

At this stage, with nearly 100 years of supportive empirical evidence, it seems safe to conclude that the pattern of increasing criminality across successive immigrant generations is a robust finding. That said researchers have yet to agree about why this pattern occurs. Questions remain as to what factors contribute to the variation in delinquency across immigrant generation? And what mechanisms explain the causal connection between assimilation to American society and increasing involvement in crime? Using data from the National Longitudinal Study of Adolescent Health, Bui (2009) drew upon social control theory in an effort to account for generational differences in crime and delinquency. Three categories of immigrant generations were examined: first (foreign-born youth with foreign-born parents), second (American-born youth with at least one foreign-born parent), and a third-plus group (American-born youth with American-born parents). Consistent with a control theory explanation, Bui found that differences in crime and delinquency across immigrant generations were explained in part by family and school process measures. Later immigrant generations were more likely to report parent-child conflicts and school problems which in turn were found to affect delinquent involvement (Bui 2009; see also Driscoll et al. 2008 for a discussion of changes in parenting styles across immigrant generations and its effect on delinquency).

The general story from the research on generational analyses of the immigration-crime nexus is one of increasing problem behavior the longer an individual is in the

United States. Stated simply, the process of "Americanization" across successive generations results in deleterious outcomes such as increased rates of delinquency, crime, and violence (Bui 2009; Driscoll et al. 2008; Harris 1999; Morenoff and Astor 2006) and increased rates of incarceration (Portes and Rumbaut 2006; Rumbaut et al. 2006).

The importance of crime among the second generation is becoming increasingly consequential in contemporary U.S. society given the rapid growth of this group. In just four years (1994 to 1998), the percentage of children under the age of 18 with one or more foreign-born parents (the second generation) increased 13.9 percent; compared to a mere .4 percent increase among native-born children of native-born parents (Jensen 2001). Estimates from the Pew Hispanic Center indicated that the absolute number of second generation immigrants will increase from 9.8 million in 2000 to nearly 22 million in 2020 (Suro and Passel 2003). As Portes and colleagues (2006) note, given the continuing flow of immigrants into the United States and given the higher fertility rates among foreign-born women, estimates are that the proportion of second generation individuals in the country will continue to grow at a fast rate. Recognizing the increased rates of crime among this portion of the population, future prospects regarding crime and delinquency do not look bright (Hagan and Palloni 1999).

Disaggregation by Nationality Group

Most research on the immigration-crime nexus combines all immigrants into a homogeneous cluster of individuals. This strategy, however, neglects to recognize the potential differences that may exist between different immigrant groups regarding migration and generational histories, cultures, and contexts of reception and incorporation (Rumbaut et al. 2006; Tonry 1997; Waters 1999). Although prior research has analyzed

immigrants as if they comprise a homogeneous group – largely due to data constraints and small population sizes – it has long been recognized that studies need to account for the differences between nationality groups. In particular, although research on immigration and crime was critical of the often heralded public opinion that immigration increased crime (e.g., Sellin 1938; Shaw and McKay 1942; Sutherland 1924, 1934), many also noted distinctive patterns of criminal involvement across nationality groups (see also Industrial Commission 1901; Schneider 1980; Waters 1999). For example, it was often observed that Italians evidenced high rates of involvement in violence and that the Irish were known for their excessive drunkenness (see e.g., Sellin 1938; Sutherland 1924, 1934).

Taft (1936) warned of a possible aggregation bias in research on immigration and crime that did not investigate group specific patterns of behavior. In particular, he asserted that the conclusion of previous studies that immigrants were no more criminal, and perhaps even less criminal, than native-born whites may be erroneous as the records of "bad" immigrant groups may be offset by the records of "good" immigrant groups (Taft 1936). It is argued that this variation across nationalities may arise from differences in criminal propensities or to the fact that some immigrants enter the United States with previously established ties or networks with criminal associates (Hagan and Palloni 1998). Few data sources allow for an analysis of differences in crime across nationality group and as such, empirical examinations of these differences are very limited.

In perhaps the most detailed analysis of offending differences across nationality group in the early 20th century (unpublished manuscript entitled "Nationality and Delinquency," cited in Bursik 2006) McKay documented the variation in the rates of

delinquency by nationality from 1900 to 1940 in Cook County Juvenile Court, Chicago. Consistent with previous research, he found that given similar neighborhood contexts, boys of native parentage and boys of foreign parentage have similar rates of delinquency. Second, McKay found that when the children of immigrant's category (i.e., boys of foreign parentage) was disaggregated by nationality group, delinquency rates varied widely. Yet, within similar neighborhood contexts the delinquency rates for the various nationality groups were not widely different. This finding challenged notions that certain nationality groups were involved in crime at higher rates than other nationality groups. Rather, the influence of neighborhood context appeared to be the driving force behind the delinquency of boys of native parentage and boys of foreign parents regardless of nationality group.

Contemporary research has begun to examine behavioral differences across nationality groups. In a recent study examining the link between ethnicity, immigration, and violence, Stowell and Martinez (2007) demonstrated the need for greater sensitivity of the ethnic differences that exist between foreign-born populations (see also Martinez and Lee 2000; Waters 1999). Noting that the current immigration wave is characterized by heterogeneity in its ethnic and social capital composition, the authors decomposed their immigration variable into specific ethnic populations (i.e., Cubans, Nicaraguans, Hondurans, and Haitians for their Miami sample; Mexicans, Salvadorans, Chinese, and Vietnamese for their Houston sample). Consistent with previous research, they failed to find a single instance where immigration was associated with an increase in violence. Yet, the authors also failed to find that immigration was universally associated with a decrease in violence. Rather, their findings revealed differences across immigrant groups

and their association with overall rates of violence. In Miami, although Cuban, Nicaraguan, and Honduran immigration was negatively associated with overall rates of violence, this significant pattern did not hold for Haitian immigration. Conversely, in Houston, none of the immigrant groups were significantly related (positively or negatively) to overall rates of violence. These findings not only emphasize the diversity within the immigration label, but also the importance of social context when examining the immigration-crime nexus.

Unlike the general consensus evident in the studies of the influence of generational status on involvement in crime, the research examining variation in offending across nationality is much less clear. Although there has not been a lack of interest in examining these differences, research studying offending by nationality group is limited due to the availability of data capturing information on nationality. Moreover, when this information is available, the sample sizes are often too small for in depth statistical analysis. From the available literature there appears to be evidence of diversity in criminal behavior within the larger "immigrant" classification. It is less clear whether certain nationality groups represent a particular crime problem.

Contemporary Theory, Immigration, and Crime

Two important theoretical issues loom large when assessing contemporary research on immigration and crime. First, most research on immigration and crime remains couched in the social disorganization tradition or are macro level theories and aim to explain group rate differences rather than individual differences. As a result, we know very little about the influence of a number of important predictors of crime on the development of offending for immigrants. Hagan and colleagues (2008:106) note that

what appears to be lacking in the literature on immigration and crime is a thorough examination of individual, cultural, and structural factors relating why immigrants fare so well (see also Mears 2001; National Research Council 1996). For example, there is a body of evidence linking involvement in crime with factors such as impulsivity, poor parental supervision, weak attachment to school, association with delinquent peers, victimization, and disadvantaged neighborhoods. Although recent studies have begun to assess the influence of some of these factors on immigrant offending, the evidence to date is minimal and often limited to specific ethnic groups (see Bui 2009) or to European immigration (see Yeager 1997).

The second and arguably larger issue pertains to the general lack of theoretical inquiry and advancement. Specifically, the finding that immigration is not linked to an increase in crime generates a criminological paradox (or in some ethnically specific research, a Latino paradox) (Martinez 2002; Sampson and Bean 2006). First, most immigrants are young males often with limited educational and occupational skills (Hagan and Palloni 1998). This demographic profile is prototypical of an individual who would be at-risk for offending. Second, most immigrants settle initially in impoverished, disorganized areas often characterized by high levels of crime (Martinez 2002; Martinez and Lee 2000; Shaw and McKay 1942) although this trend is changing among recent immigrants (see Iceland 2009). Yet, against expectations, research finds that regardless of this demographic profile and the environmental risks, immigrant's rates of crime closely mirror or are less than those of native-born whites (see e.g., Sampson et al. 2005; Martinez 2002; Lee et al. 2001; Butcher and Piehl 1998). In part due to the inconsistency

between theory and empirical evidence, a central charge is to broaden the theoretical lens we use when examining the immigration-crime nexus (Hagan et al. 2008; Mears 2001). [22]

The general tendency of research on the immigration-crime nexus to rely upon the same theories used in the early 20th century has to date resulted in a litany of unanswered questions and unexpected findings (i.e., Latino paradox). At a basic level, general patterns of offending (i.e., prevalence, frequency, persistence, desistance)[23] among immigrants have not been documented. Moreover, an understanding of the factors that may influence variation in offending patterns between immigrants and native-born individuals remain largely unknown. In order to increase our understanding of the relationship between immigration and crime, an obvious next step seems to be to exploit recent theoretical advancements. Responding to this theoretical dearth, in this dissertation research I draw upon a life course perspective generally (Elder 1998) and, specifically, examine the utility of the age-graded theory of social control (Laub and Sampson 2003; Sampson and Laub 1993) to examine the immigration-crime nexus.

Life Course Perspective

Despite the growing body of literature examining the immigration-crime nexus, the vast majority of studies have been limited to aggregate level, cross-sectional analyses. As a result, although research consistently finds that immigration does not increase crime, a number of important questions remain regarding the criminal involvement of

[22] Notably, Lee and Martinez (2002) have put forth an immigration revitalization perspective to account for the paradoxical finding regarding immigration and crime. However, theoretical inquiry at the individual level remains limited.

[23] Definitions of these terms differ in the extant criminological literature. In this research, prevalence and frequency are defined as follows. Prevalence (or participation) refers to the percentage of the sample involved in crime. Frequency (or incidence) is a count of the number of involvements in crime during a particular period of time. More problematic are the definitions of persistence and desistance from crime. In this research, persistence is defined as the maintenance of a relatively constant rate of offending whereas desistance is viewed as a developmental process (rather than a terminal state) where criminal involvement declines toward a near zero rate of offending (see e.g., Bushway et al. 2001; Laub and Sampson 2001).

immigrants. Specifically, we do not yet have a clear understanding of whether immigrants are more frequently involved in criminal activity compared to their native-born counterparts. We do not know whether immigrants commit more serious crimes and whether or not they maintain a pattern of involvement in more serious crimes. Nor do we know whether immigrants display similar patterns of continuity in offending as those evidenced by native-born individuals. Questions similar to these, along with many others, form the basis of many contemporary criminological theories aimed at assessing the development of offending with age (see e.g., Laub and Sampson 2003; Loeber and Le Blanc 1990; Moffitt 1993).

Although several theories aim at explaining patterns of criminal behavior over time, a life-course perspective is used here for a number of reasons. Broadly speaking, life course theory is concerned with understanding the factors such as interpersonal, structural, and historical forces that influence the development of human lives over time (Elder, Johnson and Crosnoe 2004). To explain patterns of human development, life course theory draws upon two central concepts: trajectories and transitions. Trajectories refer to long term patterns of behavior, whereas transitions involve specific life events occurring over shorter periods of time (Elder 1994; Sampson and Laub 1993). As a result, each individual life history is distinct in that it is formed via interwoven age-graded trajectories that are potentially altered by short term transitions (Elder 1994). Accordingly, this theoretical framework allows for the examination of the lasting impacts of childhood factors as well as the influence of proximal factors on individual development across all life stages (Laub and Sampson 2003; Sampson and Laub 1993; Elder 1998).

At the heart of the life course perspective is an emphasis on the importance of both continuity *and* change in individual development across the life span (Elder 1998). This emphasis on continuity and change was in direct contrast to earlier theories that generally took a static view of behavior (Elder et al. 2004). This tendency toward static accounts of human behavior was prominent among many criminological theories that were largely concerned with understanding between-individual differences in offending (Farrington 2005; Sampson and Laub 1993). By highlighting the need to observe individual development across the life course emphasis has shifted away from static accounts of criminal behavior to examinations of the process of offending including the onset of problem behavior, frequency of criminal involvement, and persistence and desistance from crime.

Age-Graded Theory of Informal Social Control

One of the better known life-course theories of crime is Sampson and Laub's (1993) age-graded theory of informal social control. Consistent with traditional control theory (see e.g., Hirschi 1969), the basic premise of the age-graded theory of informal social control is that crime is more likely when bonds to society are weakened or broken. In accordance with the life-course perspective, this theory moves beyond traditional control theory by suggesting that behavioral trajectories can be and are altered by social events that occur at various stages across the life course. For instance, bonds to parents influence offending in adolescence whereas bonds to a spouse or work influence offending in adulthood. Specifically, Sampson and Laub (1993) assert that variation in delinquency is due to the combined influence of structural variables, family and school

variables, and individual characteristics.[24] Moreover, net of individual characteristics, social bonds mediate the influence of structural background variables on delinquency and crime.

Since the 1980s, a number of theories have emerged that attempt to explain offending over the life course (see e.g., Agnew 1997; Farrington 2005; Laub and Sampson 2003; Moffitt 1993; Sampson and Laub 1993; Thornberry and Krohn 2005). The age-graded theory of informal social control provides the theoretical foundation of this research for a number of reasons. First, relative to many other life-course theories the age-graded theory of informal social control has been subjected to an extensive vetting process which has demonstrated support for the theory and many of its various facets (see Laub, Sampson and Sweeten 2008). Although the initial test of the theory was limited to a sample of "white" boys from Boston, the authors stress the generality of their theory across place, time, gender, and race (see Laub and Sampson 2003:282-285).

Even though the utility of the age-graded theory of informal social control has not been systematically assessed using immigrant samples, expectations based on the general nature of the theory are that similar processes are at work for all individuals regardless of their immigrant status. Findings from two recent studies lend credence to the utility of the social bond element of the theory in explaining immigrant involvement (or noninvolvement) in crime. As was reviewed previously, Bui's (2009) research demonstrated the importance of family and school problems in explaining involvement in

[24]The age-graded theory of informal social control also explains continuity and change in crime and deviance over the life course. Additionally, Laub and Sampson (2003) proposed a revised version of their theory where crime across the life course is explained by the additive and interactive effects of social control, routine activities, and human agency. Exploration of continuity and change in crime is beyond the scope of the current study. Emphasis is placed on examining the core informal social control aspect of the theory. As such, this research provides a first step in assessing the utility of the theory in explaining immigrant offending.

crime across successive immigrant generations. Additionally, Dinovitzer, Hagan, and Levi (2009) found that bonds to the family and school decreased immigrant youth involvement in crime. While these two studies provide initial support for the importance of social bonds among immigrants, it remains to be seen whether there is a differential effect of social bonds on offending comparing immigrants with native-born individuals. Moreover, the mediation hypothesis as presented by Sampson and Laub (1993) – i.e., that social bonds will mediate the influence of structural background factors on delinquency and crime – has not been tested on immigrant samples.

Furthermore, the research presented here is part and parcel of a larger research agenda aimed at examining similarities and differences in offending over the life course for native-born and immigrant individuals. Specifically, in this research I examine the first of three core tenets of the age-graded theory of informal social control (Sampson and Laub 1993); namely how social bonds influence offending and whether social bonds mediate the effects of structural variables on offending. In subsequent projects I examine the remaining two tenets of the theory by investigating explanations for both continuity and change in offending across the life course; specifically, the influence of adult social bonds on offending trajectories.

SUMMARY

As this review demonstrates, there is a long history of research on the relationship between immigration and crime. Although this research appears to coalesce around the finding that immigrants are involved in less crime than their native-born counterparts (or that immigration is not associated with increasing crime rates), as researchers continue to delve into the immigration-crime nexus they are uncovering important complexities in

this relationship. In particular, there appear to be important generational and nationality differences related to immigration and crime. To date, researchers have only begun to disentangle this complex relationship. Moreover, there exists a theoretical dearth – particularly at the individual level – regarding immigration and crime. In the following chapter I outline the data and analytic strategy for this study which is aimed at addressing these gaps.

CHAPTER 4 THE CURRENT STUDY

Despite more than a century of research on immigration and crime, the issue remains controversial. The salience that this nexus has among the general population, and the implications it holds among immigrants in particular, necessitates the continuance of scholarly attention on this topic. That is, although much has been learned from previous research, in general there has been limited empirical effort aimed at investigating the relationship between immigration and crime (Rumbaut et al. 2006). The current research project aims to address many of the gaps in this area and thereby add to our understanding of important aspects of the immigration-crime nexus. In this chapter, I will identify the gaps in the literature and present the specific research questions that this research will address.

RESEARCH QUESTIONS

The overarching goal of this research was a comprehensive investigation of the relationship between immigration and crime in the United States at the individual level. Specifically, I was interested in examining the developmental patterns of offending among immigrants and assessing how these patterns compare to those of the native-born. To do so, I examined two broad questions: (1) how do the patterns of offending over the life course differ across immigrant and native-born groups, across immigrant generations, and across specific immigrant nationality groups? and (2) what factors explain variation in offending among immigrants and does the influence of these predictors differ across

immigrant and native-born groups, across immigrant generations, and across specific immigrant nationality groups?

Over the past 25 years criminology has focused much attention on measuring and describing the development of offending with age. This body of research has produced several consistent patterns. First, an earlier age of onset is a strong predictor of long-term, serious offending over the life course (Blumstein, Farrington and Moitra 1985; Farrington et al. 1990; Le Blanc and Loeber 1998; Piquero, Farrington and Blumstein 2007; Thornberry and Krohn 2003). Second, a high frequency of offending in adolescence is associated with a high frequency of offending in adulthood (Farrington 2003; Piquero et al. 2007). Third, research consistently finds that involvement in crime peaks in mid- to late-adolescence and declines through adulthood (Blokland, Nagin and Nieuwbeerta 2005; Ezell and Cohen 2005; Hirschi and Gottfredson 1983; Piquero et al. 2007; Sampson and Laub 2003). Finally, there is substantial heterogeneity in offending trajectories over the life-course and by mid-adulthood most individuals have desisted from crime (Blokland et al. 2005; Ezell and Cohen 2005; Piquero et al. 2007; Sampson and Laub 2003).

What has yet to be assessed is how well immigrants and the children of immigrants fit these general patterns of offending. My first research question addressed this gap and examined the basic characteristics of offending patterns and the similarities and differences across immigrant and native-born groups, across immigrant generations, and across specific immigrant nationality groups. Specifically, I began by examining the relationship between immigrant status and participation in crime, the onset of criminal

involvement, frequency of offending, offending seriousness, and duration of involvement in offending.

RQ 1. Do first and/or second generation immigrants have different offending patterns over the life course compared to their native-born counterparts?

1a. Do first and/or second generation immigrants have a higher rate of participation in crime compared to their native-born counterparts?

1b. Do first and/or second generation immigrants have an earlier age of onset compared to their native-born counterparts?

1c. Do first and/or second generation immigrants have a greater frequency of offending compared to their native-born counterparts?

1d. Are first and/or second generation immigrants involved in more serious crimes compared to their native-born counterparts?

1e. Are first and/or second generation immigrants more likely to evidence patterns of persistence or desistance from crime with age compared to their native-born counterparts?

In addition, I disaggregated the immigrant sample into their respective nationality groups and examined whether trajectories of offending differed across immigrant groups. Although prior research has analyzed immigrants as if they comprise a homogeneous group it has long been recognized that studies need to account for the differences between nationality groups. In this study, I examined whether an aggregation bias existed by disaggregating the data by nationality group and investigating the questions posed above asking whether patterns of offending differed across immigrant groups.

In this analysis I also addressed an important criticism of the research examining the link between immigration and crime. That is, previous research has relied largely on official data (Horowitz 2001; Taft 1933). The potential for bias in studies relying on official data and the possibility of erroneous conclusions drawn from these data have been well documented. As a result, research addressing the link between immigration and crime would benefit from an assessment of offending patterns utilizing alternative measures of criminal involvement. In this dissertation I examined the questions posed above using self-reports of criminal involvement and assessed whether the conclusions drawn from official data were comparable to self-report data.

With my second research question I utilized the age-graded theory of informal social control and examined predictors of offending into young adulthood. While it was beyond the scope of the current research to examine the influence of informal social bonds in adulthood (e.g., marriage, work, childrearing), an examination of the influence of social bonds in childhood/early adolescence on offending patterns provided a necessary starting point for garnering a better understanding of the similarities and/or differences in the effect of important predictors of offending across immigrant and native-born individuals. To date, only a handful of empirical studies have investigated the impact that individual, familial, educational, and/or environmental variables have on involvement in crime among immigrants (see e.g., Bui 2009; Dinovitzer et al. 2009; Yeager 1997). In this study, I added to this body of literature by examining the extent to which variation in offending patterns were explained by family, peer, school, and neighborhood factors.

RQ 2: What factors explain variation in offending over time for immigrants and native-born individuals?

2a. Do social bonds in childhood/early adolescence contribute to the variation in offending patterns over time for immigrants?

2b. Do social bonds mediate the influence of structural variables on offending for immigrants?

2b. Does the influence of social bonds in childhood/adolescence on offending over time differ across native-born and immigrant youth, across immigrant generations, and across specific immigrant nationality groups?

DATA

This research examined the relationship between immigration and crime during two important periods of immigration by drawing upon two different datasets: the *Unraveling Juvenile Delinquency* data and subsequent follow-ups (Glueck and Glueck 1950, 1968) was used to examine immigration and crime in the early 20th century, and the National Longitudinal Survey of Youth 1997 (NLSY97) was used to examine immigration and crime in the late 20th century.

The Glueck Study

The *Unraveling Juvenile Delinquency* study (Glueck and Glueck 1950, 1968) and subsequent follow-ups were conducted by Sheldon and Eleanor Glueck in their classic study of 500 delinquent and 500 non-delinquent boys from the Boston area born between 1924 and 1932. This pioneering study, aimed at documenting the causes of delinquency, contains a wealth of information regarding delinquency and crime, family, school, peer,

and individual factors. The Gluecks' research team conducted three interviews with the boys capturing information spanning childhood to young adulthood. Average age at each data collection period is 14, 25, and 32 for waves 1, 2, and 3, respectively. Data from all three waves along with the reconstructed and supplemented data (see Sampson and Laub 1993 for details) were analyzed.

These data were particularly well suited to study the relationship between immigration and crime as they contain a sizeable portion of native-born children and children of immigrants (i.e., second generation).[25] The full delinquent sample (n = 500) consists of 204 native youth (youth born in the United States and both parents born in the United States) and 280 children of immigrants (youth born in the US and at least one parent born outside of the United States). A small group of boys (n = 10) was excluded from analyses as there was not enough information on parent's place of birth to determine generation status. Additionally, first generation immigrants were excluded from all analyses (n = 6) as the group was too small for statistical comparisons.

There is considerable ethnic diversity in the sample. Most of the delinquent boys are of English (26%, n = 125), Italian (24%, n = 116), or Irish (19%, n = 94) ethnic origin. Other ethnicities in the data include Slavic, Jewish, French Canadian, Scandinavian, and Portuguese. The majority of native-born boys are English (28%, n = 57), Irish (24%, n = 49), or Old American[26] (17%, n = 34). Most of the immigrant boys (the second generation) are Italian (36%, n = 101), English (24%, n = 66), or Irish (15%, n = 42) in ethnicity.

[25] Determination of immigrant status was consistent with the current literature (Bui and Thongniramol 2005; Rumbaut 2007; U.S. Census Bureau 2001) in that the Gluecks used the birth place of the youth and the birth place of the parents for generation classification decisions (see Glueck and Glueck 1950:93-95).
[26] Old American refers to those individuals with families who have resided in the United States for multiple generations.

Dependent Variables

The original data compiled by the Glueck's (1950, 1968) contains information on the criminal histories for each boy. The information was derived from official reports (i.e., police, court, and correctional files) and includs details such as the number of arrests, number of convictions, and type of disposition at each wave. During the reconstruction of the Glueck data, Sampson and Laub (1993:55) recognized that having the data in this format (i.e., aggregated counts at each wave) prevented an analysis of criminal histories including an analysis of the sequence of arrest events and dispositions. Over a two-year period, Sampson and Laub returned to the original case records and recoded the criminal history data into a format where information regarding offense counts by crime type and conviction histories were available annually from first arrest (beginning at age 7) to 32 years of age. The result was an individually-based longitudinal data set (see Sampson and Laub 1993:55-59, for more information regarding the reconstruction and supplementation of the data). Complete criminal histories were available for 480 men in the delinquent sample.[27] Overall, more than 6,300 arrest charges were accrued by the Glueck men from ages 7 to 32 (Sampson and Laub 1993).

Involvement in crime was assessed using an additive total arrest measure that captured involvement in any crime. In subsequent analyses the total crime measure was disaggregated by crime type and analyses were conducted with crime specific outcomes including property crime, violent crime, alcohol/drug crime, and a measure of involvement in "other" crimes.

[27] Records for the remaining 20 cases were lost and therefore criminal histories could not be created for this small group of men. Analyses indicated that these men do not differ from the 480 men for whom criminal histories could be created (see Sampson and Laub 1993:55, footnote 6).

Independent Variables

I examined three social bond domains in the current study: family, peer, and school.[28] All independent variables were measured in wave one during childhood and early adolescence. I also controlled for the effect of a number of demographic correlates of crime including IQ, antisocial attitude, impulsivity, and the early onset of delinquent/criminal behavior.

Family Context: The family context represents one of the most important factors related to delinquency and crime (see Hawkins et al. 1998; Loeber and Stouthamer-Loeber 1986). Family context variables included here measured both family process and family structure factors (see Sampson and Laub 1993). There are four family process items measuring attachment, supervision/monitoring, parental erratic/harsh discipline, and family cohesion. The *attachment* indicator captured the reciprocal affection between parent and child. This item was coded 1 = hostile, rejective; 2 = indifferent; and 3 = warm (mean = 1.98). *Supervision* was a single item that measured whether suitable care was given or arranged for the child. This item was coded 1 = unsuitable (children were left by themselves or in the care of an irresponsible child or adult); 2 = fair (partial supervision by the mother); and 3 = suitable supervision (mean = 1.43). *Erratic/harsh discipline* was a composite measure of three variables that measured physical punishment by the mother/father, threatening or scolding behavior by mother/father that elicited fear, and erratic discipline (see Sampson and Laub 1993:73). The final measure is an ordinal scale ranging from 1 = no erratic/harsh discipline evidenced by either parent; 4 = high erratic/harsh discipline evidenced by at least one parent (mean = 3.24). *Family cohesion*

[28] All of the boys in the Glueck study resided in underprivileged neighborhoods. The lack of variability across neighborhood contexts precludes the study of neighborhood influences in these data.

was a general measure of emotional ties among family members, joint interests, pride in the home, and a "we" feeling in general (Glueck and Glueck 1950:115; mean = 1.91).

The structure variables examined here include family structure, family size, socioeconomic status, household crowding, residential mobility, parental criminality, and parental education. *Family structure* was a variable differentiating intact households from other living situations. Children living with both their biological mother and father were categorized as living in an intact household (coded 1); all other living situations were categorized as non-intact households (coded 0). The majority of youth reported not living with both biological parents (mean = .39). *Family size* was a measure of the number of children in the boy's family (range 1 to 8; mean = 5.44). Sampson and Laub (1993:72) created a *socioeconomic status* standardized scale based on the average weekly income of the family and the family's reliance on outside aid. The socioeconomic status variable ranged from -3.64 to 3.45 (mean = .56). *Household crowding* measured the number of occupants per bedroom and was coded 1 = one person per bedroom, boy has his own room; 2 = average, two persons per bedroom; 3 = overcrowded, more than two persons per bedroom excluding infants (see Sampson and Laub 1993:71; mean = 2.24). *Residential mobility* captured the frequency of moves during the boy's childhood. This item ranged from 1 to 16 or more moves (mean = 8.67). *Parental criminality* captured paternal and maternal official reports of criminal involvement (excluding minor auto and license law violations). The parental criminality variables were coded 1 = presence of official criminal involvement; 0 = no presence of official criminal involvement. Nearly half of all boys reported a history of maternal criminality (mean = .45) while two-thirds reported a history of paternal criminality (mean = .66). *Parental education* distinguished

between parents who had a minimal level of education and those with some high school level education. Parental education was split into three categories: no formal education, some primary school education, and some high school level education. The modal category was some primary school education.

Peers Associations: One of the strongest correlates of one's own delinquent involvement is the delinquency of one's peers (Agnew 1991; Hawkins et al. 1998; Warr 2002). Due to the coterminous nature of the delinquent peer measure and the measure of the respondent's own delinquency, Sampson and Laub (1993:108) constructed a measure of *delinquent peer attachment*, distinguishing boys with high attachment to delinquent peers from those with no delinquent peers or low attachment to delinquent peers. To do so they utilized a two step process. First, two measures were combined to examine attachment to peers. The boys were asked about their relationships with fellow schoolmates (ranging from strong attachment to hostile feelings). Additionally, information pertaining to how well the boy got along with other children/schoolmates was culled from teacher reports coded 1 = poor (boy was unfriendly to other children, other children did not like him); 2 = fair (boy did not seek companionship, but he was not actively antagonistic toward other children); and 3 = good (boy was friendly and made an effort to please friends). The second step involved the identification of those boys who reported strong attachment to delinquent peers. Those with strong attachments to delinquent peers were coded 1, while boys with no delinquent peers or low attachment to delinquent peers were coded 0 (mean = .42).

School Factors: Research consistently finds that children and youth who do well in and are more attached to school are less likely to be involved in delinquent and

criminal behavior (see Gottfredson 2001). I examined three measures of school performance including attachment to school, grade repetition, and frequency of truancy. *Attachment to school* was a standardized scale combining two measures (Sampson and Laub 1993:106). First, boys were asked about their general attitude toward school coded 1 = readily accepts school, 2 = indifferent toward school, and 3 = very resistant to school, expressing a marked dislike of it (recoded). Second, the boys academic ambition was assessed by asking whether or not the boy expressed a desire for further schooling and was coded 1 = boy had not given any thought to stopping or continuing school, 2 = boy wanted to stop school immediately, 3 = finish grade school, 4 = go on to high school or trade school, 5 = continue education beyond high school. The attachment to school variable ranged from -2.41 to 2.84 (mean = -1.13). *Grade repetition* was a measure of the total number of grades the boy repeated (mean = 3.52). *Truancy* was an ordinal measure of the frequency of truancy where 1 = never truant; 2 = occasionally truant; and 3 = persistent truant (mean = 2.58).

Demographic Correlates: Individual characteristics such as IQ, antisocial attitude, impulsivity, and early onset of offending evidence a robust relationship with delinquency and crime (see Lipsey and Derzon 1998; Hawkins et al. 1998). The *IQ* measure reflected verbal intelligence (Wechsler-Bellevue Scale). Verbal ability has been recognized as a particularly important predictor of problem behavior (see Moffitt 1990 for an extensive review). IQ ranged from 53 to 128 (mean = 91.7). *Antisocial attitude* included measures such as: defiance, hostility, and destructiveness. These items were measured using the Rorschach method and coded by Rorschach experts (Glueck and Glueck 1950:57-60). Although the validity of traditional Rorschach tests are suspect today (see e.g., Garb et al.

2004), the Gluecks included a psychiatric interview component which largely supported the findings derived from the Rorschach tests (Glueck and Glueck 1950:252). Each item was coded where 1 = marked presence of the trait; 2 = slight or suggestive presence of the trait; 3 = absence of the trait. As was initially pointed out by one of the psychiatrists administering the test, it is possible "…that one can find almost every trait at some time and to some degree in most persons…" (Glueck and Glueck 1950:217), but with the use of this classification scheme it can be determined whether a particular trait plays a considerable role for each boy. To further distinguish those who strongly evidenced a particularly trait from the rest of the boys, I recoded these variables so that 1 = marked presence of a trait; 0 = slight presence or absence of a trait. I then summed these items to create an antisocial attitude scale which ranged from 0 to 3 where 3 = marked antisocial attitude (mean = .88). Impulsivity was also measured using the Rorschach method. Boys with marked presence of the impulsivity trait were coded 1. Nearly one fifth of the boys evidenced marked impulsivity (mean = .18). *Early onset of offending* identified boys who self-reported the onset of misbehavior prior to 8 years of age (mean = .13).

The National Longitudinal Survey of Youth 1997

The National Longitudinal Survey of Youth 1997 (NLSY97) is the newest assessment in the series of National Longitudinal Surveys and is representative of people living in the United States in 1997 who were born during the years 1980 through 1984 and were 12 to 16 years of age during the initial survey round in 1997 (Center for Human Resource Research 2005; CHRR). In Round 1, conducted in 1997, parents were interviewed about their own and their children's attitudes and behaviors. Additionally, the youth were interviewed on an annual basis beginning in 1997 and completed a self-

administered survey that collected information on sensitive topics that reflected antisocial behavior such as delinquency and substance use. This dataset includes a variety of information on family dynamics, structural factors, individual characteristics, and delinquent/criminal involvement. Currently, there are nine waves of information available for participants involved in the original study. The sampling design of the NLSY97 features an over-sampling of minority groups that allows researchers to analyze behaviors and experiences across racial/ethnic groups. Data from the 1997 to 2005 waves were analyzed in the current research.[29]

The initial sample size of the NLSY97 was 8,984 boys and girls. The largest portion of these respondents (n = 6,748) comprised the general sample which was designed to be representative of the general U.S. population born between January 1, 1980, and December 31, 1984. The remaining portion of the sample (n = 2,236) was an over-sample of Hispanic and African American youth living in the United States during the initial survey who were born during the same period as the cross-sectional sample (CHRR 2005). Overall, the NLSY97 has a high retention rate; 83.5% of the total sample completed the most recent survey round in 2006. The retention rate was slightly higher among the supplemental over-sample (85.1%) compared to the general sample (83.0%).

Immigration status was calculated using information on the place of birth of the youth and his/her biological parents, grandparent place of birth, and a citizenship measure created by analysts at the Center for Human Resource Research.[30] Based on this

[29]Starting in 2004 questions pertaining to criminal involvement were asked only of those individuals who ever reported a history of incarceration as well as of a random subsample of the never incarcerated population. This change in survey methodology dramatically reduces the sample size especially when examining offending disaggregated by immigrant status.

[30] Place of birth questions asked respondents whether they were born in the United States or its surrounding territories including Guam, Puerto Rico, Virgin Islands, other U.S. Pacific Islands. Only those born in the 50 states were classified as born in the United States. Although Puerto Ricans are U.S. citizens by birth,

information, the youth were classified as: native-born (the youth and both biological parents were born in the US), first generation immigrant (the youth and at least one biological parent were born outside the US), and second generation immigrant (the youth was born in the US and at least one biological parent was born outside the US).[31] Of the 8,984 youth surveyed in the first wave, immigrant status could be calculated for 7,918 youth (88% of the full sample)[32] of which there were 6,418 native-born youth (n = 1,946 native-born blacks), 532 first generation immigrants, and 968 second generation immigrants.[33]

Country of birth information was gathered for those youth who were born outside the United States (i.e., first generation immigrants).[34] Due to the small sample sizes of immigrants from most countries I used a two step process to group countries into appropriate regional categories.[35] First, information from the United Nations (United Nations Statistics Division 2008) geoscheme was used to group countries by sub-region. Second, because of the small sample sizes for the majority of the sub-regions I grouped geographically proximal areas together. For example, eastern and south-eastern Asia

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previous research excludes Puerto Ricans from the native-born U.S. sample as Puerto Ricans often experience many of the obstacles to incorporation that other immigrant groups face (see e.g., Hirschman 2001). For those youth not living with their biological parent(s), information regarding the biological parent's place of birth was collected from the responding resident parent.

[31] Interviewers offered to conduct the interview in Spanish. Only 1 percent of youth, and less than 5 percent of parents preferred to have the interview conducted in Spanish.

[32] The offending histories of the 1,066 cases dropped from the analysis were compared to the 7,918 cases included in the study. Four indicators in each wave from 1997 to 2005 were examined including self-reported participation and frequency of involvement in delinquency/crime and self-reported incidence and frequency of arrest yielding a total of 36 statistical comparisons. Only five significant differences emerged; I cannot rule out that these differences were merely due to chance. Notably, three of the significant differences were found comparing self-reported participation in delinquency/crime; however, there was no systematic pattern of variation between the two groups. The exclusion of the 1,066 cases does not appear to interject bias into the analyses.

[33] See Appendix A for a detailed discussion of the classification strategy adopted for this research.

[34] Country of birth information was not available for the parents of the youth in the NLSY97 restricted Geocode data. As a result, immigrant nationality could only be determined for first generation immigrants. Information was available to code the nationality group for 513 of the 532 first generation immigrants.

[35] See Appendix B for a complete list of countries classified into each regional category.

were grouped. This classification strategy resulted in the following four categories. The largest group of youth was born in Mexico (n = 201; 39%).[36] Sizable groups of youth were born in Central America (n = 63; 12%), the Caribbean (n = 74; 14%) and Asia (n = 49; 10%).[37] Ideally, an analysis of immigrant differences by nationality group would include a greater variety of nationality groups; however, the four groups captured in the current research represent the fastest growing immigrant groups in the United States (Gerstle and Mollenkopf 2001).

In 2001 researchers began to ask respondents about their citizenship status. Sixty percent of the first generation immigrants in this sample reported that they were not U.S. citizens in 2001 (n = 291). Most of these youth stated that they were lawful permanent residents (n = 153; 52%). Others reported that they had submitted their application for naturalization (n = 58; 20%), submitted their application to become a legal permanent resident (n = 38; 13%), were in the United States on a temporary visa (n = 9; 3%), were a refugee or asylee (n = 3; 1%), or were living outside the United States at the time of the survey (n = 11; 4%). The remaining 19 youth (7%) did not report a reason for their non-citizenship status.

[36] Due to the relatively large sample size for Mexican immigrants this group was analyzed separately. Historically, Mexican immigrants have been isolated in analyses of criminal behavior (see e.g., Abbott 1931). Moreover, their exposure to persistent disadvantage and negative contexts of reception have led some to suggest that Mexican American's are at high risk for negative outcomes or downward assimilation (Portes and Rumbaut 2001:279), as is evidenced for instance, by their high rates of academic problems compared to other immigrant groups (see e.g., Hirschman 2001; Matute-Bianchi 1986).

[37] Other regional groups were represented in the data (European's (n = 31; 6%), South America's (n = 30; 6%); Middle Easterner's (n = 23; 4%), African's (n = 15; 3%), Canadian's (n = 17; 3%), Oceania's (n = 4; < 1%) and Other (n = 12; 2%)), but small sample sizes hindered a statistical analysis of these groups. Preliminary analysis of these groups did not reveal any substantive differences to the nationality group differences reported in the Results chapters.

Dependent Variables

The NLSY97 gathered information in each wave on self-reported delinquent and criminal involvement since the date of the last interview.[38] In the first wave of the NLSY97 survey in 1997 respondents were asked if they had *ever* been involved in a series of delinquent/criminal acts including: whether they had purposely damaged or destroyed property that did not belong to them; if they had stolen something from a store or something that did not belong to them that was worth less than 50 dollars; if they had stolen something from a store, person or house, or something that did not belong to them that was worth 50 dollars or more including stealing a car; if they had committed other property crimes such as fencing, receiving, possessing or selling stolen property, or cheated someone by selling them something that was worthless or worth much less than what they said it was; if they had attacked someone with the idea of seriously hurting them or had a situation end up in a serious fight or assault of some kind; and if they had sold or helped to sell drugs including marijuana, hashish, heroin, cocaine, or LSD. In subsequent interview waves, respondents were asked whether they were involved in any of the delinquent/criminal acts since the date of the last interview (i.e., in the last 12 months). Information was also gathered about the frequency of involvement in each of these behaviors. Over the nine waves, more than 257,000 self-reported acts of delinquency and crime were accrued by respondents in the sample.

Self-reported criminal involvement was assessed using an additive crime scale measuring involvement in any of the six crimes listed above. In subsequent analyses the

[38] Beginning with the 2004 survey, the self-reported delinquency and crime items were only asked of a random subsample of respondents and those who had ever reported being arrested in a previous wave. This change in survey structure significantly reduces the sample size for these items in the final two waves.

crime scale was disaggregated by crime type including violent, property, and drug crimes.

Independent Variables

I looked at three social bond domains in the current study: family, peer, and school.[39] Family and neighborhood structural variables as well as a number of important demographic correlates of crime including sex, intelligence, and the early onset of delinquency/criminal behavior are included in the models.[40] All independent variables were measured during the first wave of interviews in 1997.

Family variables: The family context variables measured both family process and family structure factors. There were three family process items including parental attachment, emotional ties to parent, and supervision/monitoring. *Attachment* was measured using three variables including: youth thinks highly of mother, youth wants to be like mother, and youth enjoys spending time with mother. The items ranged from 0 to 4 where 0 = strongly disagree and 4 = strongly agree. These three items were analyzed using factor analysis with all items loading on a single factor (alpha = .73). Regression factor scores were saved. The final scale ranged from -3.51 to 1.14 (mean = .03).[41] *Emotional ties* to mother was measured using variables asking the youth whether his/her mother praises youth when he/she does well, mother criticizes youth's ideas (reverse coded), mother blames youth for problems (reverse coded), mother helps youth with

[39] Due to the survey strategy of the NLSY97 information on many of the independent variables was only available for a subsample of the youth. Specifically, questions pertaining to family processes and neighborhood risk were asked only of those aged 14 and younger in the first wave. This restriction affected my second research question.

[40] Race is also included as a control variable in supplemental analyses to assess the robustness of the findings. Specifically, I control for the effect of Black, Hispanic, and other race/ethnicity.

[41] Identical measures were also gathered regarding paternal supportive behaviors (α = .83). In order to retain cases, when information was not available for mothers, data from fathers was used to create a parental attachment scale. The correlation between maternal attachment and paternal attachment was strong (r = .532; $p < .001$). This coding strategy affects less than 2% of the sample.

things that are important to him/her, mother makes and then cancels plans, and mother is supportive of youth. The response categories for the first five items ranged from 0 = never to 4 = always. The final item was coded 1 = very supportive, 2 = somewhat supportive, and 3 = not very supportive (recoded). These items were analyzed using factor analysis with all items loading on a single factor (alpha = .70). Regression factor scores were saved. The scale ranges from -5.13 to 1.17 (mean = .03).[42] *Supervision* was measured using four items capturing maternal knowledge of child behavior including: knowing child's friends, knowing the parents of the child's friends, knowing who their child is with when they are not at home, and mother knows teachers and about school activities. These items ranged from 0 to 4 where 0 = knows nothing and 4 = knows everything. These four items were analyzed using factor analysis with all items loading on a single factor (alpha = .71). The final scale ranges from -3.11 to 1.76 (mean = .03).[43]

The structural factors examined here include family structure, family size, and socioeconomic status. *Family structure* differentiated intact households from other living situations. Children living with both their biological mother and father were categorized as living in an intact household (coded 1). All other living situations were categorized as living in a non-intact home (coded 0). Just over half of the youth reported living with both biological parents (mean = .52). *Family size* reflected the number of individuals living in the youth's household who were under the age of 18 at the time of the survey. Family size ranged from 1 child to 8 or more children in the household (mean = 2.43).

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[42] Identical measures were also gathered regarding paternal emotional ties (α = .74). In order to retain cases, when information was not available for mothers, data from fathers was used to create a parental emotional tie scale. The correlation between maternal emotional tie and paternal emotional tie was strong (r = .445; p < .001). This coding strategy affects less than 2% of the sample.

[43] Identical measures were also gathered regarding paternal supervision (α = .81). In order to retain cases, when information was not available for mothers, data from fathers was used to create a parental supervision scale. The correlation between maternal supervision and paternal supervision was strong (r = .649; p < .001). This coding strategy affects 2% of the sample.

Socioeconomic status was a measure of the ratio of household income to the poverty level in the previous year taking household size into account. This measure was developed by researchers at the Center for Human Resource Research. To ensure anonymity, the CHRR researchers truncated the responses for high income respondents. Socioeconomic status ranges from 0 (in poverty) to 1,627 (mean = 284.33). Because of skew, the log of socioeconomic status was used in the analyses. Parental education measured the highest grade completed by either parent in the household. Parental high school graduate was coded 1 if one or both parents attained a high school degree, 0 = otherwise (mean = .34). Parental college education was coded 1 if one or both parents had some formal education past high school, 0 = otherwise (mean = .49). When models included both these variables, parents with less than a high school education became the comparison group.

Peer Association: Respondents were asked about their perceptions of peer involvement in delinquent activities including smoking, drinking, illegal drugs, gang involvement,[44] and skipping classes. For each behavior responses were coded 1 = almost none (less than 10%), 2 = about 25%, 3 = about half, 4 = about 75%, and 5 = almost all (over 90%). The five items were summed to create a *delinquent peer* scale where a higher score indicated a greater perception of peer involvement in deviant behaviors. The scale ranged from 5 to 25 (mean = 11.06).

School Factors: There were three total measures of school factors including frequency of tardiness, suspension, and school victimization. *Truancy* measured how often the youth reported that they were late to school without an excuse in the previous fall term. The truancy item ranged from 0 to 99 times late (mean = 2.32). Because this

[44] Assessments of gang involvement were based upon the respondents' subjective interpretation; no cues for gang colors, name, or the like were given during the interview.

item was severely skewed, the inverse of the variable was used in subsequent analyses. S*uspension* was a single item that measured problem behaviors at school. Respondents were asked if they had ever been suspended from school (0 = no, 1 = yes). More than a quarter of youth reported being suspended from school at some point in their academic career (mean = .29). *School victimization* was a three item indicator measuring the number of times the respondent had been threatened at school, had something stolen at school, or was in a fight at school. These items were summed and the final scale ranged from 0 = no school victimization to 140 instances of victimization at school (mean = 1.84). To deal with severe skew for this variable, the inverse of school victimization was used in analyses.

Neighborhood Factors: The importance of neighborhood context (i.e., disadvantage, disorder, crime, violence) on criminal behavior has long been recognized (see e.g., Sampson and Groves 1989; Shaw and McKay 1942). I examined two measures tapping domains of environmental risk and neighborhood victimization. *Environmental risk* was a composite index of items assessing adolescents' physical environmental risk in and around their homes developed by researchers at Child Trends (CHRR 2005:202). This item was created using information from respondent and interviewer assessments. First, respondents were asked about the availability of electricity and heat in their home in the past month (0 = no risk; 1 = risk) and the presence of gunshots in their neighborhood in a typical week (0 = no risk; 1 = risk, gun shots heard 1 or more days a week). Second, interviewers were asked to report on the appearance of neighborhood buildings (how well kept the neighborhood was; 0 = no risk, well kept; 1 = moderate risk, fairly well kept; 2 = high risk, poorly kept), the cleanliness of the respondents home (0 =

no risk, well kept; 1 = moderate risk, fairly well kept; 2 = high risk, poorly kept), and if the interviewer was concerned for their safety when in the respondents neighborhood (0 = no, no risk; 1 = yes, risk). An environmental risk score was calculated for all respondents with complete data on at least 4 of the 5 questions. Those with only 4 of the 5 responses were assigned a weighted score based on the 7-point scale (see CHRR 2005:116). Respondents with missing data on 2 or more items included in this scale did not receive an environmental risk score. The five items were summed; higher environmental risk scores indicated greater risk (mean = 1.35).

The influence of experiences with victimization early in the life course was also assessed. Respondents were asked about the frequency of early exposure to victimization including if had ever had their house broken into prior to turning 12 years of age and if they had ever seen someone get shot or shot at prior to turning 12 years of age. Items were coded 0 = no, 1 = yes and summed (range 0 – 2). Nearly a quarter of the sample (23%) reported at least one experience with early victimization. A small portion of the sample (3%) reported experiences with both forms of victimization prior to turning 12 years of age.

Demographic Correlates: The individual level variables included sex, intelligence, and early onset of offending. *Gender* was coded 1 = male, 0 = female. *Intelligence* was measured using the Peabody Individual Achievement Test (PIAT) math subtest which was designed to test knowledge and application of math concepts and facts. A standardized version of the PIAT math score was created by analysts at the Center for Human Resource Research that was normed on a nationally representative sample of children and youth. The PIAT variable ranged from 0 to 100 (mean = 70.7).

Respondents were asked about the age at which they were first arrested. *Early onset* captured those who self-reported an arrest at thirteen years of age or younger (mean = .06).

ANALYTIC STRATEGY

Patterns of Offending over the Life Course

My first set of research questions asked about the patterns of offending across: a) immigrant and native-born youth, b) immigrant generations, and c) immigrants from specific nationality groups compared to native-born individuals. Because research has yet to assess how well immigrants and their children fit (or do not fit) general patterns of offending this research began with a descriptive analysis of basic offending patterns. Specifically, I examined the relationship between immigration status and official crime (using the Glueck data) and self reports (using the NLSY97 data) of offending looking at participation, age of initiation, frequency, offending seriousness (i.e., crime type), and continuity of involvement in crime (i.e., persistence and desistance) from childhood/adolescence through young adulthood.

Prevalence, Age of Onset, and Frequency Analyses. The analysis of offending patterns proceeded in two steps. In the first step, I utilized descriptive statistics to examine whether immigrants had a higher rate of participation, an earlier age of onset, and a greater frequency of involvement in delinquency/crime compared to their native-born peers. A series of *t* tests and χ^2 tests were estimated to test for mean level differences in participation, age of onset, and frequency of offending between the immigrant and native-born groups. To assess whether immigrants were differentially

involved in crimes of a more serious nature, analyses were disaggregated by crime type (i.e., property, violent, and alcohol and/or drug crime) and reanalyzed.

Participation or prevalence of offending was assessed by calculating the percentage of youth involved in delinquency/crime at each age. Specifically, prevalence of offending was measured by dividing the total number of cases with at least one recorded instance of delinquent/criminal involvement by the total number of cases (or people) in each subsample. In this study, this calculation was computed at each age, for immigrant and native-born groups separately.

Age of onset has been identified as an important predictor of sustained criminal behavior into adulthood (see LeBlanc and Loeber 1998; Thornberry and Krohn 2003, for thorough reviews). In fact, much of the extant research suggests that an early onset of criminal behavior represents one of the strongest predictors of long term offending (Blumstein et al. 1986; Farrington et al. 1990; Loeber and LeBlanc 1990; Piquero et al. 2007). The definition of early onset, however, is not clear cut (Krohn et al. 2001) which has lead to criticism regarding the often arbitrary and data driven operationalization of early onset measures (Delisi 2006). In addition, designation of an early onset of offending differs depending upon which data source is used. That is, most studies drawing upon official reports tend to use 13 years of age as the cut point between early and normative or late onset (see e.g., Blumstein et al. 1984; DeLisi 2006; Farrington et al. 1990; Piquero et al. 2007) although some use older ages (see e.g., Patterson et al. 1998) or younger ages (see e.g., Hawkins et al. 2003) to define early onset. In contrast, studies utilizing self-reported delinquency typically rely upon an earlier age to delineate between early onset and later (or never) onset (see e.g., Sampson and Laub 1993; Tolan and

Thomas 1995). This difference is likely influenced by the fact that the onset of unofficial or self-reported delinquency occurs prior to the first official report of delinquency/crime with estimates of the difference varying from roughly one to three years (Farrington et al. 2003; Kirk 2006; Loeber, Farrington and Petechuk 2003; Moffitt et al. 2001; Thornberry and Krohn 2003). Consequently, the definition of early onset of delinquent/criminal behavior utilized in criminological research is fluid.

Whether there were significant differences in the ratio of early onset immigrants to early onset native-born youth was assessed using a χ^2 test. Additionally, because there is no agreed upon age marker distinguishing early onset from normative or late onset, I conducted a series of χ^2 tests using different age-specific cut points to assess the robustness of the early onset differences. For example, I tested to see whether a differential designation of early onset as those with a history of involvement in delinquency/crime prior to 12 years of age, 13 years of age, and so on, influenced the findings.

Finally, frequency rates are an estimate of the average number of arrests/crimes for an individual during a specified observation period. Here, I examined the frequency of arrest/crime for immigrant and native-born youth from childhood/adolescence through young adulthood. Whereas prevalence estimates document the percentage of individuals ever involved in crime, frequency estimates may be a more useful tool in making comparisons between groups. That is, it has been argued that some involvement in delinquency/crime constitutes normative behavior in the adolescent behavioral repertoire (see e.g., Moffitt 1993). Using this reasoning, participation rates in crime should be fairly high for all individuals regardless of group affiliation (e.g., sex, race, ethnicity, and

immigration status). In contrast, frequency estimates allow for the investigation of whether some individuals comprise a more serious group of offenders due to their higher frequency of offending. A series of *t* tests were estimated to test for mean-level differences in offending between immigrant and native-born youth.[45]

Persistence and Desistance. In the second step I used group-based trajectory modeling (Nagin 2005) to examine patterns of continuity and change in offending over time. Although the previous analyses allowed for an examination of average patterns of offending, a sizeable body of evidence has accumulated documenting the considerable heterogeneity in offending trajectories over the life course (see e.g., Blokland et al. 2005; Ezell and Cohen 2005; Sampson and Laub 2003; Piquero et al. 2007). The group-based trajectory modeling strategy allowed for the identification of clusters of individuals who displayed similar behavioral trajectories. Using this approach, I examined whether there were different groups of offenders within the immigrant and native-born subsamples and I investigated whether immigrants were more likely to belong to any of the specified trajectory groups. In addition, I examined whether immigrants from specific nationality groups were more likely to cluster within a particular trajectory group.

Conceptually, the group-based trajectory approach identifies groups of individuals who display similar behavioral trajectories (e.g., onset, rate of offending, persistence and desistance patterns) over the life course (Nagin 2005). The models used in the current

[45] While there is an extensive history of debate surrounding the correct definition and calculation of offending frequency (see e.g., Blumstein et al. 1986; Blumstein, Cohen and Farrington 1988; Gottfredson and Hirschi 1986, 1988), the focus of this research was comparing across sub-groups in the population – not on whether or not frequency or lambda declines with age. Additionally, this research was interested in examining offending patterns among all individuals in each sample, rather than a focus on the patterns of offending among high-rate, chronic offenders. Therefore, the calculation of frequency of offending used in the current research used information from the full population (i.e., offenders and non-offenders). Substantively similar results were obtained in models using an offender only sample.

research were estimated using Nagin and Land's (1993) semiparametric group-based modeling approach (see Nagin 2005 for a full discussion). Because the outcome variable of interest was the frequency of involvement in a variety of criminal behaviors in each year, the models were estimated using a zero inflated Poisson form of a group-based trajectory model:

$$\ln(\lambda_{it}^{j}) = \beta_0^j + \beta_1^j(age_{it}) + \beta_2^j(age_{it}^2),$$

where $\ln(\lambda_{it}^{j})$ is the natural logarithm of the number of total arrests for persons *i* in group *j* at each age *t*. The shape of the trajectory was defined by a polynomial function of age. The equation specified above followed a quadratic function of age (age, age^2). The coefficients β_0^j, β_1^j, and β_2^j determine the shape of the trajectory. The superscript *j* indicates that the coefficients were not constrained to be the same across all groups; as a result, trajectories could differ in both their magnitude and in their shape over time (Nagin 1999).

Model Selection. The first step in modeling developmental trajectories involves determining the appropriate number of groups to accurately capture the developmental heterogeneity in the sample population. In selecting the optimal model, Nagin (2005) recommends using the Bayesian Information Criterion (BIC). BIC is calculated using the following equation:

$$BIC = \log(L) - 0.5 * \log(n) * (k),$$

where *L* is the model's maximum likelihood value, *n* is the sample size, and *k* is the number of parameters in the model. Preference is given to the model with the largest BIC value. Because the addition of more parameters (e.g., more groups) always improves the model fit, the log of the sample size for additional parameters is used to

calculate BIC effectively penalizing models with more parameters and rewarding more parsimonious models (Nagin 1999). Stated simply, the BIC favors models with fewer groups. Since BIC scores are always negative, the BIC score closest to zero represents the most optimal model.[46]

Although BIC has proven to be a useful and often preferred criterion for model selection (Brame, Nagin and Wasserman 2006) an important limitation of the BIC score is that it does not always identify a preferred number of groups. That is, in some instances BIC scores can continue to increase as more groups are added to the model resulting in a less than parsimonious and comprehensible model. In addition, BIC scores have been found to be less accurate in identifying the correct number of groups when assessing trajectories using smaller samples (Brame et al. 2006). In these cases, it is recommended that analysts should err on the side of parsimony while at the same time being sure to not conceal any distinctive features of the data (Nagin 2005).

Model Adequacy Measures. In the next step of the analysis, the model is assessed to determine how well it corresponds with the data. In addition to its many other functional qualities, posterior probabilities of group membership are a useful measure of the precision of group assignment or model fit. Posterior probabilities are a measure of

[46] Debate exists regarding the appropriate statistic to use when making a determination of the optimal number of groups to include in a model. For instance, rather than using the BIC, some state that the Akaike Information Criterion (AIC) is a more appropriate statistic. Using a simulation procedure, Brame and colleagues (2006) showed that although AIC outperformed BIC in the majority of simulations, both statistics perform better with additional data. In fact, when more data were added to the model, BIC performed as well and sometimes better than the AIC. Although in the cross-section data used in the current study fell below 500 cases, this research modeled offending trajectories over multiple time periods effectively increasing the amount of data available for model estimation. Due to this longitudinal design, sample size was increased to a point where I was confident that the BIC provided a reasonable estimate for use in determining the optimal number of groups in the model. The AIC statistic was used as supportive evidence that the correct model had been chosen.

an individual's likelihood of belonging to a specific trajectory group and are calculated using the following equation:

$$\hat{P}(j|Y_i) = \frac{\hat{P}(Y_i|j)\hat{\pi}_j}{\sum_j^J \hat{P}(Y_i|j)\hat{\pi}_j},$$

where $\hat{P}(j|Y_i)$ is the estimated probability of observing the actual trajectory of offending Y_i for an individual *i*, given membership in a specific group *j* where $\hat{\pi}_j$ represents the estimated proportion of the sample population in group *j* (Nagin 2005:79). These individual posterior probabilities can then be used to calculate the average posterior probability of assignment to each trajectory group. The optimal value for the average posterior probability is 1; however, this would require that each individual's posterior probability of group membership be equal to 1 as well. As a rule of thumb, Nagin (2005:88) suggests that for all groups the average posterior probability be at least .7.

The calculation of the odds of correct classification (OCC) for the distinguished groups can also be used to assess model adequacy (Nagin 2005:88).[47] The OCC statistic captures the accuracy of group assignment beyond what would be assumed if individuals where assigned to groups randomly. OCC is calculated using the following equation:

$$OCC_j = \frac{\frac{AvePP_j}{1 - AvePP_j}}{\frac{\hat{\pi}_j}{1 - \hat{\pi}_j}},$$

[47] Nagin (2005) also recommends two additional diagnostic tests that can be used to assess model adequacy including the correspondence between the estimated group probabilities and the proportion of the sample assigned to each group, as well as the assessment of the tightness of the confidence intervals around the group membership probabilities. In the current research, these additional diagnostic tests were redundant as in each case they supported the findings arrived at using the posterior probability and OCC statistics.

where the ratio of $AvePP_j$ to 1- $AvePP_j$ represents the odds of a correct classification based on the maximum probability classification rule and the ratio of $\hat{\pi}_j$ to 1- $\hat{\pi}_j$ is the odds of correct classification based on random assignment. Larger OCC values indicate better assignment accuracy where a value of 5 for all groups indicates that the model has high assignment accuracy (Nagin 2005:89).

Predicting Variation in Offending

My second research question examined what familial, peer, school, and structural variables contribute to the variation in offending patterns over the life course for immigrant and native-born youth. The age-graded theory of informal social control (Sampson and Laub 1993) provided the framework for this analysis. Generalized Hierarchical Linear Modeling (HLM) version 6.04 (Raudenbush, Bryk and Congdon 2007) was utilized for the analysis for two reasons. First, the use of longitudinal panel data results in the violation of the independence assumption of ordinary least squares regression resulting in incorrect estimates of the standard errors – smaller standard errors and an increase in the likelihood of type 1 error (Osgood 2009; Raudenbush and Bryk 2002). That is, because individuals display at least a modest level of behavioral stability over time, individuals are more similar to themselves across observations than they are to other individuals (Osgood 2009). Specifically, observations are nested within each individual. In addition, because change is typically a gradual process, problems with serial correlation arise as observations that occur closer in time will be more similar than observations that occur farther apart (Osgood 2009). Second, the number and spacing of observations were not invariant across respondents resulting in an unbalanced model. That is, some individuals had missing data in certain waves (i.e., variation in the number

of observations) and time intervals sometimes varied between observations for respondents (i.e., variation in the spacing of observations). HLM is flexible and can accommodate both of these limitations (Raudenbush and Bryk 2002; Snijders and Bosker 1999).

Because the outcome of interest was a count of the number of criminal involvements in each year, I utilized the Poisson extension of HLM and allowed for overdispersion in each model. The addition of the overdispersion parameter has been shown to result in more accurate significance tests compared to standard Poisson models (Osgood 2000). I examined offending behavior over time using a two level hierarchical model. Change or growth in offending was measured at level 1 and included repeated measures of offending for individuals in years (age). The level 1, within-individual equation is:

$$\eta_{it} = \log(\lambda_{ij})$$

$$\eta_{it} = \pi_{0i} + \pi_{1i}(age)_{it} + \pi_{2i}(age^2)_{it}$$

where η_{it} is the log of the offense rate for individual *i* at age *t*. To capture the nonlinear nature of age-crime curve the equation was specified to follow a quadratic function of age (age_{it}, age_{it}^2).[48] Substantively, the linear age term represents the rate of growth for each individual, while the quadratic age term represents the curvature or acceleration in each individual's growth trajectory (Raudenbush and Bryk 2002). The subscript *i* attached to

[48] The age terms were grand mean centered to allow for more stable estimation due to collinearlity between the two age terms. Grand mean centering yielded an interpretation of π_{1i} as the average rate of growth across the entire observation period.

variables at level 1 indicates that these variables could take on different values for each individual.

Individual level characteristics were entered into the equation at level 2. Coefficient effects at this level indicated how much variation in the intercept (i.e., initial offending level) and slopes (i.e., growth in the offending trajectory) was explained by between-individual characteristics. The level 2, between-individual equations are:

$$\pi_{0i} = \beta_{00} + \beta_{01}(controls)_i + \beta_{02}(X)_i + ... + \beta_k(X)_i + r_{0i}$$

$$\pi_{1i} = \beta_{10} + \beta_k(controls)_i + r_{1i}$$

$$\pi_{2i} = \beta_{20} + \beta_k(controls)_i + r_{2i}$$

where variation in the log-odds of an offense at the age coded as zero (π_{0i}) is explained by individual level controls and an array time-invariant individual level characteristics as indicated by *X*. The probability of an offense (π_{0i}) was allowed to vary between individuals as indicated by the error term r_{0i}. To investigate whether the age-crime curve was differentially influenced by individual level characteristics I modeled the time-invariant individual level characteristics on the age and age squared slopes (π_{1i} and π_{2i}), respectively.

CHAPTER 5 PATTERNS OF OFFENDING OVER THE LIFE COURSE

In this chapter I examined patterns of offending from childhood (Glueck data) or early adolescence (NLSY97 data) through young adulthood for immigrants and native-born individuals. Of key interest here was whether developmental patterns of offending differed for immigrants and native-born individuals, across immigrant generations, and across immigrants from different nationality groups in comparison to native-born individuals. Specifically, I examined the relationship between immigrant status and participation in crime, age of onset of criminal involvement, frequency of offending, and seriousness of offending. In the first section I examined the patterns of offending among immigrant and native-born individuals from the early 20th century using the Glueck data. In the second section I repeated these analyses looking at patterns of offending among immigrant and native-born individuals from the late 20th century using data from the National Longitudinal Survey of Youth (NLSY97). When possible, analyses were disaggregated by generation status and nationality group.

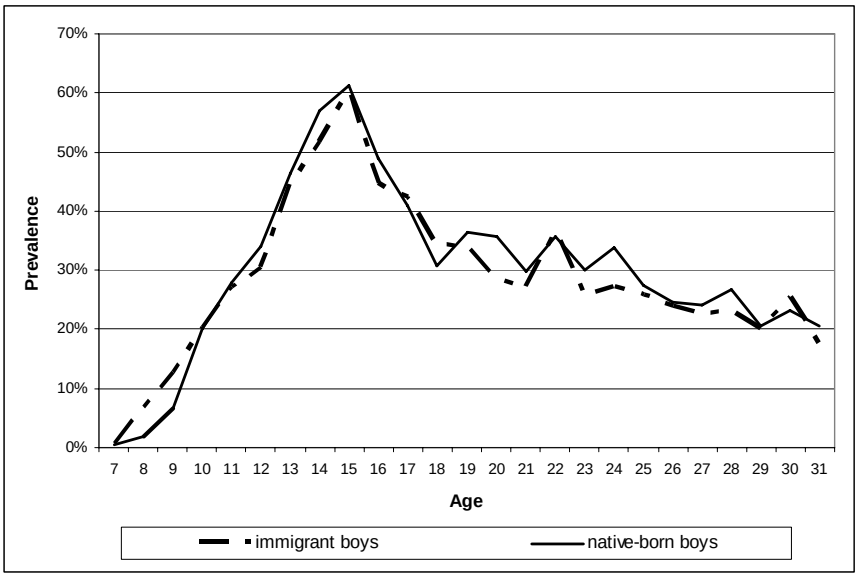
IMMIGRATION AND CRIME AT THE TURN OF THE 20TH CENTURY, GLUECK DATA

Prevalence of Offending

In this research, prevalence of offending captures the percentage of individuals involved in crime during a given time period. Because of the sampling strategy employed, 100% of the boys in the Glueck delinquent data were involved in at least one officially reported crime from childhood through adolescence (average number of arrests

in the first wave = 5.02).[49] Rates of participation may vary however, when looking at the prevalence of offending at each age. With my first question I asked whether immigrants[50] had a higher rate of participation (prevalence of offending) in delinquency/crime compared to their native-born counterparts. The prevalence rates of arrest for any crime are shown in Figure 5.1. The patterns for the prevalence of crime among immigrant and native-born boys were similar to those identified in previous criminological research (see e.g., Ezell and Cohen 2005; Farrington 2005; Hirschi and Gottfredson 1983; Piquero et al. 2007). That is, for both immigrant and native-born boys,

Figure 5.1 Prevalence of Arrest for Any Crime by Age among Second Generation Immigrant and Native-born Boys, Glueck Data



[49] The Glueck data offer an opportunity to assess the correspondence between official and unofficial delinquent/criminal behavior. Specifically, the data contain three different indictors of delinquency/crime including: unofficial delinquency, school misbehavior, and official delinquency/crime. The respondents for each of these measures differ (i.e., youth self-report, teacher report, parent report and official reports). Although this research did not assess the correspondence between official and self-reported crime, previous research has found a high level of validity across these measures (see Laub, Sampson and Kiger 1990). Moreover, some school misbehavior was excessive enough to warrant intervention by the authorities and therefore is included in the any/total crime measure (3.6% of the sample; see Glueck and Glueck 1950:28).

[50] The Glueck data contain too few first generation immigrants (n = 6) to analyze statistically. Therefore, the analyses using the Glueck data were conducted on second generation immigrants only. For ease of discussion, I refer to second generation immigrants as "immigrants" in the text; however, for clarity purposes I retain the "second generation immigrant" identifier in figure and table titles.

participation in crime increased steadily in early adolescence, peaked in mid-to-late adolescence, and was followed by a decline through young adulthood. Means tests indicated that immigrants had significantly more arrests early in life (prior to age 10). No other significant differences between immigrant and native-born boys emerged. Overall, prevalence rates for immigrant and native-born boys were nearly identical from childhood through young adulthood.

Age of Onset

Next I examined the age of onset of delinquent/criminal behavior and assessed whether immigrants had an earlier age of onset compared to their native-born counterparts. The age of onset of officially reported involvement in delinquency/crime captured an array of crime types including violent, property, drug/alcohol, and public order offenses (Sampson and Laub 1993:55-57). The distribution of age of onset of official delinquency/crime is presented in Table 5.1. For a minority of immigrant and native-born boys, a record of an official report of delinquency/crime was on file as young as seven years of age. The median age of onset among this high-risk sample of boys was 12 years of age. When the sample was cut at the median age of onset the results revealed that immigrant boys were not significantly more likely to have an early onset of official delinquency/crime compared to their native-born peers.[51]

[51] To investigate the robustness of this finding, a series of means tests were conducted utilizing different age markers to define early onset. The results from the χ^2 tests revealed that immigrants were significantly more likely to have an age of onset of official delinquency/crime at eight and nine years of age compared with their native-born counterparts. No other significant differences emerged.

Table 5.1 Age of Onset of Any Crime among Second Generation Immigrant and Native-born Boys, Glueck Data

	7	8	9	10	11	12	13	14	15	16
immigrant	2	17	29	31	44	27	43	42	27	4
boys	1%	6%	11%	12%	17%	10%	16%	16%	10%	2%
native-born	1	4	11	33	34	31	32	25	22	5
boys	1%	2%	6%	17%	17%	16%	16%	13%	11%	3%

Frequency of Offending

Average offending rates for total crime are presented in Figure 5.2.[52] For both immigrant and native-born boys, offending rates peaked in mid-adolescence at roughly 15 years of age. Similar to the pattern for prevalence rates of arrest for any crime, frequency rates increased sharply in early adolescence reaching their peak in mid- to late-

Figure 5.2 Frequency of Arrest for Total Crime by Age among Second Generation Immigrant and Native-born Boys, Glueck Data

[52] Analyses were also computed accounting for the influence of incarceration time on average rates of offending (any crime, property crime, violent crime, and alcohol/drug crime). Substantive findings were nearly identical to those reported above.

adolescence followed by a steady decline in young adulthood. The results from the means tests indicated that immigrants had a significantly higher frequency of arrest for total crime at young ages (i.e., eight and nine years of age) whereas native-born boys had a significantly higher frequency of arrest at older ages (i.e., sixteen and twenty years of age). Despite these few scattered statistically significant differences, average rates of offending for immigrant and native-born boys were remarkably similar from childhood through young adulthood.

Patterns of Offending by Crime Type

In the following section, the comparison of patterns of offending between immigrant and native-born boys was disaggregated by crime type. Previous research has indicated that immigrants may be differentially involved in more serious crimes thereby fundamentally altering the nature of crime committed in the United States (see Chapter 2 for details). To investigate whether immigrants were differentially involved in certain crimes, I began by estimating the prevalence of offending for specific types of crime.[53]

Prevalence of Offending by Crime Type. Prevalence of arrest rates for violent crime are presented in Figure 5.3. Due to the relative rarity of involvement in violent crime, age-years were collapsed into two year intervals.[54] The pattern indicated that the prevalence of arrest for violent crime rose steadily in adolescence for both immigrants and native-born boys. The peak prevalence of violent crime occurred slightly later in the life course (compared to property and other offenses) with a decline not evident until the mid-twenties for both immigrant and native-born boys. This pattern is consistent with previous research (see e.g., Farrington 1986). Although not statistically significant, it is

[53] Because of the high level of correspondence of the findings comparing rates of property and other crime to those presented using the total crime measure the results for these crime measures are not shown.
[54] When analyzed at yearly intervals, the substantive findings remain the same.

Figure 5.3 Prevalence of Arrest for Violent Crime by Age among Second Generation Immigrant and Native-born Boys, Glueck Data

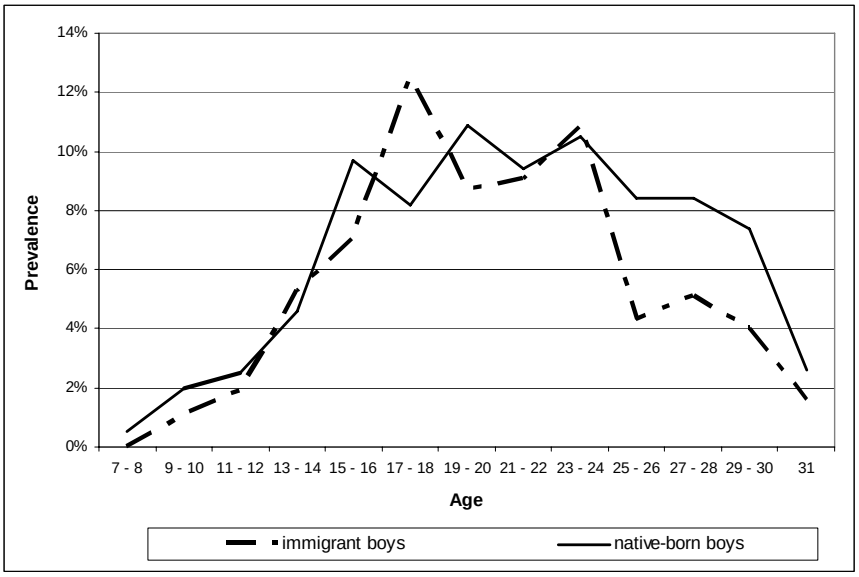
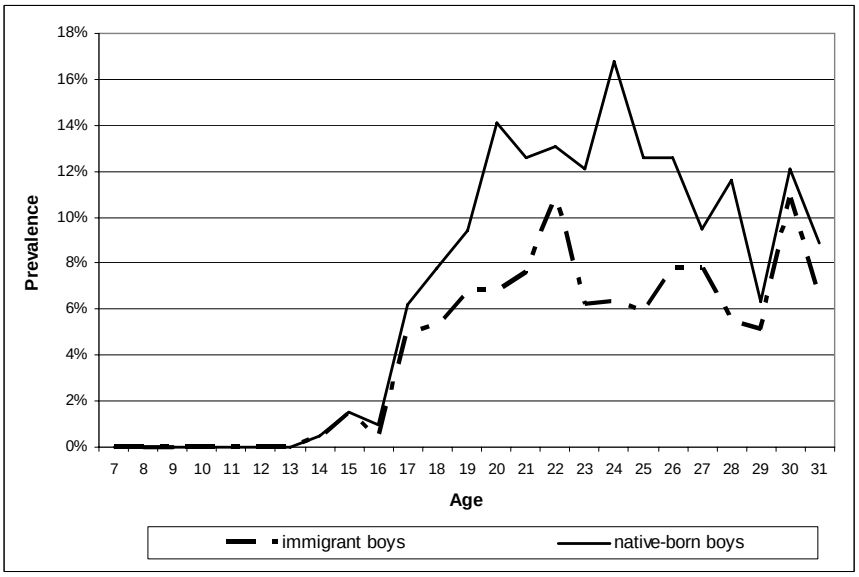


Figure 5.4 Prevalence of Arrest for Alcohol/Drug Crime by Age among Second Generation Immigrant and Native-born Boys, Glueck Data



notable that the decline in the prevalence of arrest for violent crime occurred more rapidly for immigrants compared to their native-born counterparts.[55]

The prevalence of arrest rates for alcohol/drug crime are presented in Figure 5.4. Unlike the prevalence patterns for any and violent crime where involvement peaked in mid- to late-adolescence and declined throughout the twenties, the prevalence of alcohol/drug crime was virtually non-existent until late-adolescence. Moreover, the prevalence of arrest for alcohol/drug crime was relatively consistent throughout young adulthood with no noticeable declining trend. Means tests indicated that the gap in prevalence rates for immigrant and native-born men throughout much of the twenties was statistically significant. Specifically, native-born men had a significantly higher prevalence of arrest for alcohol/drug crime at 20, 23 to 25, and 28 years of age compared to their immigrant counterparts.[56]

Age of Onset of Offending by Crime Type. When analyses of age of onset were disaggregated by crime type two clear findings emerged (results not shown). First, regardless of how age of onset was defined – using the standard age of onset before 14 years of age or any other age marker of early onset – immigrant boys were not significantly more likely to have an earlier age of onset of violent offending compared to their native-born counterparts. Second, typical definitions of early onset do not apply when examining alcohol/drug crime. That is, for immigrant and native-born boys alike, there were no official reports of alcohol/drug crime younger than 14 years of age. When

[55] Estimates of the lifetime prevalence rates of ever having an arrest for a violent crime were also calculated. From seven to thirty-one years of age, 44% of immigrant boys experienced an arrest for a violent crime compared to 47% of native-born boys. This difference is not significant (results not shown).
[56] Cumulative prevalence rates indicate that roughly 41% of immigrants and 50% of native-born boys reported at least one arrest for an alcohol/drug crime from childhood to young adulthood. The difference in cumulative prevalence rates is not significant at the $p \leq .05$ level (results not shown).

the definition of early onset of alcohol/drug offending was modified so that early onset represents the onset of an officially reported alcohol/drug crime prior to the age of 15, the results indicated that there were no significant differences comparing immigrant and native-born boys. This finding of no significant difference held regardless of whether the definition of early onset represented the first age of arrest for alcohol/drug crime by 16, 17, or 18 years of age.[57]

Frequency of Offending by Crime Type. To examine differences in immigrant and native-born boy's involvement in crime further, I also investigated whether differences existed in average offending rates disaggregated by crime type for these two groups. The frequencies for violent and alcohol/drug crimes are presented in Figures 5.5 and 5.6, respectively. Similar to the pattern found for total crime, there were very few significant differences in the mean rate of offending for any of the crime types. Again, due to the relatively rarity of violent crime in the data, age-years were collapsed into two year intervals.[58] The peak age of arrest for violent crime was less dramatic than that found for total crime. That is, although mean rates of violent crime increased rapidly from childhood through adolescence for both immigrant and native-born boys, arrests for violent crime remained relatively constant throughout late-adolescence and young adulthood (see Figure 5.5). Means tests indicated no significant differences comparing the frequency of offending rates for violent crime for immigrant and native-born boys.

A consistent pattern of differences was found looking at alcohol/drug crimes (see Figure 5.6). Native-born boys had a significantly higher mean rate of arrest for

[57] Although significant differences in age of onset of officially reported alcohol/drug crime did emerge when assessed in the twenties, these late ages of onset do not represent an "early" age of onset.
[58] No substantive differences emerged when comparing frequency of arrest for violent crime at yearly intervals.

Figure 5.5 Frequency of Arrest for Violent Crime by Age among Second Generation Immigrant and Native-born Boys, Glueck Data

Figure 5.6 Frequency of Arrest for Alcohol/Drug Crime by Age among Second Generation Immigrant and Native-born Boys, Glueck Data

alcohol/drug crime for a majority of their 20s compared to their immigrant counterparts. Specifically, alcohol/drug crime arrest rates for native-born boys were significantly higher at 20, 23 to 25, and 28 years of age (ages 21 and 27 were also significant at the .10

level). Not only was there a higher prevalence rate of alcohol/drug crime among native-born boys, but of those involved in alcohol/drug crime native-born boys reported a greater frequency of involvement compared to immigrant boys.

Patterns of Offending by Nationality Group

The analyses examining patterns of offending including prevalence, age of onset, and frequency of offending were replicated disaggregating the sample by nationality group. Within the immigrant sample there were three nationalities of sizeable numbers that allowed for comparisons to be made including those of Italian, Irish, and English ancestry. Means tests were conducted to assess whether immigrants from specific nationality groups evidence greater prevalence rates, earlier ages of onset, and higher mean rates of criminal involvement.

Prevalence of Offending by Nationality Group. Although there were a few scattered significant differences, when looking at any crime as the dependent variable no systematic trend of differences emerged. Specifically, Italian and English immigrants had a significantly higher prevalence of arrest for any crime in childhood (8 and 9 years of age for Italians and 8 years of age for English) compared to their native-born peers (see Figure 5.7). Additionally, at 11 and 20 years of age, English immigrant boys evidenced a significantly lower prevalence of arrest compared to their native-born counterparts.

Prevalence of arrest rates for violent crime by nationality group are presented in Figure 5.8. During late adolescence (17-18 years of age), Italian immigrants had a significantly higher prevalence of arrest for violent crime compared to their native-born peers. Additionally, English immigrant boys evidenced a significantly lower prevalence

rate of arrest for violent crime compared to their native-born counterparts at various times during young adulthood (ages 19-20 and ages 25-26).

Figure 5.7 Prevalence of Arrest for Any Crime by Nationality Group, Glueck Data

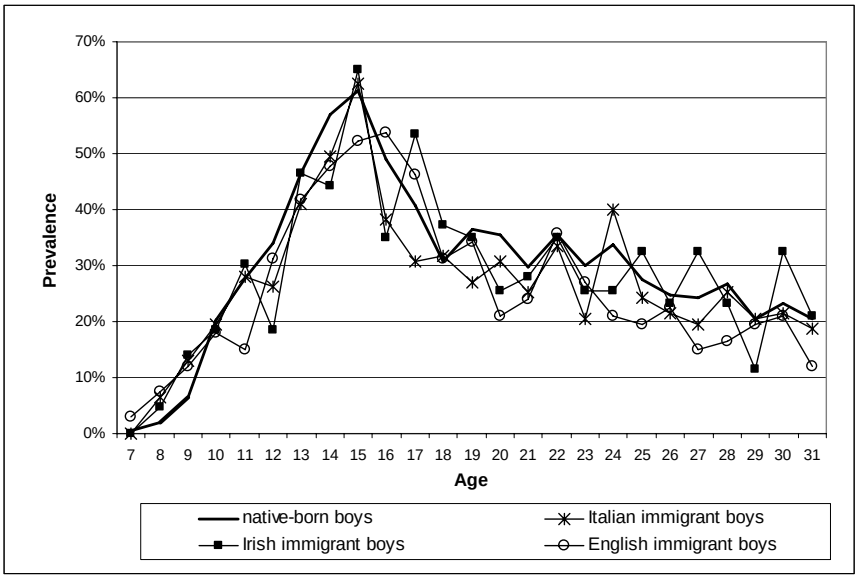
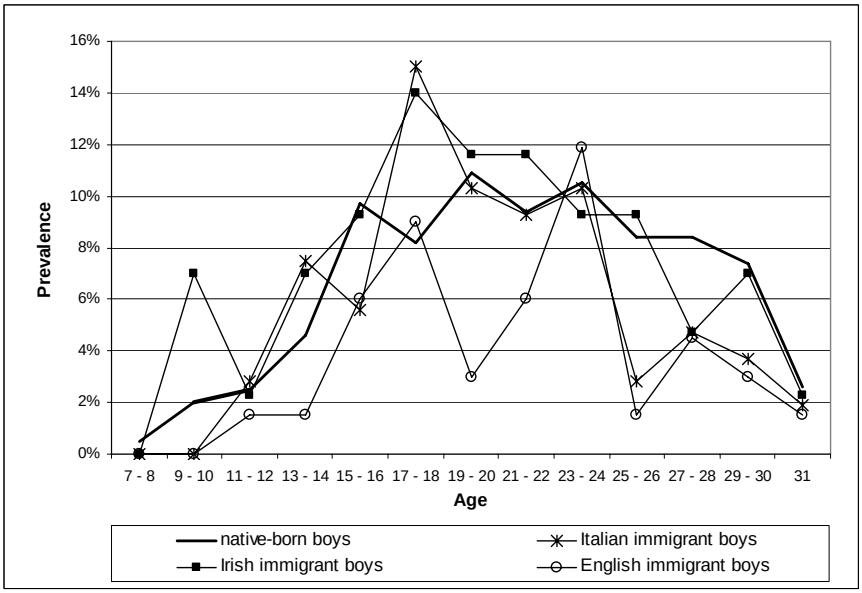
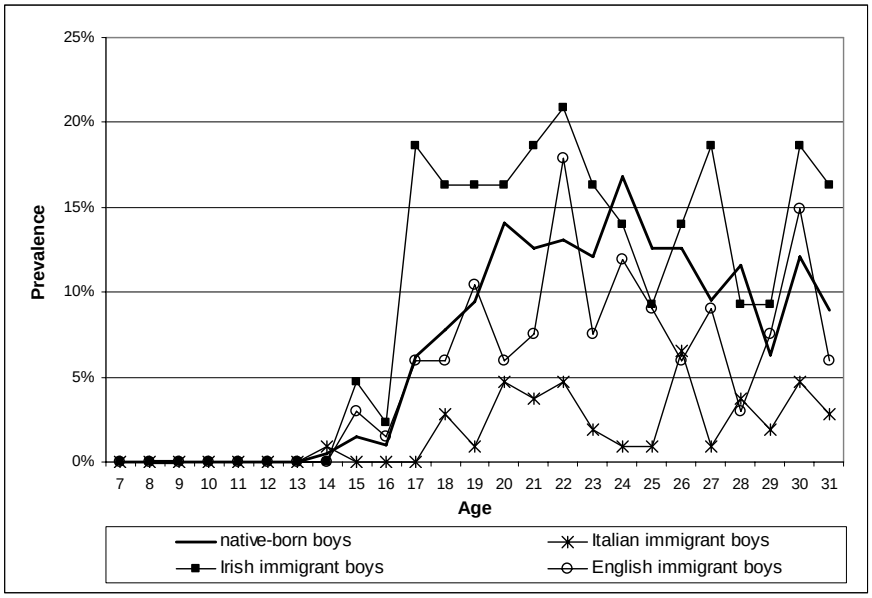


Figure 5.8 Prevalence of Arrest for Violent Crime by Nationality Group, Glueck Data



Unlike the scattered significant differences found when examining prevalence rates for any and violent crime, a more consistent pattern of differences emerged when examining the prevalence rates of arrest for alcohol/drug crime (see Figure 5.9). That is, throughout late-adolescence and young adulthood, Italian immigrants had a significantly lower prevalence of arrest for alcohol/drug crime compared to their native-born counterparts. The differences were less consistent comparing Irish and English immigrants with native-born boys. At 17 and 27 years of age, Irish immigrants had a significantly higher prevalence of arrest for alcohol/drug crime while English immigrants had a significantly lower prevalence of arrest for alcohol/drug crime at 28 years of age compared to their native-born counterparts.

Figure 5.9 Prevalence of Arrest for Alcohol/Drug Crime by Nationality Group, Glueck Data



Age of Onset of Offending by Nationality Group. Italian and English immigrant boys evidenced a significantly earlier age of onset compared to native-born boys (results

not shown). Specifically, Italian and English immigrant boys were more likely to have an age of onset of official crime by nine years of age compared to their native-born counterparts. No significant differences were found comparing Irish immigrants with native-born boys.[59]

Frequency of Offending by Nationality Group. The investigation of significant differences in patterns of offending commenced with an assessment of differences in the mean rate of offending by nationality group. In this section, differences were assessed looking at total criminal involvement and looking at the frequency of involvement in specific crime types. Average offending rates for total crime disaggregated by nationality group are presented in Figure 5.10. Regardless of immigrant nationality group or native-born status involvement in crime peaked in mid-adolescence and declined through young adulthood. *t* tests for significant differences in the mean rate of offending indicated that Irish immigrant boys had a significantly lower mean rate of offending in adolescence (i.e., ages 12 and 16) compared to their native-born peers. Additionally, English immigrant boys had a significantly lower mean rate of offending at ages 11, 20, 25, and 26 compared to their native-born counterparts. No statistically significant differences emerged comparing Italian immigrant boys with native-born boys looking at the frequency of arrest for total crime.[60]

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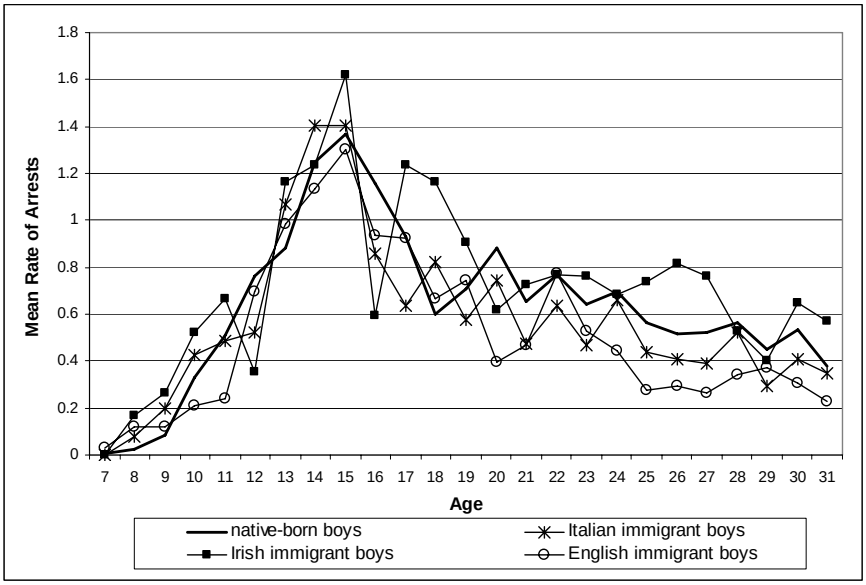
[59] Differences in age of onset were also compared looking at specific crime types. Because the comparison groups get smaller and smaller the more the sample is disaggregated (in this case by nationality group and crime type) significant differences were only assessed using the standard definition of early onset (the onset of criminal behavior prior to 14 years of age). Regardless of crime type analyzed, no significant differences emerged in the age of onset of criminal behavior comparing immigrant boys from specific nationality groups with their native-born peers (results not shown).

[60] In analyses that control for incarceration time, in no case were immigrants of any nationality group significantly more criminal than their native-born counterparts. Native-born boys had significantly higher arrest rates for any crime throughout adolescence and young adulthood compared to Italian and English immigrants. No significant differences emerged comparing Irish and native-born boys.

Figure 5.10 Frequency of Arrest for Total Crime by Nationality Group, Glueck Data



Next, mean rates of arrest across immigrant nationality groups were disaggregated by crime type. Mean rates of arrest for violent crime are presented in Figure 5.11. Only two significant differences were found. Irish immigrant boys had a significantly lower mean rate of arrest for violent crime at ages 11-12, while English immigrant boys had a significantly lower mean rate of arrest for violent crime at ages 19-20 compared to native-born boys. No differences in the frequency of arrest for violent crime were found comparing Italian immigrant boys with native-born boys.[61]

Unlike the typical pattern where involvement in crime peaks in mid- to late-adolescence, mean rates of arrest for alcohol/drug crime were non-existent in early adolescence, initiation began in mid-adolescence, and involvement continued throughout young adulthood regardless of immigrant nationality group or native-born status (see

[61] In analyses that control for incarceration time, no significant differences emerged comparing violent crime arrest rates for Italian and Irish boys with native-born boys. A similar pattern of significant differences was found comparing violent crime arrest rates for English immigrant and native-born boys.

Figure 5.11 Frequency of Arrest for Violent Crime by Nationality Group, Glueck Data

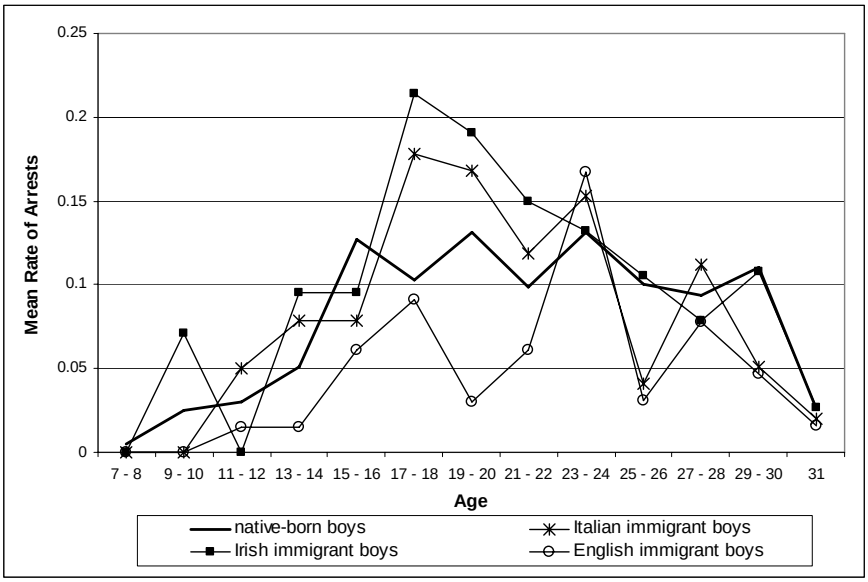


Figure 5.12 Frequency of Arrest for Alcohol/Drug Crime by Nationality Group, Glueck Data

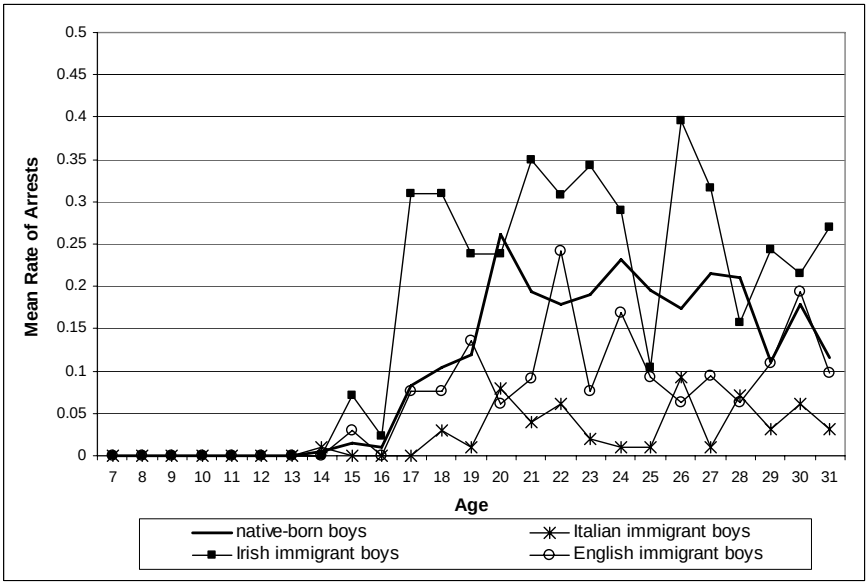


Figure 5.12). In general, native-born boys had the highest mean rates of alcohol/drug crime. Tests of significant differences revealed that Italian immigrants had a lower mean

rate of arrest for alcohol/drug crime throughout young adulthood (i.e., ages 17 to 25, and 27 to 31). At various ages throughout the twenties, English immigrants had a significantly lower mean rate of arrest for alcohol/drug crime (i.e., ages 20, 23, 26, and 28). There were no statistically significant differences in the mean rate of arrest for alcohol/drug crimes comparing Irish immigrants with their native-born peers.[62]

Summary

The dominant theme that emerged from the analyses investigating differences in patterns of offending across immigrant and native-born boys from the early 20th century was one of remarkable similarity. Regardless of how the data were disaggregated (i.e., crime type, nationality group), clear patterns of systematic differences failed to emerge. Two of the more consistent patterns are summarized here.

First, when defined as the onset of delinquent/criminal activity before nine years of age, immigrants were significantly more likely to have an early age of onset compared to their native-born peers. The disaggregated analyses revealed that this early age of onset was due to the earlier initiation of property crime among Italian and English immigrant boys. Related to this was the finding that immigrant boys had a higher frequency of delinquency/crime at eight and nine years of age. Unlike previous research that finds evidence of greater involvement in serious crime among immigrants, rates and frequency of involvement in violent crime were statistically the same for immigrants (regardless of nationality group) and native-born boys in this sample.

The second consistent pattern of difference was in regard to the higher prevalence and frequency of alcohol/drug crime among native-born individuals throughout much of

[62] Substantively similar results were found looking at analyses of alcohol/drug crime while controlling for incarceration time.

young adulthood. Although all immigrant boys had a significantly lower prevalence rate of arrest for alcohol/drug crimes, involvement in alcohol/drug crime was much lower among Italian immigrant boys. Stated simply, involvement in alcohol/drug crime was dominated by the native-born boys in this sample of delinquents.

IMMIGRATION AND CRIME AT THE END OF THE 20TH CENTURY, NLSY97 DATA

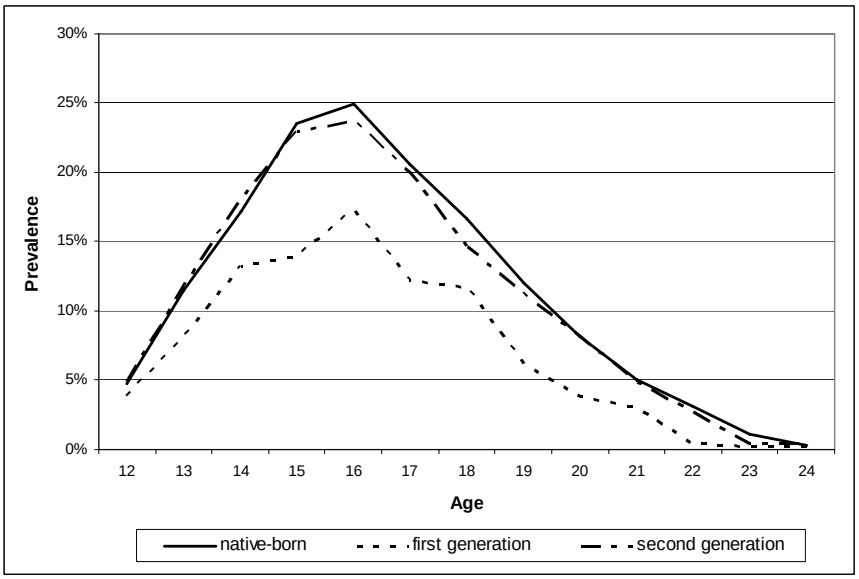
Prevalence of Offending

Prevalence of offending rates for involvement in any crime by age among first and second generation immigrants and native-born individuals are presented in Figure 5.13. Across all groups, participation in delinquency/crime peaked in mid-adolescence and was followed by a rapid decline in young adulthood. Prevalence rates were the lowest across all ages for first generation immigrants. Means tests were conducted to assess whether immigrants had significantly different prevalence rates compared to their native-born counterparts. Throughout adolescence and into young adulthood, first generation immigrants had statistically significantly lower participation rates compared to their native-born peers. No significant differences emerged comparing the second generation immigrant and native-born rates.[63]

Cumulative prevalence rates[64] were also calculated for each subgroup. Unlike general prevalence rates that measure the percent of a given population involved in crime within a given time period, cumulative prevalence rates refer to the proportion of individuals who have ever committed a crime by a given time period. In this study, the

[63] When compared to native-born white individuals, the overall picture remains virtually unchanged (results not shown).
[64] Also referred to as the lifetime prevalence rate.

Figure 5.13 Prevalence of Any Crime by Age among First and Second Generation Immigrants and Native-born Individuals, NLSY97 Data

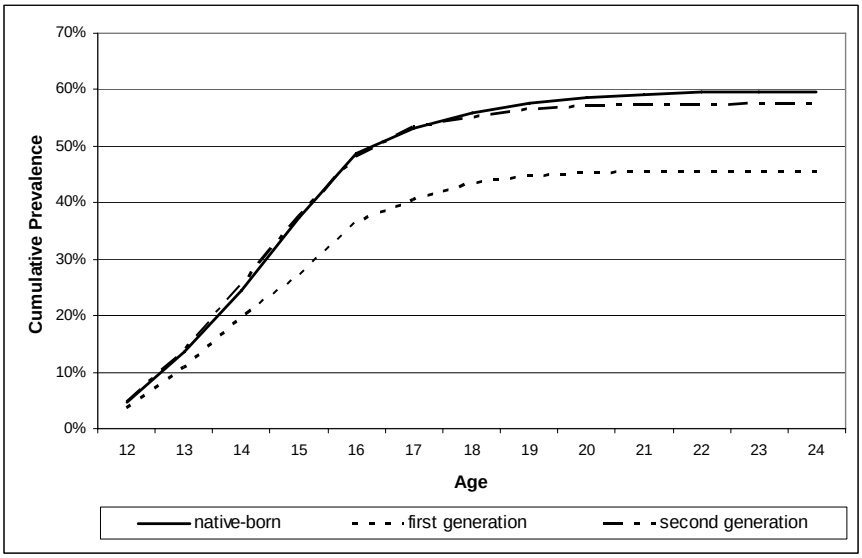


time period was defined by yearly age increments. Whereas the "active" population identified by the general prevalence rate can vary at each age (i.e., some individuals who do not have a recorded offense during a certain age, but have been active during prior age-years), the cumulative prevalence rate captures all individuals who have a reported offense up to a specified age (Gordon and Gleser 1974; Visher and Roth 1986). Therefore, it provides a stable account of the percent of a population that has ever committed a crime during a particular observation period.

Cumulative prevalence rates for involvement in any delinquency/crime are presented in Figure 5.14. Similar to the general prevalence rates displayed above, first generation immigrants had the lowest cumulative prevalence rate from 12 to 24 years of age. Whereas roughly 50% of second generation immigrants and native-born individuals reported involvement in at least one delinquent/criminal act by 16 years of age, first

generation immigrants did not approach the 50% mark until their twenties. Overall, roughly half of the first generation immigrants in the sample reported ever engaging in a delinquent/criminal act compared to nearly 60% of the second generation immigrants and native-born individuals. First generation immigrants had a significantly lower cumulative prevalence rate for involvement in any crime from 13 years of age onward compared to their native-born peers. There were no significant differences comparing second generation immigrants with their native-born counterparts.[65]

Figure 5.14 Cumulative Prevalence of Any Crime by Age among First and Second Generation Immigrants and Native-born Individuals, NLSY97 Data

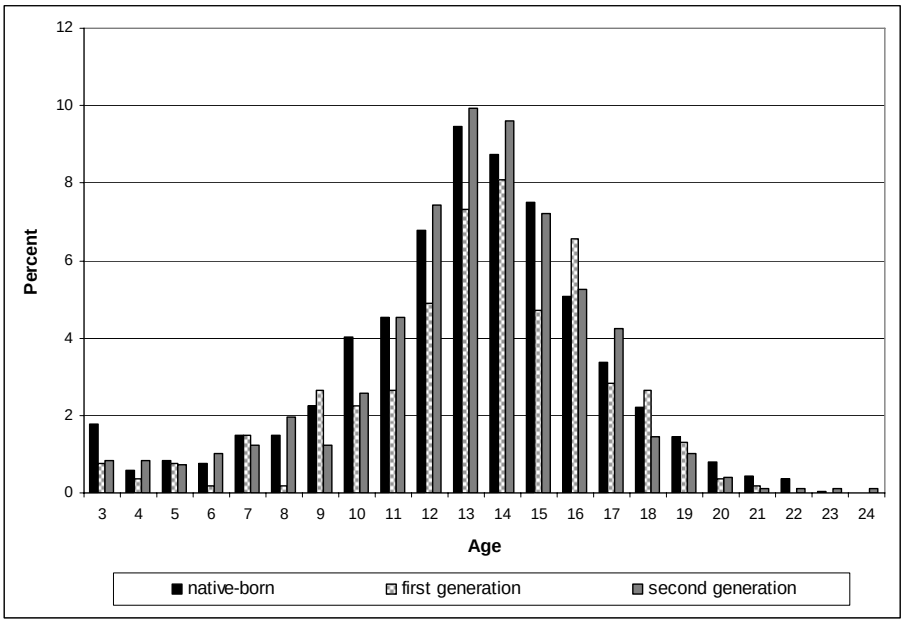


[65] The pattern of differences remained when first and second generation immigrants were compared with the sample restricted to native-born white individuals. Prevalence of self-reported arrest was also compared. Differences between native-born and immigrant youth as well as generational differences observed in the general crime measure were replicated. Arrest rates were similar for native-born and second generation immigrants while arrest rates were significantly lower among first generation immigrants. When the sample is restricted to native-born white youth, any differences in arrest rates between native-born and second generation immigrants disappear. This pattern is likely due to the higher rates of arrest among African Americans in the United States (LaFree 1995; Sampson and Lauritsen 1997).

Age of Onset

Differences in the age of onset between immigrant and native-born youth were calculated by designating those with a history of involvement in delinquency/crime prior to 14 years of age as "early onset" youth. The findings regarding age of onset are presented in Figure 5.15. Overall, the general trend was similar for all individuals regardless of immigrant status; the large majority of youth reported the onset of delinquency/crime by mid-adolescence with very few indicating that they initiated their criminal behavior in young adulthood.

Figure 5.15 Age of First Self-Reported Crime among First and Second Generation Immigrants and Native-born Individuals, NLSY97 Data



Frequency of Offending

Mean rates of self-reported involvement in any crime by age for first and second generation immigrants and native-born youth are presented in Figure 5.16.[66] For all individuals, the frequency of involvement increased during early-adolescence and maintained a relatively steady rate through adolescence into young adulthood. Although all groups evidenced a declining rate of involvement in delinquency/crime over their life course, the decline was more substantial among first generation immigrants. *t* tests revealed that first generation immigrants had a significantly lower mean rate of offending compared to their native-born counterparts throughout adolescence and young adulthood (i.e., ages 12 to 24 years).[67] Mean rates of offending among second generation immigrants were similar to those of their native-born peers across all ages with the exception of 16 years of age when native-born youth had a significantly higher mean rate of offending compared to second generation immigrants.[68]

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[66] Due to severe skew in the NLSY97 data the range for the frequency of involvement in all crimes was collapsed so that the category of 100 captures individuals who reported involvement in 100 or more crimes in a given year.

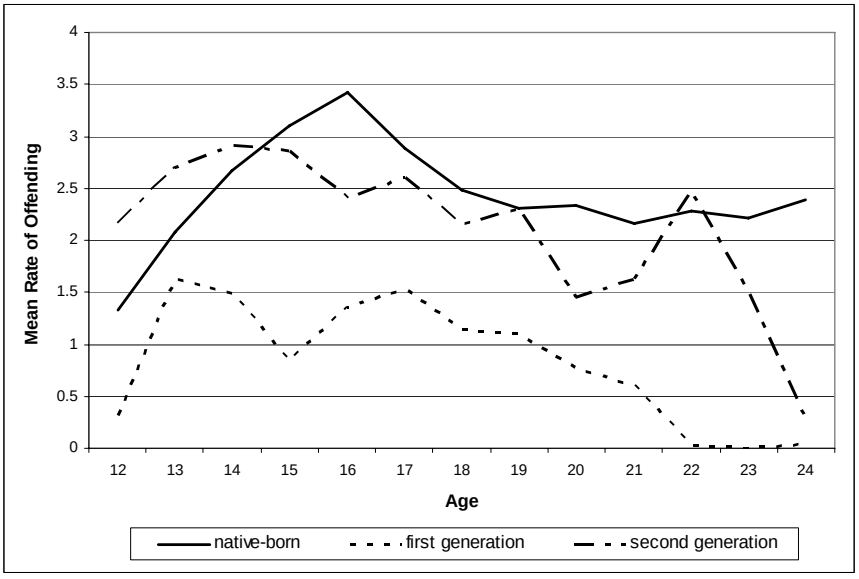
The importance of accounting for exposure time in criminological research has been documented (Eggleston, Laub and Sampson 2004; Piquero et al. 2001). Previous research using the first six waves of the NLSY97 data finds that less than 5% of the sample has ever been incarcerated (Sweeten and Apel 2007). Additional analyses on a subsample of youth incarcerated during peak years of offending (ages 16 to 19) reveals that the median length of incarceration is very short (2 months). Although exposure time is not accounted for in the current research, the influence of exposure time in this sample appears to be minimal and should not bias the results.

[67] In many cases, Levene's Test for the equality of variances indicated that the assumption of equal variances was not met. As a result, the Welch corrected F statistic was used to calculate statistically significant differences between groups.

[68] Substantive findings remained the same when first and second generation immigrants were compared with native-born white youth (results not shown).

Mean rates of arrest by age among first and second generation immigrants and native-born youth were also compared. Similar to the analyses looking at self-reported involvement in delinquency/crime, first generation immigrants had the lowest mean rates of arrest. Significant differences between first generation immigrants and their native-born peers were particularly evident in mid- to late-adolescence (i.e., ages 15 to 20). Only one significant difference emerged comparing second generation immigrants with native-born individuals. At age 18 second generation immigrants reported significantly lower mean rates of arrest compared to their native-born peers. Identical results were found when first and second generation immigrants were compared to native-born white youth.

Figure 5.16 Frequency of Total Crime by Age among First and Second Generation Immigrants and Native-born Individuals, NLSY97 Data



Patterns of Offending by Crime Type

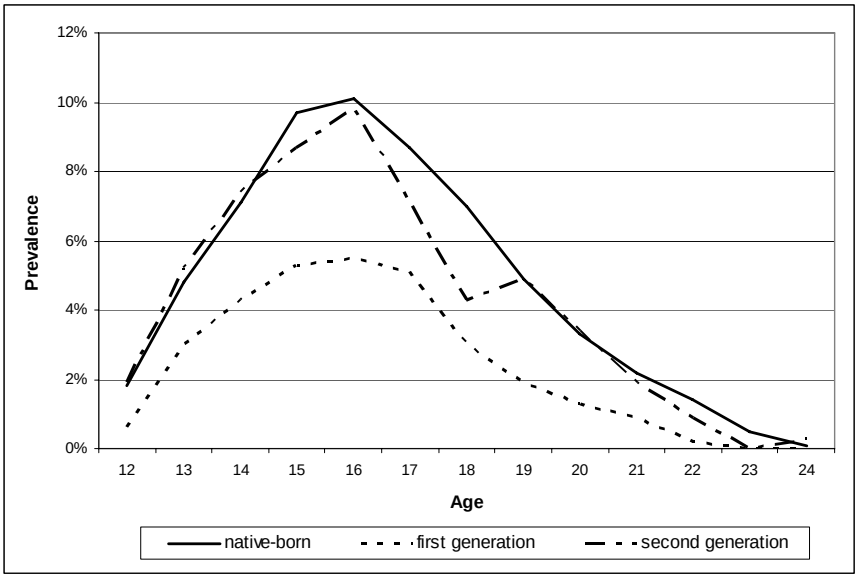
Prevalence of Offending by Crime Type. Prevalence rates of offending were disaggregated by crime type and the results are presented in Figures 5.17 and 5.18.[69] The general trend revealed in the crime specific analyses parallel those of the total crime analyses in many respects. First, across all crime types, involvement peaked in mid- to late-adolescence and was followed by a decline in young adulthood. Second, first generation immigrants had the lowest levels of criminal involvement regardless of criminal behavior analyzed. Throughout much of adolescence, the difference between first generation immigrants and their native-born peers in their involvement in violent crime, property crime, and drug crime was statistically significant. In general, prevalence

[69] Property crime includes four items: damaged or destroyed property, stole something valued at less than 50 dollars, stole something valued at more than 50 dollars, and involvement in other property crimes including fencing, receiving, possessing or selling stolen property, or cheating someone. Violent crime is a single item: attacked someone with the idea of seriously hurting them or had a situation end up in a serious fight or assault of some kind. Drug crime is a single item: sold or helped sell drugs.

rates for second generation immigrants and their native-born counterparts were comparable. Because the findings for property crime were nearly identical to those reported above using the total crime dependent variable, in the following paragraphs statistically significant differences were detailed for violent and drug crimes only.

Prevalence rates for violent crime are presented in Figure 5.17. Throughout adolescence and into young adulthood, first generation immigrants had a significantly lower prevalence of violent crime compared to their native-born counterparts. Only two significant differences emerged when comparing second generation immigrants with native-born individuals. At ages 18 and 23, second generation immigrants had a significantly lower prevalence of violent crime compared to their native-born peers.[70]

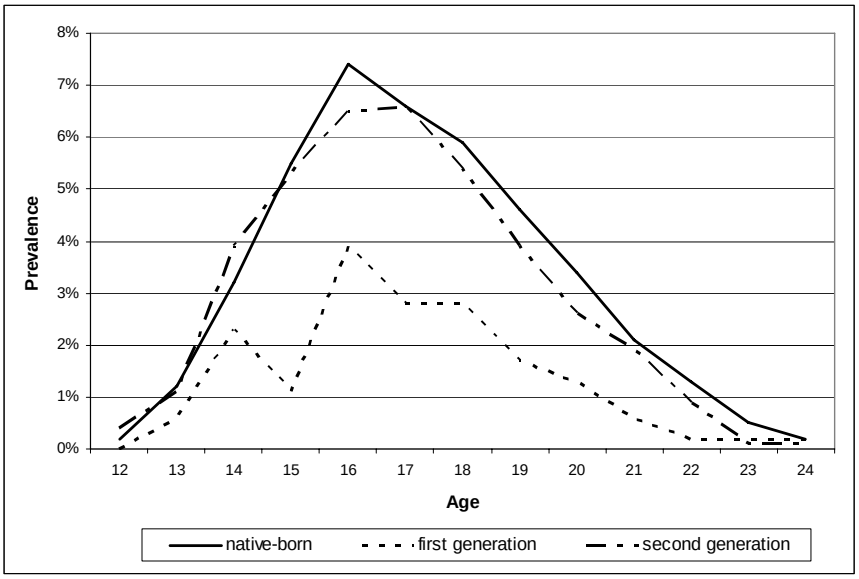
Figure 5.17 Prevalence of Violent Crime by Age among First and Second Generation Immigrants and Native-born Individuals, NLSY97 Data



[70]Substantive results remain the same when looking only at native-born white youth (results not shown).

The prevalence rates of drug crime are presented in Figure 5.18. First generation immigrants had a significantly lower prevalence of drug crime through adolescence and young adulthood (i.e., ages 15 to 22). No statistically significant differences between second generation immigrants and native-born individuals emerged.[71]

Figure 5.18. Prevalence of Drug Crime by Age among First and Second Generation Immigrants and Native-born Individuals, NLSY97 Data



Frequency of Offending by Crime Type. Similar to the pattern that emerged for prevalence rates of offending, across all crime type measures[72] (violent, property, and drug crime) first generation immigrants had the lowest mean rates of offending while the mean rates of offending were similar for second generation immigrants and native-born individuals (results not shown). Means tests revealed that throughout adolescence and

[71]Substantive results remain the same when looking only at native-born white youth (results not shown).
[72] Due to severe skew the range for the frequency of involvement in drug crime and to minimize the effect of extreme values, this variable was collapsed so that the category of 100 captures individuals who reported involvement in 100 or more drug crimes in a given year. This recode affects at most 2% of the sample in any given wave.

into young adulthood, first generation immigrants had significantly lower mean rates of offending for violent crime (i.e., ages 12, and 14 to 22), property crime (i.e., ages 12, 15 to 17, and 20 to 22), and drug crime (i.e., ages 13 to 16, and 18 to 22) compared to their native-born peers. Although scattered statistically significant differences emerged comparing second generation immigrants with their native-born peers in their mean rates of violent, property, and drug crime, the dominant trend was one of no difference. Specifically, second generation immigrants had a significantly lower mean rate of violent crime at age 18, property crime at age 16, and drug crime at age 20 compared to their native-born counterparts.[73]

Patterns of Offending by Immigrant Generation

In the analyses presented above, differences between immigrants (first and second generation) and native-born youth were investigated. An important finding of previous immigration research is that significant differences exist in the crime rates of first and second generation immigrants. That is, research finds that crime rates increase across successive immigrant generations (see Chapter 3 for details). To explore this finding with the NLSY97 data, patterns of offending across immigrant generations were compared. Of interest here was whether or not second generation immigrants were more involved in crime, whether they had an earlier age of onset of criminal behavior, and whether they had higher rates of offending compared to their first generation immigrant counterparts. Because the patterns were illustrated in Figures 5.13 to 5.18 above, they will not be duplicated here.

[73] Substantive results were similar when first and second generation immigrant youth are compared to native-born white youth. Although a few differences emerge, there is no systematic pattern to this variation.

The results of this research were supportive of the pattern of increasing criminal behavior across successive generations. First generation immigrant youth evidenced significantly lower prevalence rates compared to their second generation peers (see Figure 5.13 for any crime, 5.17 for violent crime, and 5.18 for drug crime). The age of onset of criminal behavior was comparable across immigrant generation (results not shown). Finally, first generation immigrants had a significantly lower frequency of involvement in crime (see Figure 5.16 for any crime, results for violent and drug crime not shown).

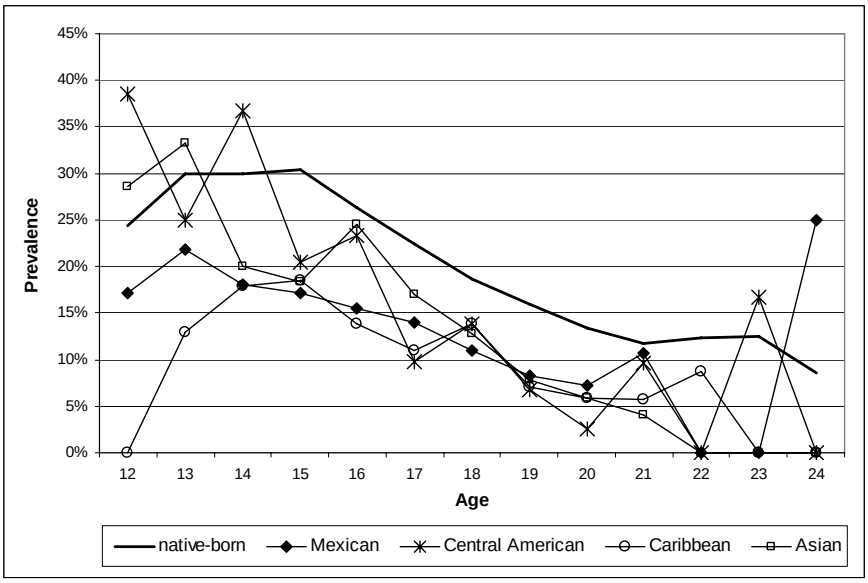
Patterns of Offending by Nationality Group

Much of the literature examining the relationship between immigration and crime suggests that certain immigrant nationality groups may evidence higher rates of delinquency/crime compared to other immigrant nationality groups (see Chapters 2 and 3 for details). As most research lumps all nationality groups into a homogeneous "immigrant" category, an understanding of the potentially large variation in criminal involvement among immigrants from specific nationality groups has been limited. Although sample size restricted a detailed investigation of immigrant nationality group differences in the present study, a comparison of regional differences was undertaken. In the following paragraphs, I investigated whether immigrants from certain nationality groups/geographic regions were more likely to be involved in crime, had an earlier age of onset of criminal behavior, and had higher rates of offending compared to their native-born counterparts.[74]

[74] The results of the analyses disaggregated by nationality group should be interpreted cautiously due to the fact that many nationality groups contain a small sample size (see Appendix B for nationality group sample sizes). Due to the larger sample size, greater weight should be given to the findings comparing Mexican immigrants with native-born individuals.

Prevalence of Offending by Nationality Group. Prevalence rates of involvement in any crime are presented in Figure 5.19.[75] In general, means tests indicated that no immigrant nationality group had a statistically significantly higher prevalence of offending at any age. Moreover, when significant differences did emerge it was in the direction of native-born youth having a significantly higher prevalence of offending. The most consistent trend from the data was that first generation Mexican immigrants had a statistically significantly lower prevalence of offending throughout adolescence compared to their native-born peers.

Figure 5.19 Prevalence of Any Crime by Age and Nationality among First Generation Immigrants and Native-born Individuals, NLSY97 Data

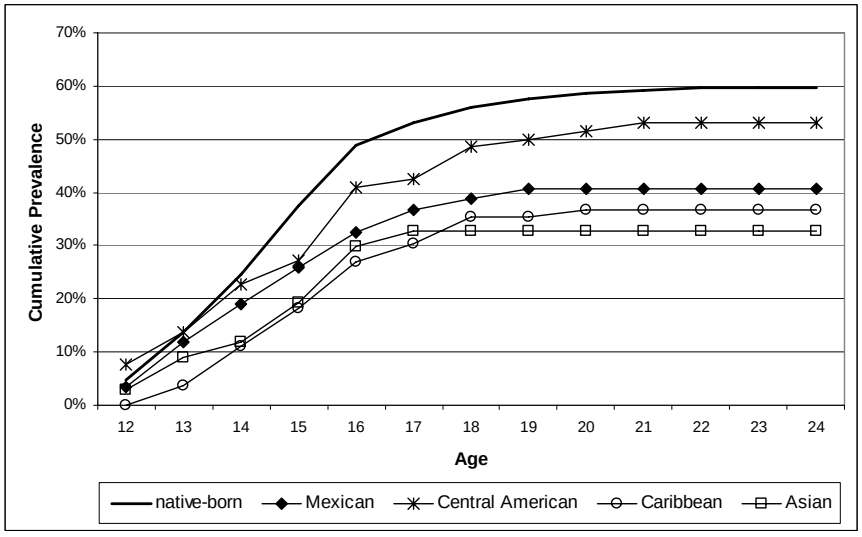


Cumulative prevalence rates of involvement in any crime disaggregated by immigrant nationality group are presented in Figure 5.20. For a large portion of

[75] Due to the increasingly small sample sizes when analyses are disaggregated by nationality group and crime type, I limit the investigation of patterns of offending by nationality group to involvement in any crime (a variable capturing involvement in violent, property, and/or drug crime).

adolescence and into young adulthood, immigrants of Mexican and Caribbean nationalities had statistically significantly lower cumulative prevalence rates compared to their native-born peers. Additionally, Asian immigrants had significantly lower cumulative prevalence rates in young adulthood (i.e., ages 20 to 24) compared to their native-born counterparts. No significant differences were found comparing immigrants from Central America to native-born youth.

Figure 5.20 Cumulative Prevalence of Any Crime by Age and Nationality among First Generation Immigrants and Native-born Individuals, NLSY97 Data

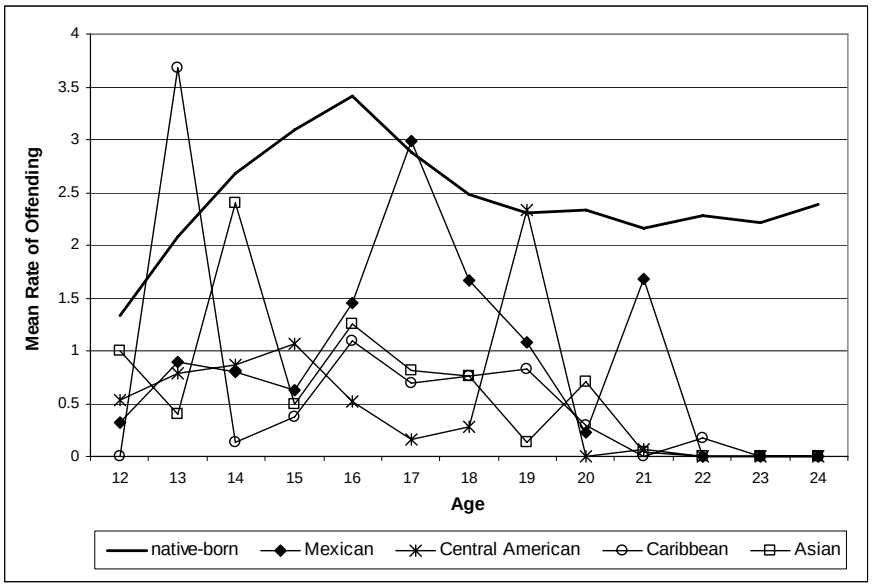


Age of Onset by Nationality Group. Results comparing the age of onset of crime among immigrants from specific nationality groups to the average age of onset of native-born youth revealed few significant differences (results not shown). In fact, the only statistically significant difference indicated that native-born youth were more likely to have an earlier age of onset compared to immigrants from the Caribbean.

Frequency of Offending by Nationality Group. Lastly, differences in the mean rate of offending among immigrants from specific nationality groups and native-born

youth were compared (see Figure 5.21). Results from the χ^2 analyses indicated that native-born individuals had a significantly higher mean rate of offending in adolescence and young adulthood compared to immigrants from certain nationality groups including Mexican (i.e., ages 12 to 16, 20, and 22), Central American (i.e., ages 15 to 18, and 20), Caribbean (i.e., ages 14 to 18, 20, and 21), and Asian (i.e., ages 15 to 17, and 19) immigrants. It is important to note that in no case did immigrants from any nationality group have a statistically significantly higher mean rate of offending compared to their native-born counterparts.

Figure 5.21 Frequency of Total Crime by Age and Nationality among First Generation Immigrants and Native-born Individuals, NLSY97 Data



Summary

In the preceding section, patterns of offending from adolescence through young adulthood for first and second generation immigrants and native-born individuals from the late 20th century were compared. Specifically, differences in prevalence, early onset,

and frequency of offending were assessed. Only one consistent difference was revealed; first generation immigrants displayed a lower prevalence and frequency of offending compared to their native-born peers as well as to second generation immigrants. Additionally, although random significant differences emerged, in general no systematic pattern of difference was found comparing second generation immigrants with their native-born counterparts.

It is particularly noteworthy that these patterns were robust to various forms of disaggregation. Specifically, the finding of a lower "risk" among first generation immigrants held regardless of crime type analyzed (i.e., total crime, violent crime, property crime, drug crime). Moreover, when the first generation immigrant group was disaggregated by nationality group I found no evidence that immigrants from specific nationality groups had a higher prevalence of offending, were more likely to have an early onset of offending, or had a higher frequency of offending compared to native-born individuals. In fact, when significant differences did emerge it was always in the direction of the native-born youth being of greater "risk" (i.e., higher prevalence, early onset, higher frequency). Although these results should be interpreted cautiously because of the small immigrant nationality group sample sizes, greater confidence is garnered by the finding that Mexican immigrants – who have a sizable presence in the data – followed this same trend. This group has been branded as being particularly problematic in regard to their criminal involvement throughout the 20th century (see e.g., Bowler 1931; Hagan and Palloni 1999). Yet, in no case were Mexican American's involvement in crime greater than that of their native-born peers.

In sum, similar to the conclusions drawn from the analyses using data from the early 20th century, the findings comparing patterns of offending for immigrants and native-born individuals are noteworthy for their remarkable consistency. It was a rarity to find evidence of significantly greater criminal involvement among immigrants. Rather, keeping with past research, first generation immigrants had a consistently lower rate of criminal involvement compared to native-born individuals. By the second generation, however, this difference disappeared as second generation immigrants displayed patterns of offending that were nearly identical to those of their native-born counterparts.

CHAPTER 6 TRAJECTORIES OF OFFENDING OVER THE LIFE COURSE

Although the findings reported thus far revealed more similarity than difference when comparing the offending patterns of immigrant and native-born individuals, the previous analyses were based upon group averages. These averages may have masked important variability in offending patterns within the immigrant and native-born groups. In order to examine whether such variability existed in the Glueck and NLSY97 samples, semi-parametric group-based trajectory models were analyzed. Group-based trajectory analysis allows for the identification of individuals who display similar offending trajectories in regards to their initiation, rate of offending, and duration of offending over a given time period. In the first section I examined trajectories of offending among immigrant and native-born individuals from the early 20th century using the Glueck data. In the second section I repeated the analyses looking at trajectories of offending among immigrant and native-born individuals from the late 20th century using data from the National Longitudinal Survey of Youth (NLSY97).

TRAJECTORY ANALYSIS, GLUECK DATA

Model Estimation

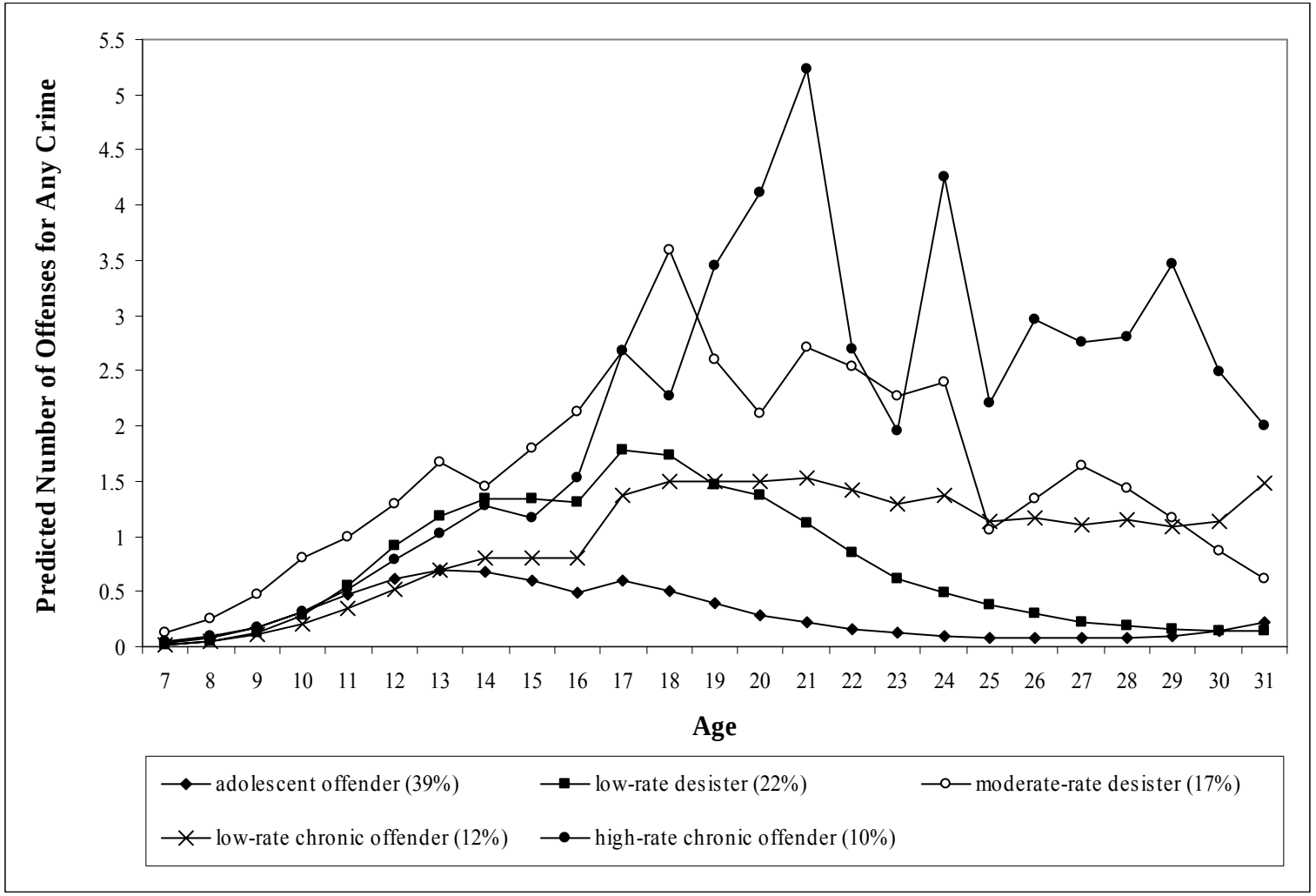
Group-based semi-parametric trajectories were estimated for the 266 immigrant boys and 198 native-born boys from ages 7 to 31. The optimal number of trajectory groups was determined separately for immigrant and native-born boys using information obtained from the BIC statistic, model adequacy diagnostics, and parsimony. I estimated models with up to six trajectory groups. For both the native-born and immigrant samples,

the BIC continued to increase up to at least six groups; however, the specification of models with more groups failed to identify new substantively interesting patterns in the data. In each sample, all model adequacy measures exceeded the minimum criteria defined by Nagin (2005). For native-born boys, the average posterior probabilities ranged from .87 to .96. In addition, the lowest odds of correct classification (OCC) value was 31.91. For immigrant boys, the posterior probabilities ranged from .89 to .96 and the lowest OCC value was 19.58. For both subsamples of boys the model adequacy measures were well above the minimum criteria for identifying an adequate model fit. Based on these findings, the identification of the optimal number of groups ultimately falls upon the analyst's subjective assessment, erring on the side of parsimony while exercising caution to not conceal important features of the data (Nagin 2005).

Taking all aspects into account, I concluded that the native-born model was best described by a five group model as the addition of more groups merely parsed out magnitude variations in trajectories rather than identifying new patterns of offending behavior. The five group trajectory model for native-born boys is graphically presented in Figure 6.1.[76] Two of the five trajectories contained individuals who evidence a near-zero rate of offending by the final wave of data. The largest portion of the sample (39%) was defined by an adolescent offender trajectory with peak levels of criminal involvement during mid- to late-adolescence. A low-rate desister group contained nearly a quarter of the sample of native-born boys (22%). During the peak years of criminal activity, this group averaged less than one and a half arrests per year.

[76] It should be noted that the labels provided for the trajectory groups function only as heuristic devices to aid in the presentation and discussion of the findings. They have no qualitative meaning and are based on the relative patterning of groups within datasets, but *not* across datasets.

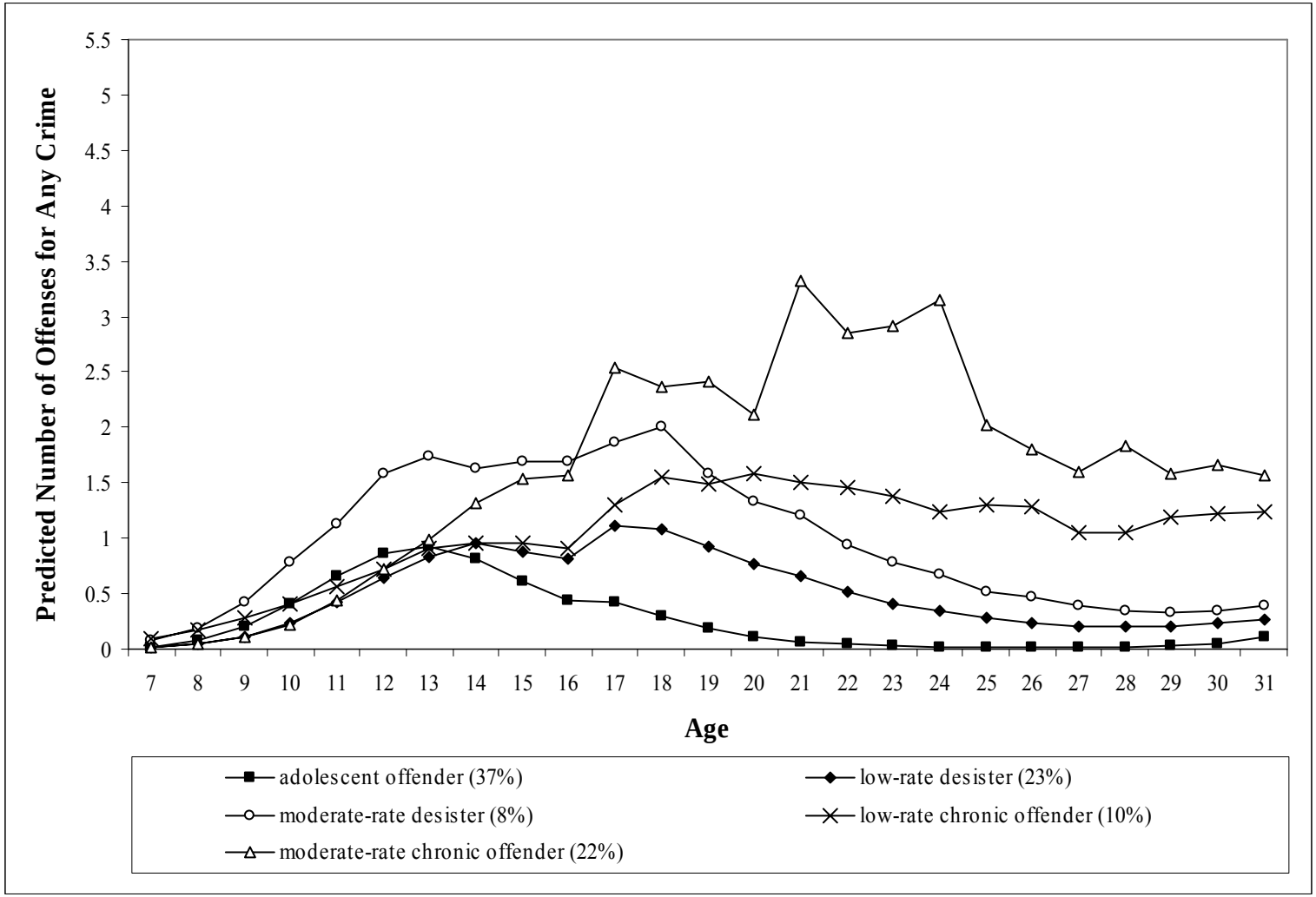
Figure 6.1. Offending Trajectories for Native-Born Boys, Incarceration Time Controlled, Glueck Data



The final three trajectories contained individuals with a more active rate of offending over the life span. The moderate-rate desister group contained nearly a fifth of the sample (17%). Although this group displayed a high-rate of offending in adolescence and young adulthood, their criminal involvement declined rapidly in the mid-20s and began to approach a near-zero rate of offending by 31 years of age. The two final groups were defined by a chronic pattern of offending. High-rate chronic offenders comprised 10% of the sample. These boys had a high rate of offending from mid-adolescence that remained high throughout the 20s and into later adulthood. There was also evidence of a low-rate chronic offender group, characterized by a similar pattern of offending, but at a lower rate of offending compared to the high-rate chronic offenders. This group contained the final 12% of the sample.

Examination of the immigrant trajectories revealed that models containing more than five trajectory groups did not uncover any new patterns in the data. Therefore, it was determined that five groups represented the optimal number of groups needed to best characterize the heterogeneity in offending among immigrant boys. The trajectories of offending for second generation immigrants are presented in Figure 6.2. The adolescent offender group contained the largest portion of the second generation immigrant sample (37%). Another 23 percent of the sample was defined by a low-rate desisting trajectory where offending began in early adolescence and lasted into young adulthood; however, the rate of offending for this group never exceeded an average of one offense per age-year. The third group, moderate-rate desisters contained a tenth of the sample (8%), with offending trajectories characterized by a relatively high-rate of offending in adolescence and a declining pattern throughout young adulthood. By 31 years

Figure 6.2. Offending Trajectories for Second Generation Immigrants, Incarceration Time Controlled, Glueck Data



of age, their rate of offending approached a near-zero rate.

The final two trajectory groups were characterized by a chronic rate of offending throughout most of childhood, adolescence, and adulthood. A tenth of immigrant boys displayed a low-rate of chronic offending that lasted into adulthood. Their peak years of offending occurred in their early 20s with an average of one and a half offenses per age-year. By 31 years of age this group still maintained an average of just under one and a half offenses per age-year. The final group, the moderate-rate chronic offenders, contained 22 percent of the sample. Average offending rates peaked at three and a half offenses per age-year in the mid 20s. Although offending evidenced a decline in the late 20s, this group maintained a relatively active level of involvement into their 30s.

Comparison of Offending Trajectories

Trajectories of offending for native-born and immigrant boys shared a number of similarities comparing the shape, magnitude, and size of the trajectory groups. First, for both samples, the adolescent offender group comprised a large portion of the sample. Adolescent offenders had a peak rate of offending in mid-adolescence which declined to a near zero-rate of offending in young adulthood. Second, a low-rate desister group was also observed in each sample. During peak years of offending, this group averaged no more than one and a half offense per age-year. By the mid to late 20s the low-rate deisters had a near zero rate of offending. Third, a group displaying a declining pattern of offending – from relatively high-rates of offending in adolescence and young adulthood – was observed in each sample. The general shape and size of the moderate-rate desister group was variable across samples as 17 percent of native-born boys followed this trajectory while only 8 percent of immigrant boys did.

Finally, two chronic offender groups were observed in each sample. The shape and of these two groups was very similar when compared across samples, however, the magnitude and size of the chronic trajectory groups varied. Specifically, the chronic offender groups in the native-born sample on average were involved in more crimes per age-year. Peak rates of offending among native-born high-rate chronic offenders reached an average of nearly five and a half offenses per age-year. A high-rate chronic offender trajectory was not observed in the immigrant sample. Instead, immigrant boys were described by a moderate-rate chronic offender trajectory with peak rates of offending averaging three and a half offenses per age-year. Both samples contained a trajectory group defined by a low-rate of chronic offending with average rates of offending peaking at roughly one and a half offenses per age-year. In sum, offenders with active rates of offending into adulthood were observed in each sample. Although a greater portion of the immigrant boy sample was classified as "chronic" offenders (i.e., immigrant sample 32%, native-born sample 22%), the magnitude of offending among native-born chronic offenders was greater than that of the immigrant sample.

In general, comparing the trajectories of offending across native-born and immigrant samples revealed a number of similarities. The most obvious trend was that the five trajectory groups identified in each sample were nearly identical in shape and size for each group. When differences were observed they were in the form of magnitude of offending and sample composition differences. Specifically, native-born boys appeared to have a higher magnitude of offending compared to immigrant boys. Additionally, different portions of each sample belonged to specific trajectories.

Comparison of Offending Trajectories by Crime Type

Heterogeneity in offending trajectories was also compared by disaggregating the any crime measure by crime type. Since the trajectories of offending for property crime were nearly identical to those obtained for the total crime measure, I only discuss the results for violent and drug crime here. The optimal number of groups was determined based upon BIC statistics, model adequacy measures, and parsimony.

The violent offending trajectories for native-born boys and immigrant boys are presented in Figures 6.3 and 6.4, respectively.[77] The samples differed in the number and magnitude of trajectories. First, looking at the number of trajectory groups needed to capture the heterogeneity in violent offending the results indicated that a two group model was optimal for native-born boys while a three group model was optimal for immigrant boys. A small group (10%) of low-rate desisters was found within the immigrant sample that was not revealed in the native-born model. This low-rate desister group evidenced involvement in violent crime in late-adolescence and young adulthood, but rates of violent crime declined to near zero by the mid 20s. Second, although a chronic offender group was observed in both samples, the magnitude of offending was much greater among the chronic offenders in the native-born sample. Average rates of violent crime among the native-born high-rate chronic offender group were nearly double that of the immigrant moderate-rate chronic offender group.

Despite these differences, one dominant theme was apparent in both samples. Specifically, a non-offender group displaying a near-zero rate of violent crime from

[77] Average posterior probabilities for the violent crime model ranged from .77-.94 for native-born youth and .81-.94 for second generation immigrants with the lowest OCC value of 4.09 and 4.16 for native-born youth and second generation immigrants, respectively.

Figure 6.3 Violent Offending Trajectories for Native-Born Boys, Incarceration Time Controlled, Glueck Data

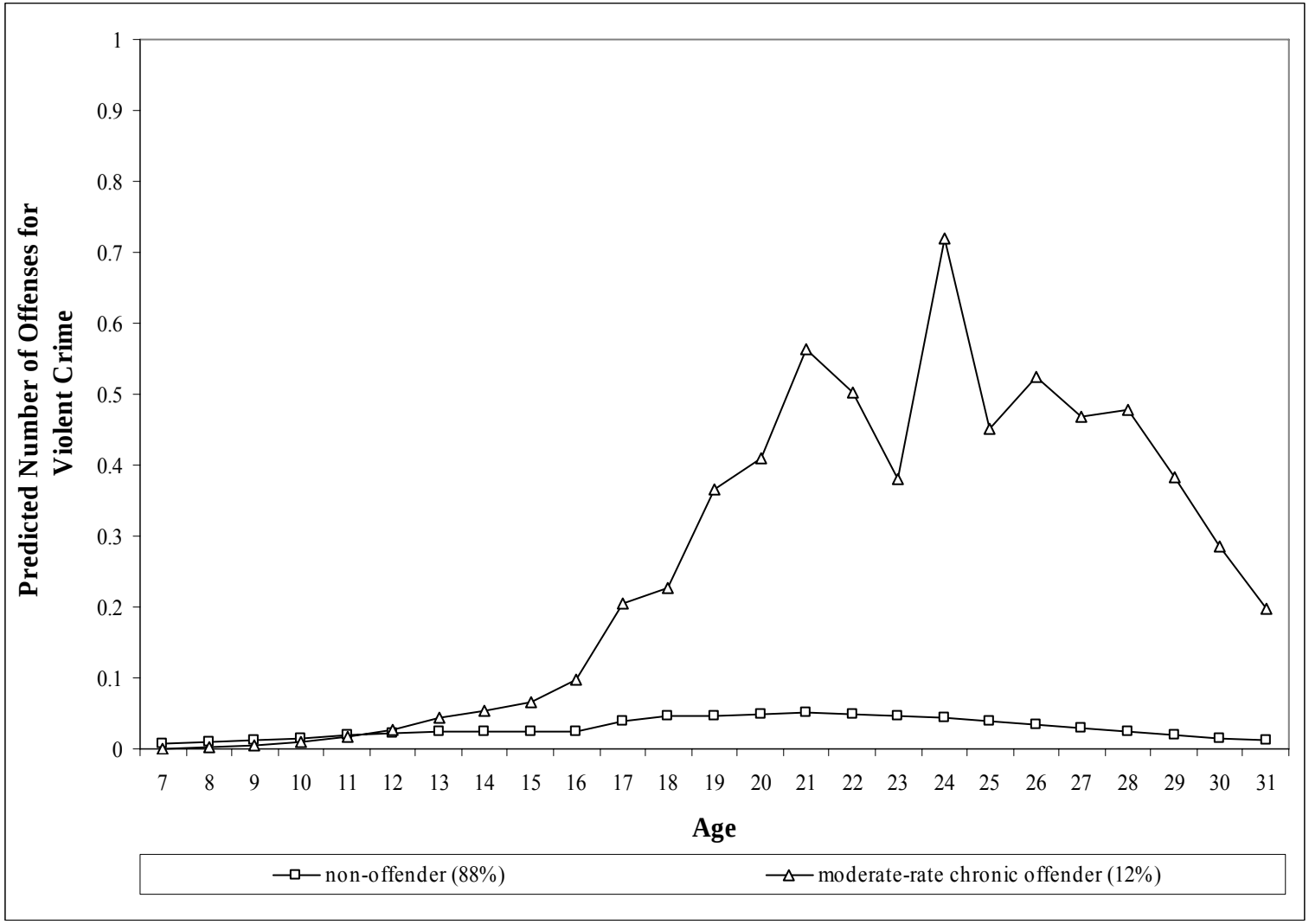
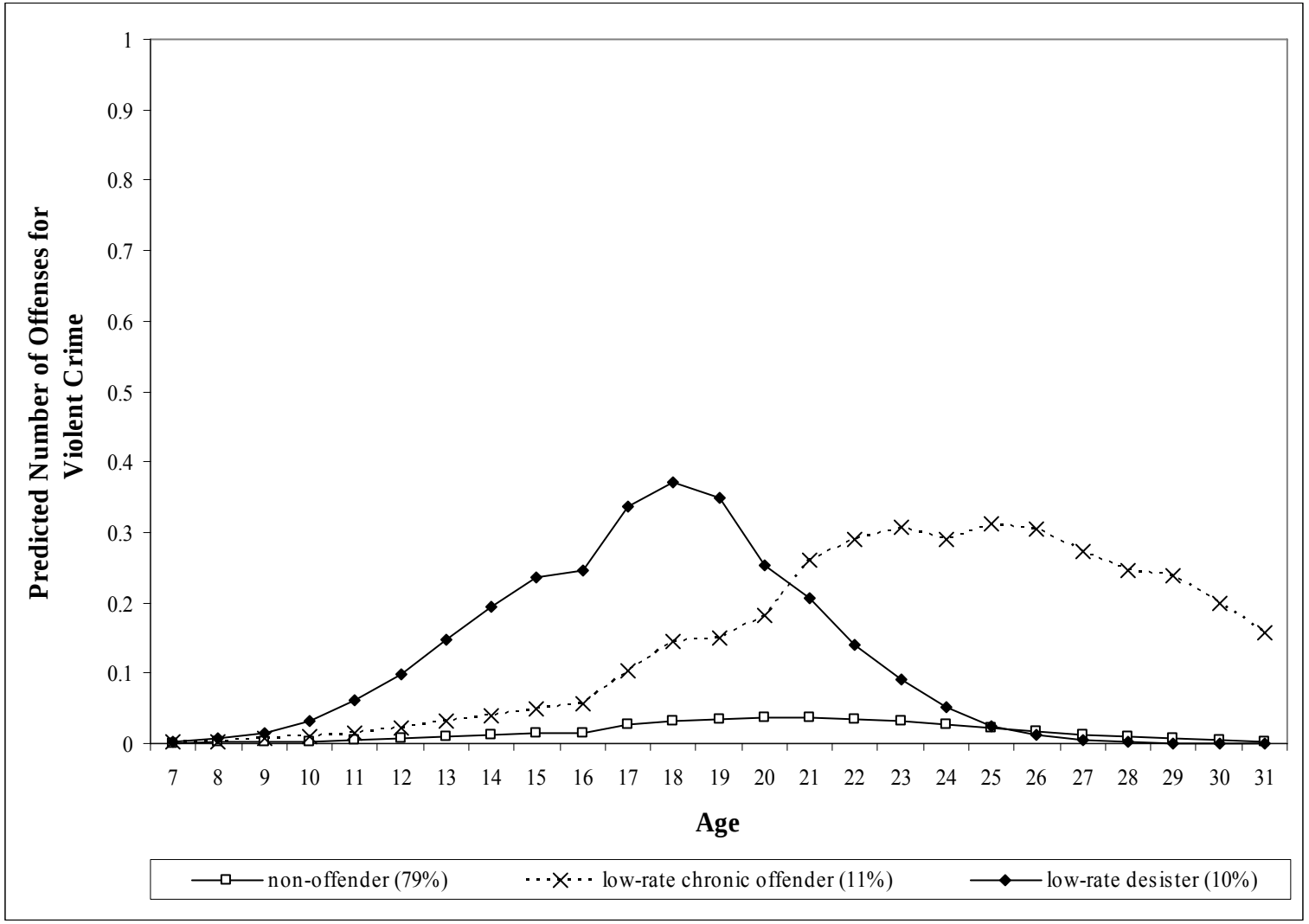


Figure 6.4 Violent Offending Trajectories for Second Generation Immigrants, Incarceration Time Controlled, Glueck Data



childhood to adulthood was observed in both samples and contains the largest portion of boys in each sample (88% native-born boys, 79% immigrant boys).

Alcohol/drug offending trajectories for native-born boys and immigrant boys are presented in Figures 6.5 and 6.6, respectively.[78] In general the patterns were very similar in regard to the number of trajectories that best captured the heterogeneity in alcohol/drug offending as well as the magnitude and shape of the trajectories over the life course. A large group of non-offenders was observed in each sample (68% native-born boys, 48% immigrant boys). In addition, a sizable group of low-rate offenders was observed in both samples (21% native-born boys, 44% immigrant boys). Differences emerged when looking at the chronic offender groups across subsamples. Although moderate-rate chronic offenders were observed in both subsamples, by 31 years of age the moderate chronic immigrant offenders where approaching a near zero rate of offending. Conversely, the moderate-rate chronic native-born offenders still maintained a relatively active rate of alcohol/drug offending by 31 years of age. This difference in level of offending likely explains the higher average rates of involvement in alcohol/drug crime among native-born boys that was observed in Chapter 5.

Comparison of Offending Trajectories by Nationality Group

Although the small sample sizes of the immigrant nationality groups precluded an examination of offending trajectories within each nationality group, it was possible to assess whether immigrants from specific nationality groups disproportionately clustered into any of the five trajectory groups identified in the full immigrant sample.

[78] Average posterior probabilities for the alcohol/drug crime model ranged from .81-.96 for native-born youth and .92-.96 for second generation immigrants with the lowest OCC value of 11.29 and 8.00 for native-born youth and second generation immigrants, respectively.

Figure 6.5 Alcohol/Drug Offending Trajectories for Native-Born Boys, Incarceration Time Controlled, Glueck Data

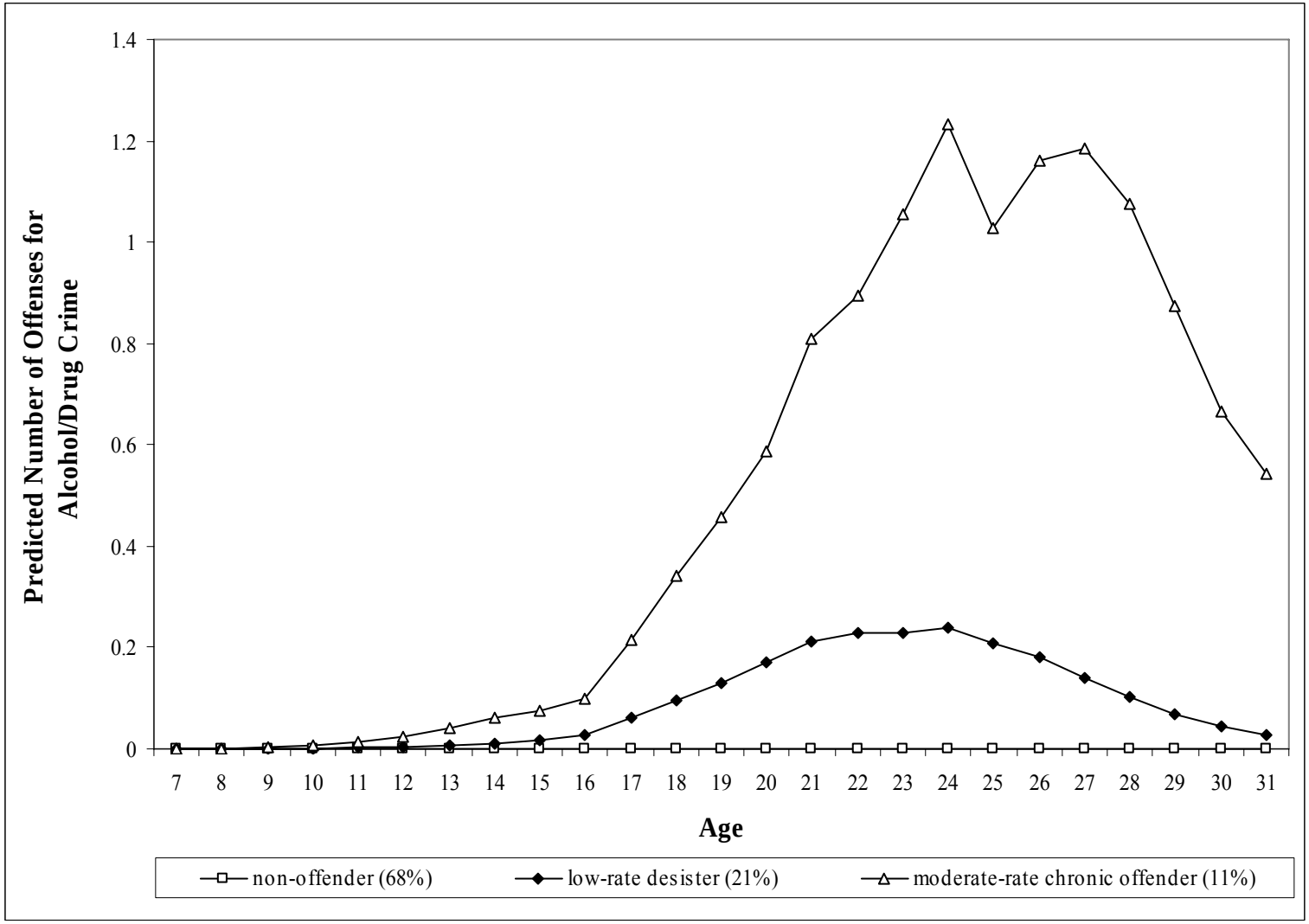
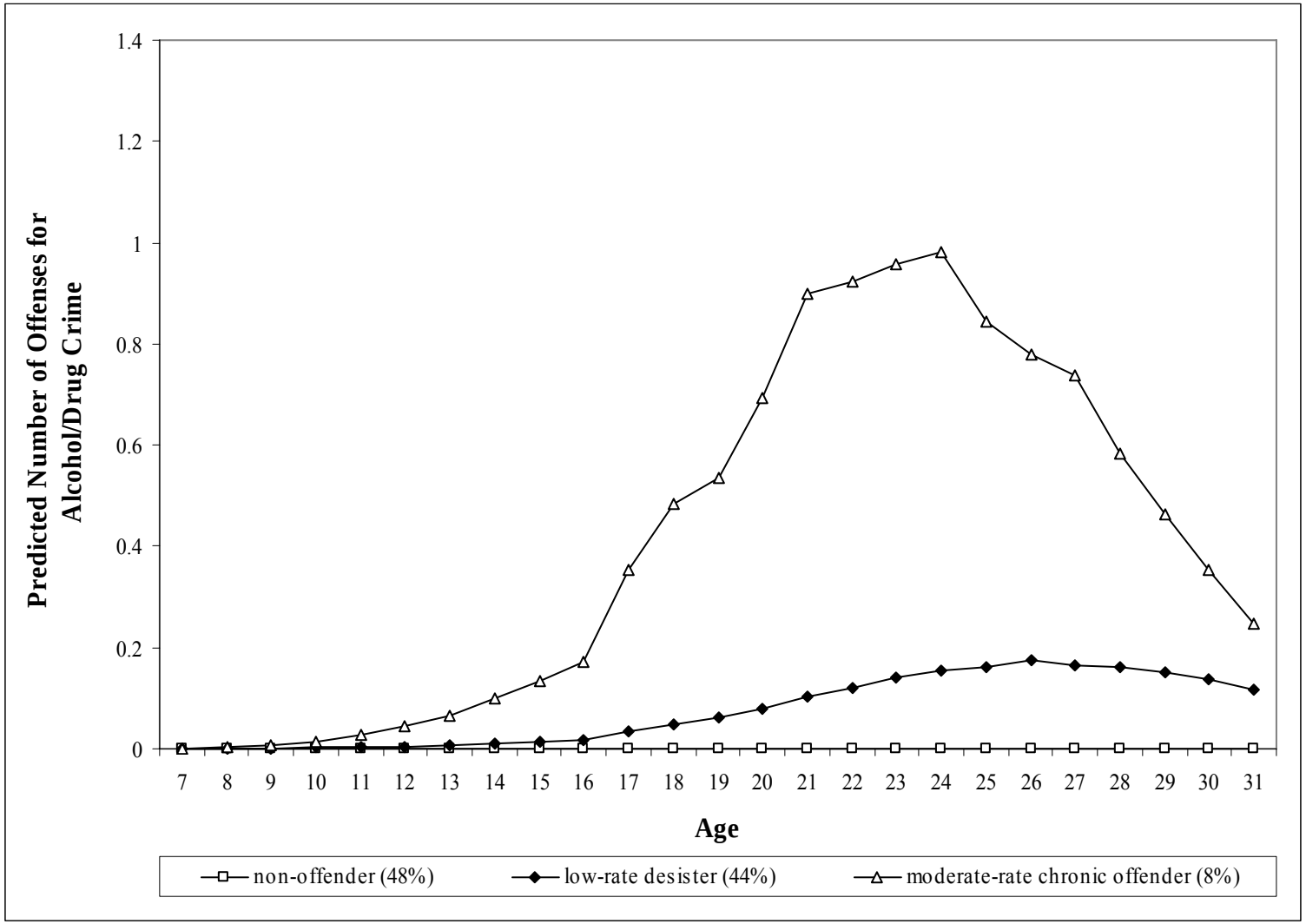


Figure 6.6 Alcohol/Drug Offending Trajectories for Second Generation Immigrants, Incarceration Time Controlled, Glueck Data



Specifically, I examined whether immigrants from particular nationality groups were at greater risk for chronic offending compared to their immigrant peers.

First, means tests were conducted to investigate whether immigrant nationality groups were disproportionately clustered in any of the five trajectory groups identified in the full immigrant sample. Significant mean differences were estimated using an ANOVA test with a post hoc comparison to determine if groups differed and if so, which groups significantly differed from one another.[79] The results of the mean differences test are presented in Table 6.1. No statistically significant differences emerged. That is, there was no evidence that any of the five trajectory groups were more likely to be characterized by English, Italian, or Irish immigrants. Stated simply, immigrants from each nationality group were dispersed across all five trajectory groups.

Table 6.1 Means Test Comparison of Immigrant Offending Trajectories by Nationality Group, Glueck Data

	Trajectory Group				
	Classic Offender	Low-Rate Offender	Moderate-Rate Declining Offender	Low-Rate Chronic Offender	Moderate-Rate Chronic Offender
Nationality Group					
English	0.25	0.32	0.07	0.18	0.29
Italian	0.38	0.40	0.33	0.47	0.21
Irish	0.19	0.09	0.19	0.12	0.33

Note: Since I only look at a select set of nationality groups due to small sample sizes, the columns do not sum to 100 percent.

Second, I investigated whether being a member of a specific immigrant nationality group distinguished membership in a particular trajectory group. That is, does

[79] Because equal variances could not be assumed, a Games-Howell post-hoc test was conducted. Although means tests are not accurate in probabilistic groupings as they do not take into account classification error, Nagin (personal correspondence January 2008) finds that they are remarkably robust.

immigrant nationality group act as a "risk factor" for trajectory group membership? Results from the Wald tests[80] revealed that the chi-square statistics for English immigrants ($\chi^2 = 5.748$, $df = 3$), Italian immigrants ($\chi^2 = 3.897$, $df = 3$), and Irish immigrants ($\chi^2 = 3.360$, $df = 3$), did not reach statistical significance. Specifically, immigrant nationality group did not distinguish among the five trajectory groups.

Summary

Differences in patterns of offending among immigrant and native-born boys were assessed using group-based trajectory modeling. Results indicate that patterns of offending are remarkably similar comparing immigrant and native-born boys regarding the number, shape, magnitude, and size of trajectories. This basic conclusion holds regardless of crime type analyzed. Additionally, there was no evidence that immigrants from particular nationality groups posed a heightened risk as nationality group was not found to distinguish trajectory group membership. Differences were largely observed when assessing the magnitude of offending for particular trajectory groups across samples. In every case, when magnitude differences did emerge it was in the direction of native-born youth having a higher rate of offending compared to their immigrant peers in comparable trajectory groups. This finding supports the general trend that emerged from the analyses presented in Chapter 5.

In light of criminological interest in and concerns regarding persistent, chronic offenders, it is important to note that even within this high-risk sample roughly a quarter of the boys evidenced an "active" rate of offending at 31 years of age. More important for this research, however, was the comparison of chronic offenders across subsamples. The findings indicate that a greater portion of the immigrant sample was active at 31

[80] The Wald test is computed using the SAS macro *trajtest* (see Jones and Nagin 2007:563-564).

years of age; however, among the active offenders, native-born boys evidenced more criminal involvement (a higher magnitude of offending) than immigrant boys.

TRAJECTORY ANALYSIS, NLSY97 DATA

Model Estimation

Data from the National Longitudinal Survey of Youth 1997 was used to compare heterogeneity in offending patterns across immigrant and native-born groups from age 12 to age 24 by estimating semi-parametric group-based trajectory models.[81] This analytic strategy began with the determination of the optimal number of trajectory groups that best defined the data. This decision making process was based upon the consideration of a variety of model diagnostics including the BIC statistic, average posterior probabilities, odds of correct classification, and parsimony (model diagnostics were described in detail in Chapter 4). The optimal number of trajectory groups was determined separately for each group of interest: first generation immigrants, second generation immigrants, and native-born individuals.

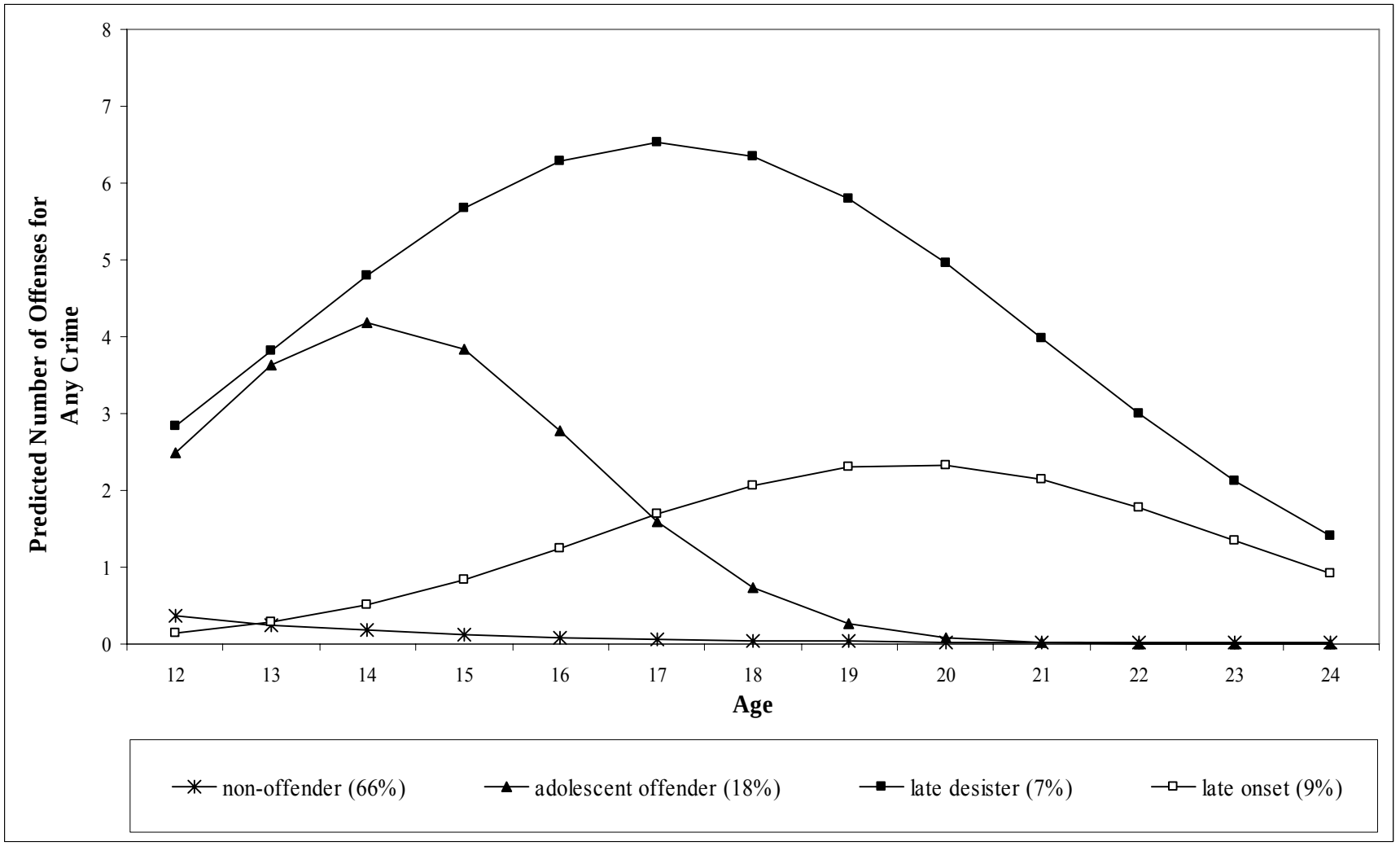
A four group model was determined to be the best fitting model for native-born individuals. Although the BIC statistic continued to increase with the addition of more groups to the model, increasing the number of groups did not result in the addition of new substantively interesting groups. The four group model proved to be of sufficient fit to the data as average posterior probabilities were high (ranging from .92 to .98) and the lowest odds of correct classification (OCC) value was 25.24.

[81] Due to the severe skew of the frequency crime measures (i.e., any, violent, property, and drug crime) the trajectory models would not converge. Frequency counts were collapsed so that reports of ten or more offenses were coded as ten offenses. In general, this coding affected less than 2% of the cases in any age-year with no more than 5% of the cases affected by this recode.

The four estimated group-based trajectories for native-born offending are presented in Figure 6.7. Two of the four trajectories evidenced a zero or near-zero rate of offending by age 24 – the final wave of data. The largest group of youth (66%) fell within a trajectory characterized by a near zero rate of offending throughout adolescence and young adulthood (i.e., non-offenders). The adolescent offender group contained nearly a fifth of the sample (18%). This group was characterized by a classic age-crime curve offending trajectory (see Hirschi and Gottfredson 1983) with the peak in the rate of offending occurring in mid-adolescence followed by a precipitous decline in late-adolescence. The final two groups evidenced a decline in offending in young adulthood, but by 24 years each group still reported on average one to two crimes per year. A small group of youth (late desisters, 7%) had a similar rise in offending in early adolescence as the adolescent offender; however, they did not begin to desist from crime until young adulthood. The final group of youth had an offending rate characterized by a late onset (9%). Unlike their peers, the peak rate of offending for late onset youth did not occur until young adulthood. Moreover, their offending tenure appeared to be short lived as their rate of offending declined toward a near zero rate by 24 years of age.

Next, semi-parametric group based trajectory models were estimated for second generation immigrants. Again, the results indicated that the BIC continued to increase with the addition of more groups to the model. In addition, all estimated models achieved adequate model diagnostic values. Examination of the visual representations of the offending trajectories indicated that a four group model was the optimal model for capturing the heterogeneity in offending patterns among second generation immigrants as the addition of more groups failed to identify substantively interesting trajectories past

Figure 6.7. Offending Trajectories for Native-Born Individuals, NLSY97 Data



the four group model. Posterior probabilities for the four group model ranged from .92 to .97 and the minimum OCC value was 16.68.

Figure 6.8 displays the estimated trajectories for the second generation immigrant four group model. More than half (60%) of the sample evidenced a pattern of a near zero rate of offending. Another 13 percent of the sample followed an adolescent offender trajectory reaching a peak level of offending in mid-adolescence followed by a declining pattern of offending in late adolescence reaching a near zero rate by 18 years of age. A third group – the late desisters (8%) – maintained an "active" pattern of offending from adolescence through young adulthood. Late desisters averaged four to five offenses per year from mid- to late-adolescence at which point their offending began to decrease. By 24 years of age (the last wave of data), late desisters still averaged nearly two offenses per year. The final group contained 19 percent of the sample and displayed an early desister trajectory with peak rates of offending occurring at 12 years of age. These youth had desisted from crime by mid- to late-adolescence.

Trajectories of offending among first generation immigrants were best described by a three group model. As was true with the models for the native-born and second generation immigrants, the BIC statistic did not clearly identify a preferred number of groups in the first generation immigrant models as the BIC continued to rise with the addition of more groups to the model. A three group model performed well on each model adequacy measure. The average posterior probability values ranged from .95 to .98. Additionally, all odds of correct classification values were greater than 5.0 (lowest OCC value was 13.03).

Figure 6.8 Offending Trajectories for Second Generation Immigrants, NLSY97 Data

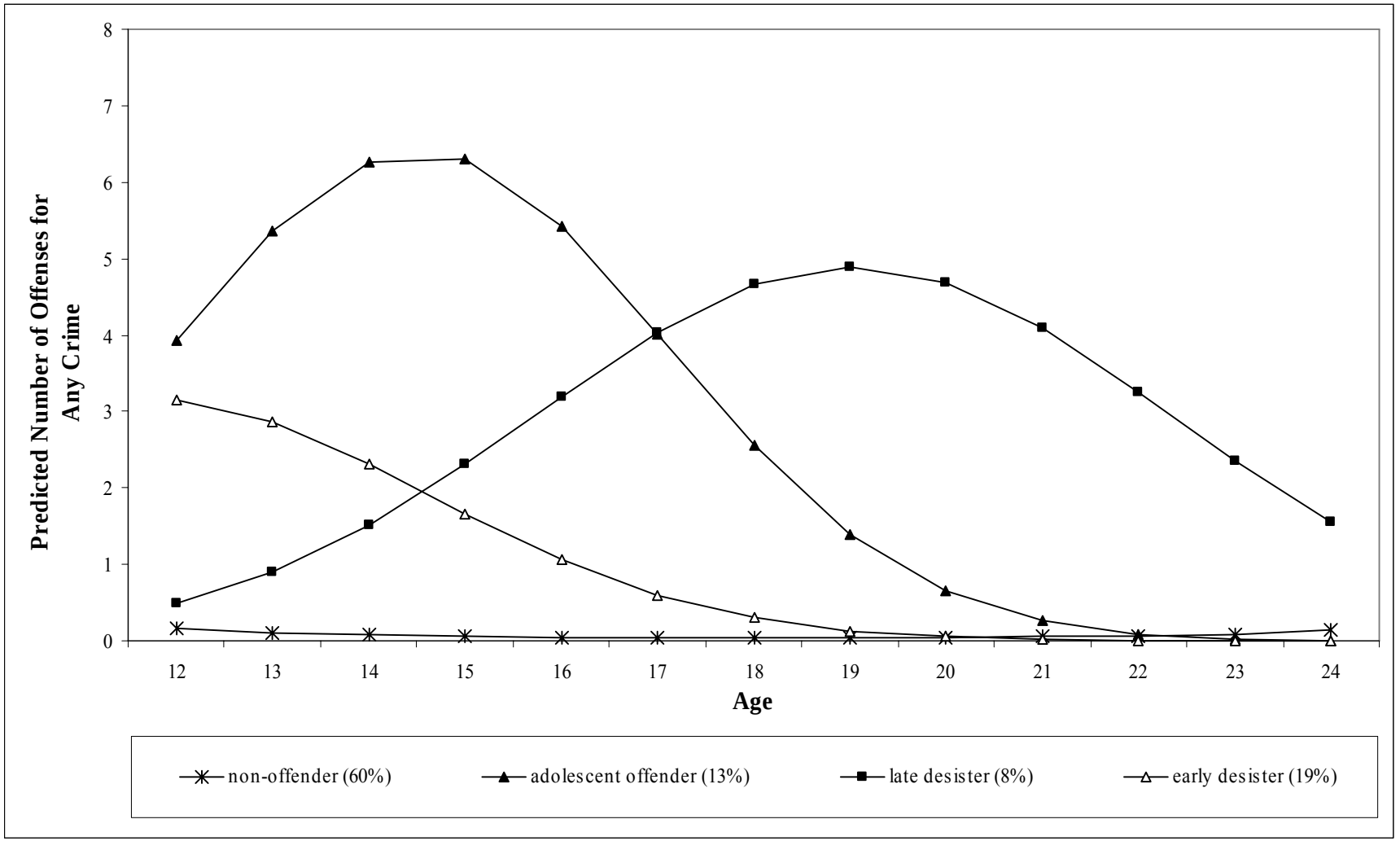


Figure 6.9 Offending Trajectories for First Generation Immigrants, NLSY97 Data

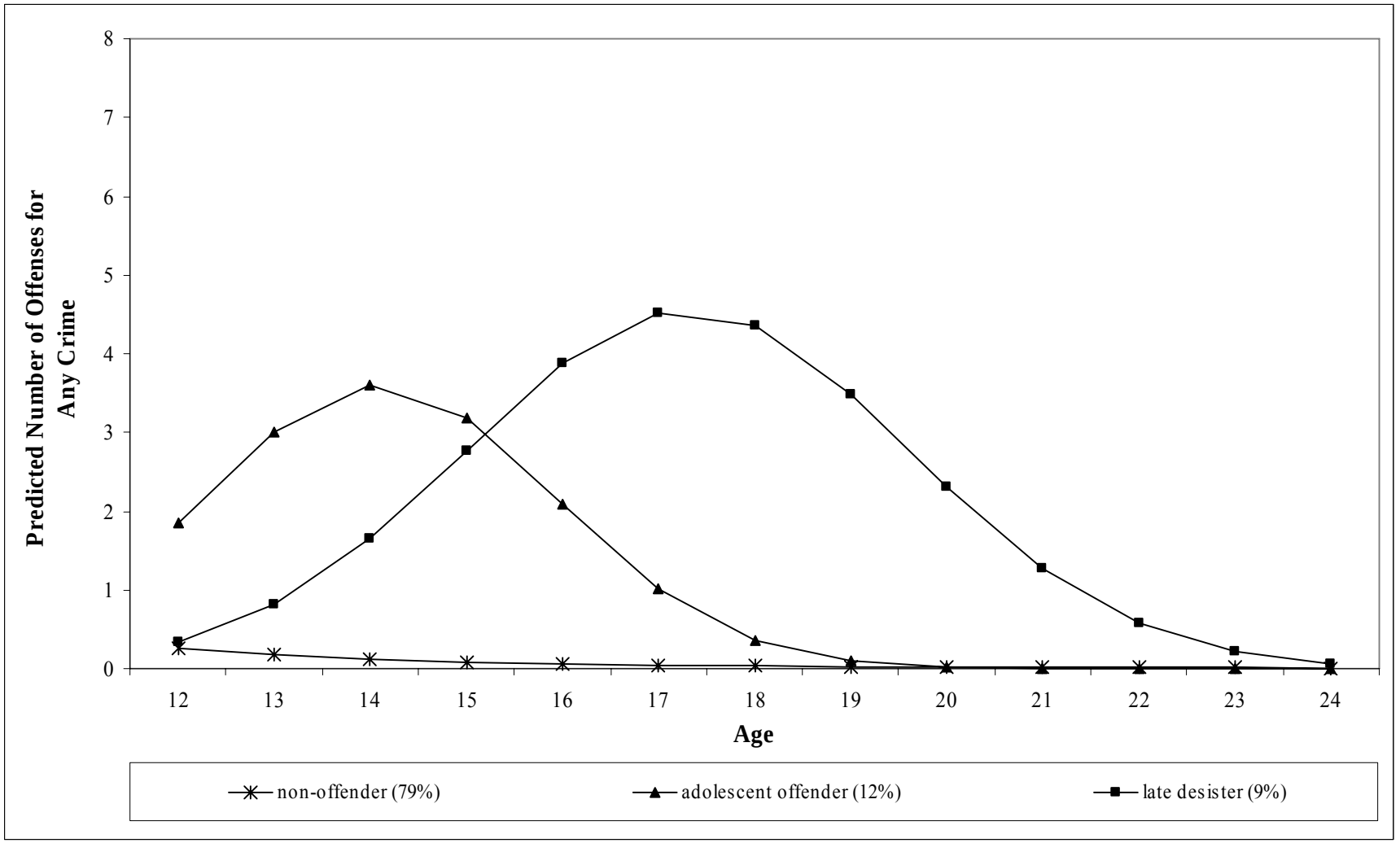


Figure 6.9 displays the three estimated offending trajectories for first generation immigrants. The vast majority of first generation immigrants (79%) fell into the non-offender group which evidenced a near zero rate of offending from early adolescence through young adulthood. Another 12 percent of the sample was characterized by an adolescent offender pattern where delinquent/criminal involvement increased in mid-adolescence, was followed by a decline in late adolescence, and reached a near zero rate of offending by 20 years of age. The final group, the late desisters, contained 9 percent of first generation immigrant sample. This group displayed a high rate of offending in mid- to late-adolescence, reaching an average of more than four offenses per age-year. Although the rate of offending was relatively high for this group compared to the non-offender and low-rate offender groups, offending for the late desister group declined rapidly in late-adolescence and reached a near zero rate of offending by 24 years of age.

Comparing the trajectories of offending for native-born and immigrant youth, similarity clearly dominated the findings. Non-offender, adolescent offender, and late desister groups were observed in all models. Moreover, similar portions of the sample were found in each of these three groups (i.e., the non-offender group contained the largest portion of each sample). Although similarity dominated the findings, a few notable differences were observed. First, magnitude differences in offending were observed. For instance, among the adolescent offenders the peak rate of total offending was an estimated three-to-four offenses for native-born youth and first generation immigrants whereas total offending peaked at an estimated six offenses per year for second generation immigrants. Conversely, among the late desisters the peak rate of total offending was an estimated six and a half offenses for native-born youth, five and a half

offenses for second generation immigrants, and four and a half offenses for first generation immigrants.

Second, two offending groups emerged (one in the native-born trajectory model and one in the second generation immigrant trajectory model) that were not observed elsewhere. Specifically, a late onset group was found in the native-born sample. This group of offenders displayed a low level of offending from adolescence through young adulthood with a peak rate at roughly 20 years of age. Their involvement in crime was found to decline in their twenties, however, at 24 years of age their offending was still characterized as "active" as it had not reached a level significantly indistinguishable from zero. Among second generation immigrants, an early desister group emerged. This trajectory group had reached their peak level of offending at 12 years of age (the first age year in the data) and evidenced a declining rate of criminal involvement thereafter reaching a near zero rate by 19 years of age. Insight into the reason for these differences was found in the crime specific analyses reported in the next section.

Comparison of Offending Trajectories by Crime Type

Heterogeneity in offending trajectories was also compared by disaggregating the any crime measure by crime type. Since the trajectories of offending for property crime were similar to the trajectories for total crime in regards to shape, size, and magnitude across the three samples, I only discuss the results for violent and drug crime here. The optimal number of groups was determined based upon BIC statistics, model adequacy measures, and parsimony.[82]

[82] Average posterior probabilities for the violent crime model ranged from .86-.98 for native-born youth, .82-.96 for second generation immigrants, and .94-.99 for first generation immigrants with the lowest OCC value of 15.47, 6.38, and 8.61 for native-born youth, second generation immigrants, and first generation immigrants, respectively. Average posterior probabilities for the drug crime model ranged from .96-.99 for

The estimated violent offending trajectories are presented in Figures 6.10 to 6.12. Comparing native-born trajectories to second generation immigrant trajectories revealed a high level of correspondence. A four group model was determined to be the best fitting model for native-born and second generation immigrants. Three of the four trajectories evidenced similar shapes and sizes for each sample. Specifically, within both the native-born and second generation immigrant samples, there was evidence of a non-offender group which comprised the largest group in both samples. Moreover, patterns characterized as "adolescent" and "late onset" emerged in both subsamples. The non-offender and late onset groups were very similar across samples in regard to their shape, magnitude of offending, and sample composition. However, differences in magnitude and sample composition were observed among the adolescent offender trajectory. Although only a small portion of the sample of immigrant youth were in the adolescent offender trajectory, their average rate of violent offending was significantly higher than the native-born adolescent offenders.

Within both the native-born and second generation trajectory models, a unique fourth trajectory group emerged. As was observed in the total crime trajectory model, the presence of an early desister group appeared in the second generation model. It appears that a small group of second generation immigrants are involved in violent crime very early in adolescence who then rapidly desist from violent crime thereafter. Conversely, among native-born youth with a similarly high average level of violent offending at 12 years of age, their rate of violent offending continued to increase till mid-adolescence.

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native-born youth, .98-.99 for second generation immigrants, and .99 for first generation immigrants with the lowest OCC value of 18.86, 17.47, and 5.21 for native-born youth, second generation immigrants, and first generation immigrants, respectively.

Figure 6.10 Violent Offending Trajectories for Native-Born Individuals, NLSY97 Data

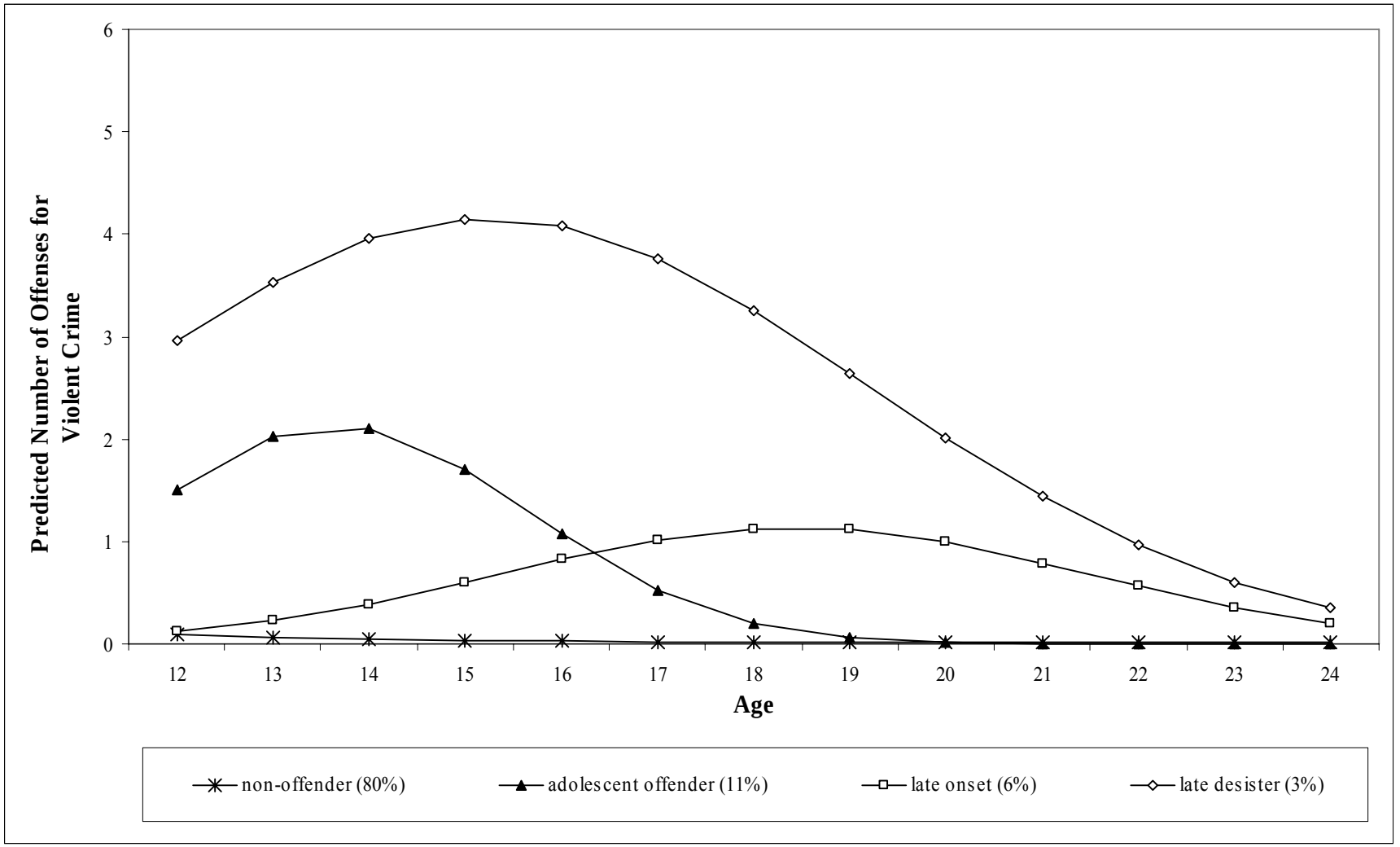


Figure 6.11 Violent Offending Trajectories for Second Generation Immigrants, NLSY97 Data

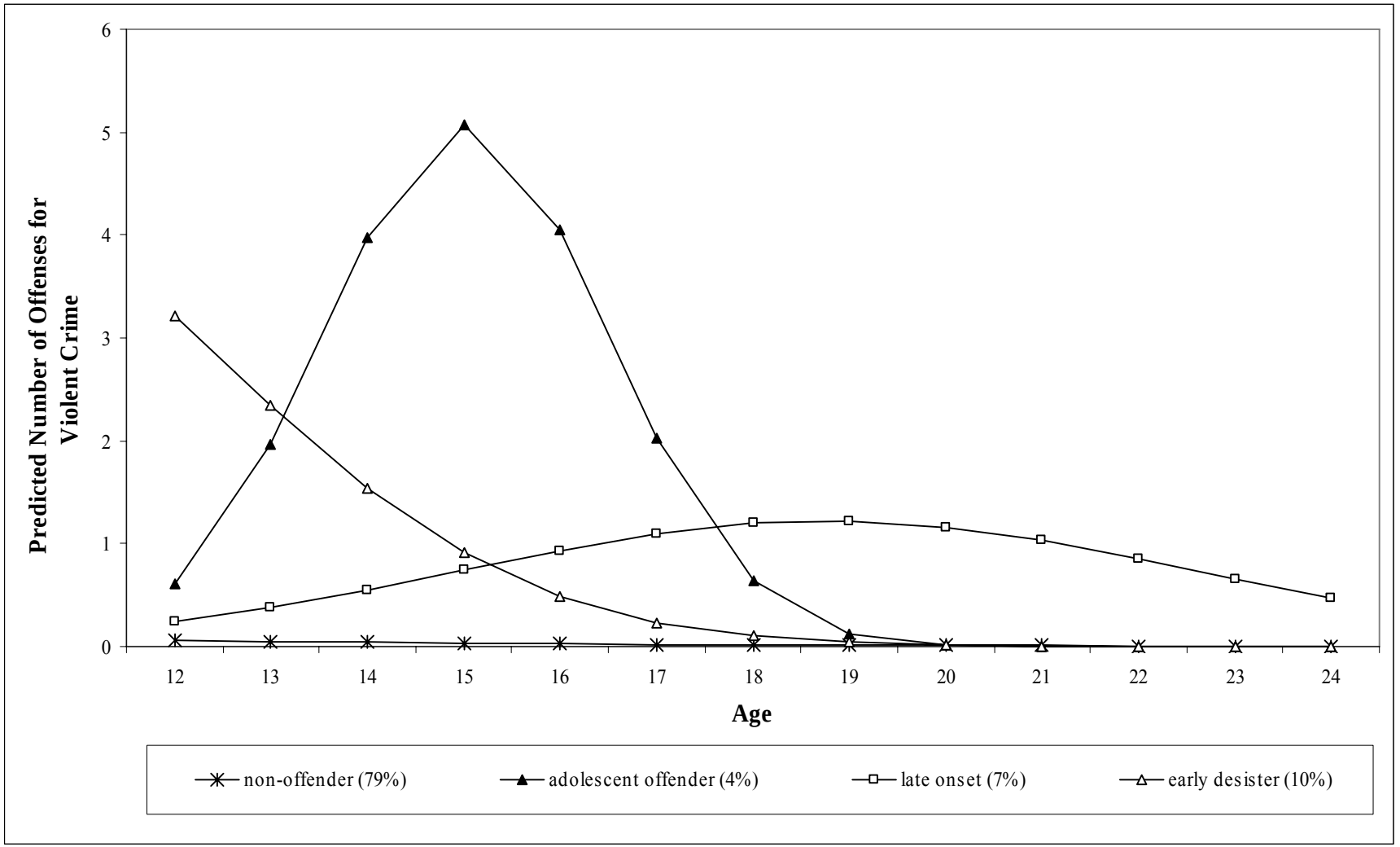
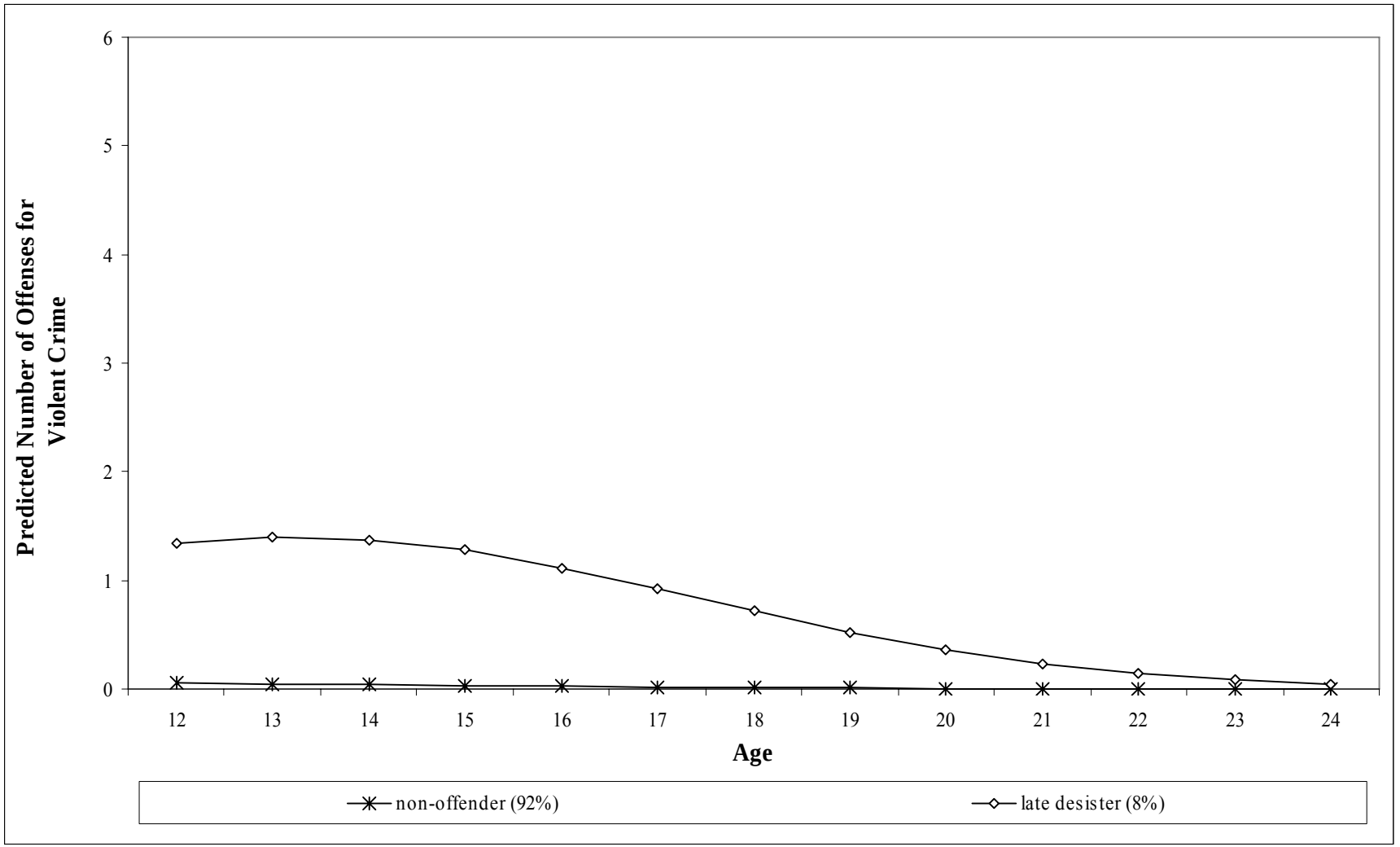


Figure 6.12 Violent Offending Trajectories for First Generation Immigrants, NLSY97 Data



Although desistance is evident among this late desister group, by 24 years of age they remain relatively active violent offenders.

Greater differences emerged when comparing first generation immigrants to either the native-born or second generation immigrant models. Most obvious was that the heterogeneity in violent offending among first generation immigrants was best described by a two group trajectory model. The vast majority of first generation immigrants (92%) had a near-zero rate of violent offending from adolescence through young adulthood. Only a small group of first generation immigrants (8%) was involved in violent offending. This group evidenced a low level of violent offending in early adolescence with declining rates observed from mid-adolescence through young adulthood. Even among the first generation immigrant late desisters average levels of violent crime peaked at just over one offense per age-year.

Offending trajectories for drug crime are presented in Figures 6.13 to 6.15 for native-born youth, second generation immigrants, and first generation immigrants, respectively. Whereas a four group model was found to be the best fitting model among native-born youth, only three groups were needed to characterized drug crime offending among second generation immigrants and two groups were found to best characterize drug offending among first generation immigrants. In fact, drug crime was virtually non-existent among first generation immigrants as 95 percent of the sample was characterized by a non-offender trajectory. Trajectory patterns for a non-offender and late desister trajectory group were observed in all three subsamples. The magnitude of offending and sample composition of these two groups was similar across the immigrant subsamples. Although the magnitude of drug crime for native-born late desisters was higher compared

Figure 6.13 Drug Offending Trajectories for Native-born Youth, NLSY97 Data

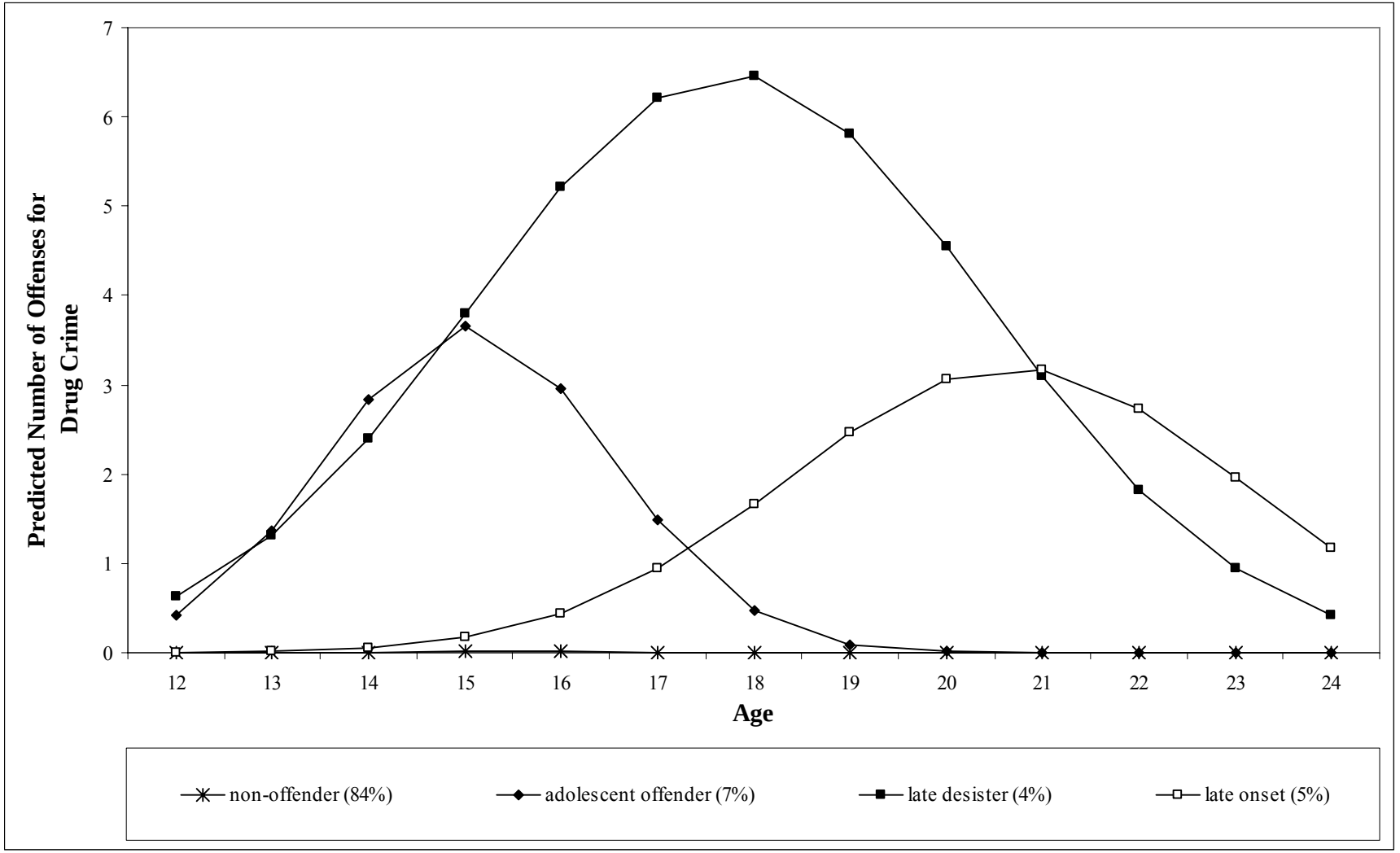


Figure 6.14 Drug Offending Trajectories for Second Generation Immigrants, NLSY97 Data

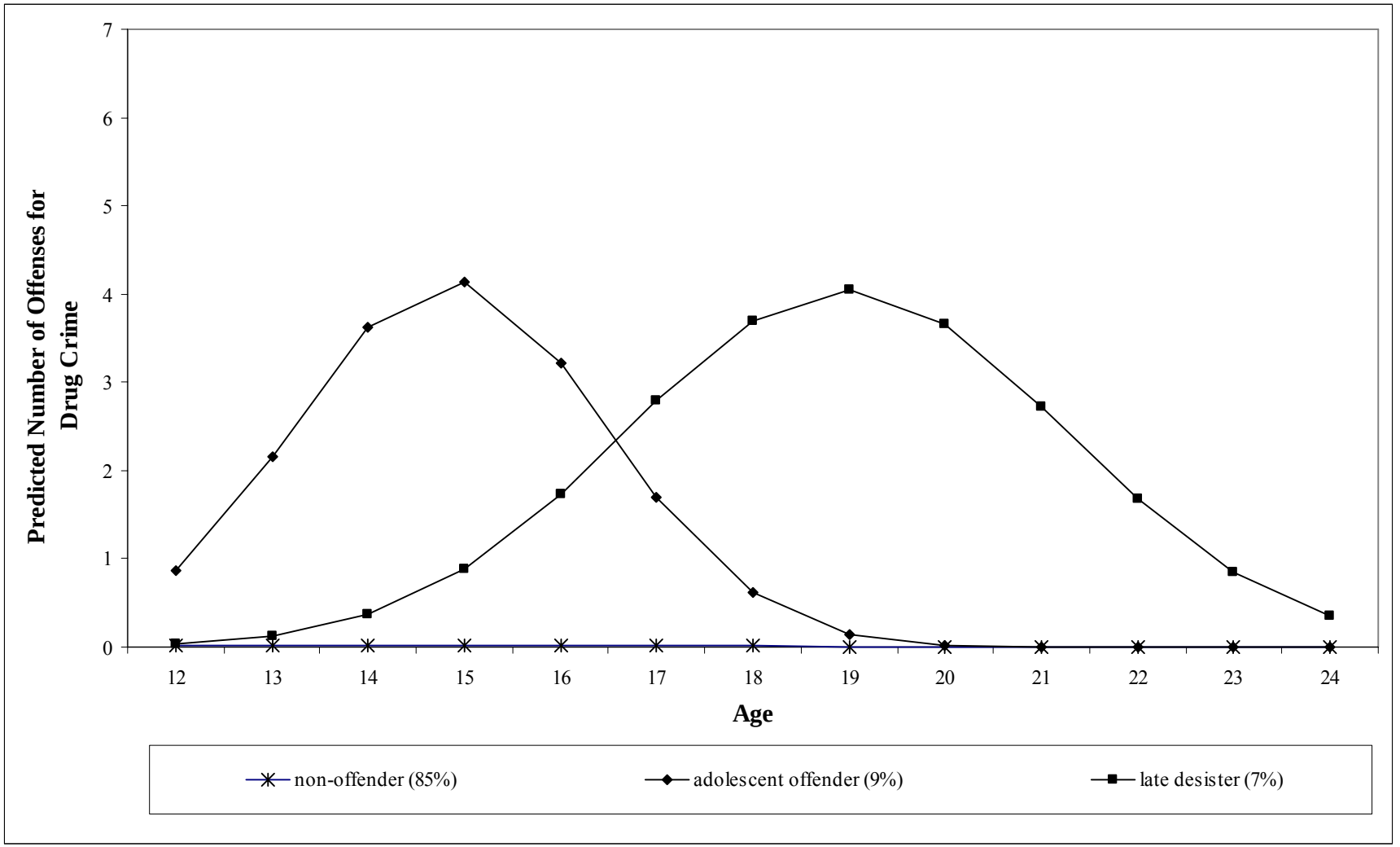
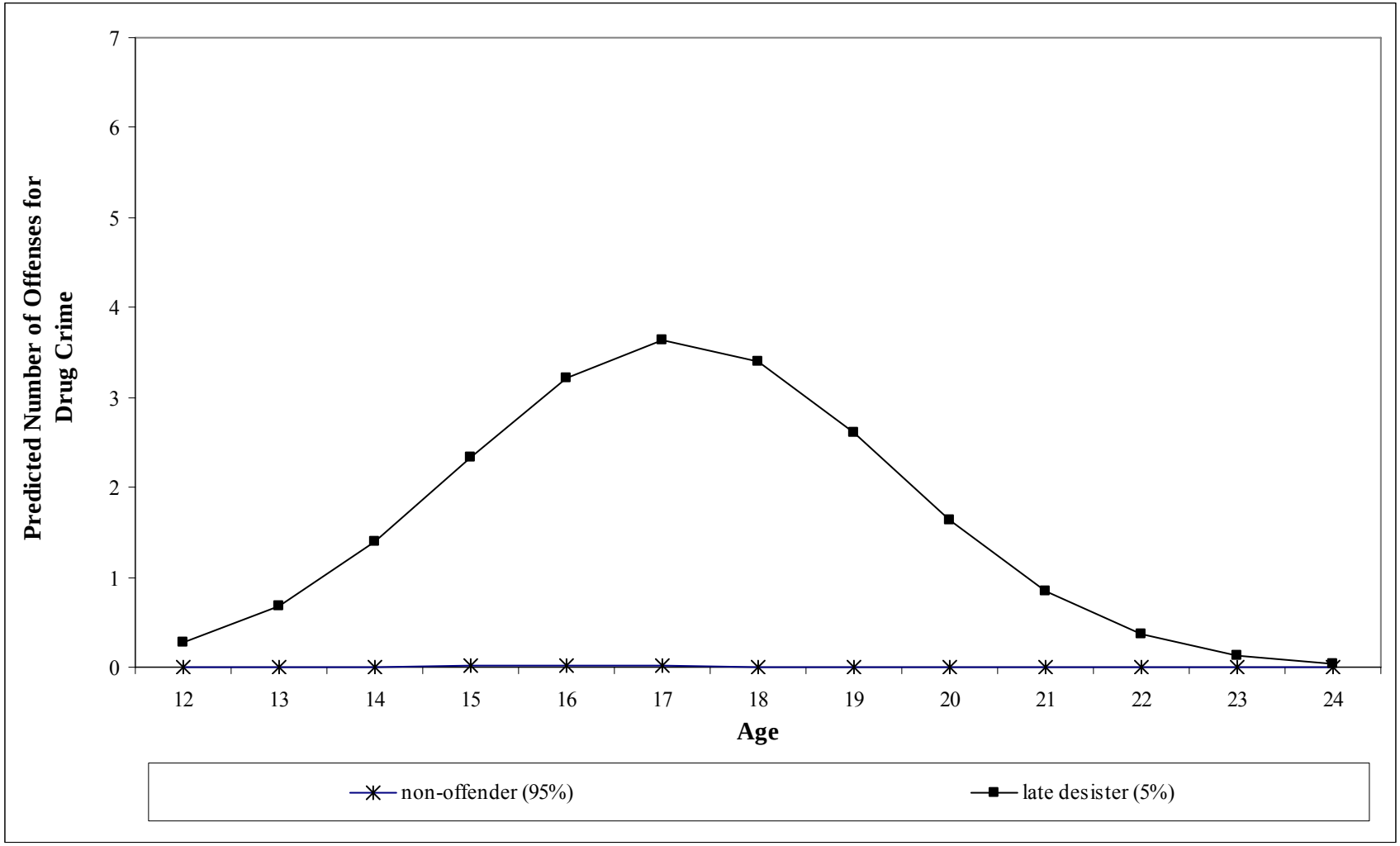


Figure 6.15 Drug Offending Trajectories for First Generation Immigrants, NLSY97 Data



to the immigrant subsamples, the size of this group was approximately half that of the immigrant late desister groups. In addition, an adolescent offender group was observed in the native-born and second generation immigrant models. The adolescent offender groups were very similar in regards to the sample composition as well as the shape and magnitude of offending.

The most obvious difference in the trajectory models of drug crime was the observation of a fourth trajectory group among native-born youth. Specifically, a late onset group emerged in the native-born trajectory model that was not observed in the immigrant models. Late onset offenders were characterized by an onset of drug crime in their late-teens with a relatively stable rate of drug offending throughout young adulthood. By 24 years of age, this group committed an average of two drug crimes per year. The presence of this group gives insight into the observation of a late onset group in the total crime model. The native-born late onset offenders were comprised largely of drug offenders.

Comparison of Offending Trajectories by Nationality Group

To examine whether immigrants from specific nationality groups posed a particular criminal threat, I assessed differences in offending patterns among first generation immigrants by nationality group in two ways. First, means test differences were estimated using an ANOVA test with a post hoc comparison to determine if trajectory groups significantly differed from one another in terms of their immigrant composition. The results revealed no statistically significant differences (see Table 6.2). Specifically, there was no evidence that any of the three trajectory groups were more likely to be characterized by Mexican, Central American, Caribbean, or Asian

immigrants as members from each nationality group were dispersed across all trajectory groups.

Table 6.2 Means Test Comparison of First Generation Immigrant Offending Trajectories by Nationality Group, NLSY97 Data

	Trajectory Group		
	Non-Offender	Adolescent Offender	Late Desister
Nationality Group			
Mexican	.39	.27	.44
Central American	.12	.10	.09
Caribbean	.14	.15	.09
Asian	.08	.15	.12

Note: Since I only look at a select set of nationality groups due to small sample sizes, the columns do not sum to 100 percent.

Second, analyses were conducted to assess whether immigrant nationality group acted as a risk factor for membership in a particular trajectory group. Results from the Wald tests revealed that the chi-square statistics for Mexican immigrants (χ^2 = 3.049, *df* = 2), Central American immigrants (χ^2 = .0001, *df* = 2), Caribbean immigrants (χ^2 = .026, *df* = 2), and Asian immigrants (χ^2 = .037, *df* = 2) did not reach statistical significance. These results indicated that immigrant nationality group did not distinguish any of the trajectory groups.

Summary

Once again, the general theme emerging from the group-based trajectory analyses was one of substantial similarity comparing native-born and immigrant offending patterns. By and large, regardless of immigrant status, much of this sample was characterized by a near zero rate of offending. Involvement in crime was most prevalent during adolescence and while there was evidence of "active" offenders in young

adulthood even these individuals were characterized by a declining rate of offending that was approaching a near zero rate by 24 years of age. This conclusion was found in analyses using a total crime measure as well as in analyses disaggregated by crime type (i.e., violent, property, and drug crimes). Moreover, I found no evidence that immigrants from specific nationality groups were more likely to cluster within any of the trajectory groups nor were they found to be a risk factor for membership in any particular trajectory group.

To date, previous research on immigration and crime had failed to document basic patterns of offending among immigrant individuals. In the preceding analyses, this gap in the literature was addressed using two different datasets that captured information on immigration and crime at the beginning and end of the 20th century. In general, the analyses comparing trajectories of offending among immigrants and native-born youth from two different socio-historical contexts revealed similar stories. If systematic variation in offending patterns across immigrant and native-born youth is present I did not find evidence for it in the analyses conducted here. Rather, after taking into account heterogeneity in offending, results revealed substantial similarity across immigrant status and nationality group when examining prevalence, age of onset, frequency, persistence and desistance from crime. This finding of similarity held in analyses of an array of crime type outcomes, across immigrant nationality groups, and in both the early 20th century and late 20th century datasets.

CHAPTER 7 EXPLAINING VARIATION IN OFFENDING OVER TIME

In the previous two chapters, various strategies were undertaken to examine patterns of offending for immigrant and native-born individuals. Basic descriptive analyses revealed that the prevalence, age of initiation, and frequency of offending was similar across groups – this pattern was evident across two socio-historical contexts, when disaggregated by crime type, and for various immigrant nationality groups.[83] The observed generational differences in the prevalence and frequency of offending was supportive of previous research that found increased rates of involvement in crime across successive immigrant generations (see, e.g., Tonry 1997). By the second generation, offending patterns among immigrants closely mirrored those of native-born youth. Even when subjected to an advanced statistical technique that models the heterogeneity in offending for immigrant and native-born groups, the overwhelming theme was one of remarkable similarity in offending trajectories from childhood/adolescence through young adulthood. Given this level of similarity in the prevalence, age of onset, frequency, and persistence and desistance from crime, the question remains: are there unique factors that explain variation in offending over time among immigrant youth? In other words, do the predictors of offending among native-born youth also predict immigrant offending?

In this chapter I employed the age-graded theory of informal social control (Sampson and Laub 1993) to explain variation in offending over time. This theory has received substantial support in previous studies for explaining crime (see Laub, Sampson

[83] Note that similarities were observed in regard to the shape, but not necessarily the magnitude of offending for native-born and immigrant youth.

and Sweeten 2008 for a review). I began by examining whether social bonds in childhood/adolescence contributed to the variation in offending for native-born and immigrant subsamples. Moreover, a core element of the age-graded theory of informal social control is that the effect of structural background factors on delinquency and crime is mediated by social bonds to the family, peers, and school. To test this notion, in the analyses presented below, predictors were "stepped" into the equation such that structural characteristics were added first, followed by family, peer, and school variables. Controls for demographic correlates and age terms were present in each model as well. Additionally, I assessed whether the influence of social bonds differed across immigrant and native-born youth.

In the first section of this chapter, predictors of offending among early 20th century immigrants and native-born youth were examined using the Glueck data. I began by conducting a test of mean differences of various predictors of offending comparing native-born and second generation immigrants. Then, using the age-graded theory of social control (Sampson and Laub 1993), I conducted a multivariate analysis examining the relationship between structural, family, peer, and school variables and involvement in crime from childhood through young adulthood. Parallel research questions, theoretical framework, and analytic strategy were applied in the second section using data from the NLSY97 in order to investigate the influence of predictors of offending among late 20th century immigrants and native-born youth. Moreover, generational differences were also examined using the NLSY97 dataset.

Mean Difference Test

Before examining the extent to which variation in offending was explained by structural, family, peer, and school variables, I present basic descriptive statistics separately for native-born and immigrant boys in Table 7.1. I estimated a series of χ^2 and *t* tests to examine mean differences on the independent variables across the two groups. The findings revealed that although the boys came from similarly disadvantaged neighborhoods, there were notable differences in their background characteristics particularly those concerning family characteristics. Specifically, immigrant boys were significantly more likely to live in intact households and have larger families compared to native-born boys. Additionally, family socioeconomic status was significantly lower for immigrant boys compared to their native-born peers. The prevalence of no formal education among parents was significantly greater for immigrant boys, while native-born boys were significantly more likely to have parents who had some high school level education. Rates of residential mobility and maternal and paternal criminality were significantly higher among native-born boys.[84] Looking at the individual characteristics, only verbal intelligence evidenced a significant difference. Average verbal intelligence scores for native-born boys were significantly higher than those for immigrant boys. There were no significant differences in peer associations. One school factor significantly differed for these two groups; immigrant boys were slightly more likely to have repeated a grade in school compared to their native-born peers.

[84] The statistically significant difference in parental criminality could reflect a lack of records in the United States regarding the criminal histories of the immigrant parents.

Table 7.1 Descriptive Statistics for Native-born Boys and Second Generation Immigrant Boys, Glueck Data

	Native-born (n = 157)				Second Generation (n = 195)				means test for differences
	mean	sd	min	max	mean	sd	min	max	
Individual									
Age	14.08	1.57	10	17	14.28	1.52	10	17	
Verbal IQ	93.69	12.66	64	125	91.27	13.92	64	128	*
Antisocial Attitude	.85	.95	0	3	.92	.95	0	3	
Impulsive	.13	.34	0	1	.23	.42	0	1	
Early Onset	.18	.39	0	1	.18	.38	0	1	
Family Context									
Family Structure	.28	.45	0	1	.52	.50	0	1	*
Family Size	5.33	1.98	1	8	5.82	1.95	1	8	*
Socioeconomic Status	.74	1.51	-2.37	3.45	.42	1.60	-3.64	3.45	*
Crowded Household	2.35	.59	1	3	2.27	.57	1	3	
Residential Mobility	9.87	4.65	1	16	7.96	4.56	1	16	*
No Formal Education (parents)	.00	.00	0	0	.35	.48	0	1	*
Some Primary Education (parents)	.55	.50	0	1	.49	.50	0	1	
Some High School Education (parents)	.45	.50	0	1	.16	.37	0	1	*
Maternal Criminality	.50	.50	0	1	.35	.48	0	1	*
Paternal Criminality	.79	.41	0	1	.61	.49	0	1	*
Supervision	1.37	.58	1	3	1.51	.66	1	3	
Family Cohesion	1.88	.60	1	3	2.04	.64	1	3	
Parental Attachment	2.06	.75	1	3	2.01	.75	1	3	
Erratic/harsh Discipline	3.19	.65	2	4	3.23	.64	2	4	

* $p \leq .05$.

Table 7.1 (continued) Descriptive Statistics for Native-born Boys and Second Generation Immigrant Boys, Glueck Data

	Native-born (n = 157)				Second Generation (n = 195)				means test for differences
	mean	sd	min	max	mean	sd	min	max	
Peer Associations									
Delinquent Peer Attachment	.48	.50	0	1	.38	.49	0	1	
School									
Grade Repetition	3.41	.91	2	5	3.62	1.01	2	5	*
School Attachment	-1.11	1.48	-2.41	2.80	-.99	1.65	-2.41	2.80	
Truancy	2.65	.53	1	3	2.51	.64	1	3	
Aggregate Level of Criminal Involvement									
Any Crime Prevalence	.29	.46	0	1	.28	.45	0	1	
Violent Crime Prevalence	.03	.18	0	1	.03	.17	0	1	
Drug Crime Prevalence	.06	.24	0	1	.04	.19	0	1	
Any Crime Frequency	.61	1.23	0	10	.57	1.20	0	10	
Violent Crime Frequency	.04	.22	0	3	.03	.21	0	3	
Drug Crime Frequency	.09	.41	0	6	.05	.26	0	4	

* $p \leq .05$.

Mean differences in arrest histories were also assessed. These findings verify those presented in Chapters 5 and 6; namely, no statistically significant differences emerged comparing either the average prevalence rate or frequency of offending over time for immigrant and native-born boys. This finding of no difference held when analyses were disaggregated by crime type.

Predicting Variation in Offending from Childhood to Young Adulthood

Variation in offending over time was examined by running a baseline model to 1) investigate whether significant variation existed in the outcome (i.e., total crime, property crime, violent crime, alcohol/drug crime), and 2) assess how much of that variation was explained at the within- and between-individual levels. For native-born and immigrant youth, the results indicated that significant variation existed when examining total criminal involvement as well as when the dependent variable was disaggregated by crime type. Intraclass correlation coefficients (ICC) were calculated by decomposing the total variance into its within- and between-individual variance components to determine the amount of variance explained at each level.[85] ICC values indicated that most of the variance lies at the within-individual level (91% native-born boys, 90% immigrant boys); while the remaining 9% and 10% percent of the variance lies between individuals for native-born and immigrant boys, respectively. Clearly, significant variation existed at the individual level to warrant the use of a multilevel modeling strategy. Results from the unconditional growth models for native-born and second generation immigrants indicated

[85] The intraclass correlation coefficient was calculated using the following equation:

$$\rho = \frac{\sigma_{u0}^2}{\sigma_{u0}^2 + \sigma_r^2}$$

that neither age nor age squared evidenced significant variation. Therefore, in subsequent models the age terms were fixed.[86]

Table 7.2 presents the findings of the hierarchical Poisson regression analysis of total crime counts for native-born boys.[87] Variables were entered into the equation in a two step process in order to test the mediation hypothesis of the age-graded theory of informal social control. First, structural variables were entered into the equation in model 1. Net of controls for individual characteristics and growth terms, the results revealed two significant effects. First, household size was positively associated with the rate of offending such that offending increased as household size increased. Second, household crowding was negatively related to offending. The close proximity of household members in crowded homes may have resulted in a type of supervision that decreased criminal behavior.

Second, family, peer, and school process measures were added to the equation in model 2. The results indicated that parental supervision and school attachment were negatively associated with the rate of offending for native-born boys. Higher levels of supervision and attachment to school were associated with lower levels of offending.

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[86] Age and age squared terms were grand-mean centered. Therefore, the intercept represents the average rate of offending for youth at roughly 19 years of age. All models controlled for the influence of incarceration time. Raudenbush and Bryk (2002:183; see also Horney, Osgood and Marshall 1995; Osgood 2009) suggest that an effective method of modeling within-individual and between-individual change over time is to decompose the time-varying covariates into two parts. First, the difference from the individual specific mean in each time period (group-mean centering) models *within-individual* change. By group-mean centering time-varying covariates at level 1, I control for the correlation between the time-varying covariates and the mean level of offending (Raudenbush and Bryk 2002). Second, I control for individual differences in the overall proportion of time free by including an aggregate measure of this time-varying covariate in the level 2 equation. This procedure models *between-individual* differences in the overall level of time free on offending. By including an aggregate measure of time free at level 2, the possibility of obtaining biased estimates arising from the likelihood that individuals vary by their average time spent free (not incarcerated) on the street is reduced (see Raudenbush and Bryk 2002:183; Osgood 2009). Specific results are available upon request.

[87] Multicollinearity does not influence the results as analyses indicated that Variance Inflation Factor values were all less than 2. Moreover, no correlation exceeded $r = .50$ and most were less than $r = .20$.

Table 7.2 Hierarchical Models of Total Crime Counts for Native-born Boys, Glueck Data (n = 156)

	Model 1		Model 2	
	Coefficient	(se)	Coefficient	(se)
Intercept	-.63 ***	.13	-.67 ***	.13
Age	-.10	.47	-.20	.42
Age2	.00	.02	.01	.02
Verbal IQ	-.01	.00	-.00	.00
Antisocial Attitude	.05	.05	.06	.05
Impulsive	-.27 *	.11	-.20	.13
Early Onset	.29 *	.12	.28 *	.13
Family Structure	.14	.10	.14	.10
Family Size	.07 *	.03	.07 **	.03
Socioeconomic Status	-.01	.03	.02	.03
Crowded Household	-.19 *	.09	-.19 *	.09
Residential Mobility	-.01	.01	-.02	.01
Maternal Criminality	.09	.11	.13	.10
Paternal Criminality	-.13	.14	-.19	.13
Some High School Education (parent)	.12	.09	.19 *	.09
Supervision			-.18 *	.08
Family Cohesion			-.00	.10
Parental Attachment			-.03	.06
Erratic/harsh Discipline			-.13	.07
Delinquent Peer Attachment			.03	.09
Grade Repetition			-.04	.05
School Attachment			-.09 **	.03
Truancy			.25 *	.10

Notes: Overdispersed Poisson model, robust standard errors with PQL estimation.
* p < .05; ** p < .01; *** p < .001.

Additionally, truancy evidenced a positive association with offending such that a greater frequency of truancy was associated with higher rates of offending.[88]

Although a number of process variables were significantly related to the rate of offending among native-born youth, the addition of these variables to the equation did not

[88] Although the addition of truancy to the model is meant to be a proxy for school bonding such that youth who are more bonded to school should be less truant, this variable may simply be measuring a behavior analogous to crime (Gottfredson and Hirschi 1990).

reduce the effect of the structural variables on offending. As a result, the mediation hypothesis of the age-graded theory of informal social control was not supported among native-born youth in this sample.[89] This finding may be due to the fact that variability in the level of bonds within this delinquent sample is low. Moreover, it may be that in this sample of high-risk boys, social bonds may be lacking in general and therefore the ability of bonds to mediate the influence of structural background factors is limited or even negated.

In Table 7.3, I present the results of the hierarchical Poisson regression models of total crime counts for immigrant youth. Net of controls for individual characteristics and growth terms, none of the structural variables were significantly associated with offending. Family, peer, and school measures were added to the equation in model 2.[90] Unlike their native-born peers, none of the process variables evidenced a significant association with offending for immigrant boys.

Overall, although only a handful of variables attained statistical significance the lack of statistical significance is not surprising as the boys in the sample were selected based upon their level of involvement in criminal behavior and therefore variation on the dependent variable – although present – is relatively small. Moreover, most boys come from similarly disadvantaged families and neighborhoods resulting in a lack of variation

[89] Mediation was tested following Baron and Kenny (1986). A mediation effect is supported if: 1) the independent variable(s) (i.e., structural variables) is significantly related to the mediator variable(s); 2) the independent variable(s) (i.e., structural variables) is significantly related to the dependent variable(s); and 3) the mediator variable(s) is significantly related to the dependent variable(s). A partial mediation effect is supported when the effect of the independent variable is smaller when the mediator is included in the analysis. A full mediation effect is supported if the independent variable has no effect on the dependent variable when the mediator is included. See Appendices C and D for the full mediation analysis results for the Glueck data.

[90] Because there were no significant effects of structural variables on offending among immigrant boys, the mediation hypothesis of the age-graded theory of informal social control could not be assessed. Essentially, there were no effects to be mediated in the immigrant model.

on the independent variables as well. Given this lack of variation, it is perhaps more surprising that any significant effects emerged at all.[91]

Table 7.3 Hierarchical Models of Total Crime Counts for Second Generation Immigrant Boys, Glueck Data (n = 195)

	Model 1		Model 2	
	Coefficient	(se)	Coefficient	(se)
Intercept	-.64 ***	.10	-.65 ***	.11
Age	.62	.56	.53	.57
Age2	-.02	.02	-.02	.02
Verbal IQ	.01 *	.00	.01 *	.00
Antisocial Attitude	.05	.04	.07	.04
Impulsive	.03	.09	-.03	.09
Early Onset	.12	.08	.11	.09
Family Structure	.03	.10	.09	.10
Family Size	.06	.03	.04	.03
Socioeconomic Status	-.01	.03	-.01	.03
Crowded Household	-.05	.10	-.06	.10
Residential Mobility	.01	.01	.01	.01
Maternal Criminality	.08	.10	.06	.10
Paternal Criminality	-.05	.09	-.06	.09
Some High School Education (parent)	-.21	.12	-.23	.12
Supervision			-.04	.06
Family Cohesion			-.07	.08
Parental Attachment			-.00	.08
Erratic/harsh Discipline			-.05	.07
Delinquent Peer Attachment			.02	.08
Grade Repetition			.03	.05
School Attachment			-.05	.03
Truancy			.11	.08

Notes: Overdispersed Poisson model, robust standard errors with PQL estimation.
* $p < .05$; ** $p < .01$; *** $p < .001$.

[91] The general lack of significance found here differs sharply from the initial test of the age-graded theory of informal social control which also used the Glueck data (see Sampson and Laub 1993). Importantly, the theory was designed to explain differences in criminal behavior between delinquents and non-delinquents and therefore the initial test of the theory was conducted using both the delinquent and non-delinquent Glueck samples. The different sample used here likely accounts for the stark differences in findings.

Although significant effects in the hierarchical regression analyses presented above were sparse, the assessment of whether predictors of offending function differently for native-born and immigrant youth was still conducted as it served as an initial step in discovering whether a differential process among the two subsamples of boys was at work.[92] The comparison of the effects of the predictors on criminal behavior revealed few statistically significant differences between the native-born and immigrant boy models (see Table 7.4).[93] Although the effect of mobility on offending emerged as significantly different, the strength of the effect of this variable was slight for both native-born and immigrant boys. As such, the substantive contribution of the differential effect of mobility was minimal.

The effect of having a parent with some high school education differed both in magnitude and direction. For native-born boys, parental high school education had a positive effect on one's rate of offending. That is, it was associated with an increased rate of offending. For immigrant boys the effect was negative in that parental high school education was associated with a decreased rate of offending. The negative association with offending among immigrant boys may be tapping into the protective effect of human capital resources hypothesized in segmented assimilation theory (see Portes and Rumbaut 2001; Portes and Zhou 1993). Analyses disaggregated by crime type presented below give some insight into this differential effect.

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[92] Although some variables are significant for one subsample and not the other, it is possible that the effect of the coefficients on the outcome variable is not statistically different from each other. When neither coefficient is significant in predicting variation in delinquency within each subsample, its effect is not compared across subsamples.

[93] To examine whether the predictors of offending differed for native-born and immigrant boys, I tested for the equality of regression coefficients (see Paternoster et al. 1998). Calculation of the equality of regression coefficient was based on the equation:

$$z = \frac{b_1 - b_2}{\sqrt{seb_1^2 + seb_2^2}}$$

Table 7.4 Equality of Regression Coefficient Test of the Predictors of Offending Comparing Native-born Boys to Second Generation Immigrant Boys, Glueck Data

	Native-born Boys compared to Second Generation Immigrant Boys
	z test
Intercept	
Age	
Age2	
Verbal IQ	
Antisocial Attitude	
Impulsive	
Early Onset	
Family Structure	
Family Size	
Socioeconomic Status	
Crowded Household	
Residential Mobility	*
Maternal Criminality	
Paternal Criminality	
Some High School Education (parent)	**
Supervision	
Family Cohesion	
Parental Attachment	
Erratic/harsh Discipline	
Delinquent Peer Attachment	
Grade Repetition	
School Attachment	
Truancy	

* p ≤ .05; **p ≤ .01; ***p ≤ .001.

Predicting Variation in Offending by Crime Type. When disaggregated by crime type, the general finding of no difference holds (see Table 7.5 for the results of the violent crime model).[94] Although scattered significant differences emerged, for the most part the effect of family, peer, and school variables was similar for native-born and immigrant boys.

[94] Because the results for the property crime analysis mirrored those of the total crime analysis they are not presented. Additionally, because the results of the test of the mediation hypothesis remained substantively the same when analyses were disaggregated by crime type, only the full model results are shown here.

Table 7.5 Hierarchical Models of Violent Crime Counts for Native-born Boys and Second Generation Immigrant Boys, Glueck Data

	model 1 native-born boys (n = 156)		model 2 immigrant boys (n = 195)		model 3
	Coefficient	(se)	Coefficient	(se)	*z* test
Intercept	-3.69 ***	.27	-3.80 ***	.22	
Age	-1.79	1.26	-3.15 **	1.02	
Age2	.06	.05	.11 **	.04	
Verbal IQ	-.01	.01	.01	.01	
Antisocial Attitude	.04	.10	-.04	.09	
Impulsive	-.82	.47	-.14	.19	
Early Onset	-.05	.28	.42 **	.15	
Family Structure	.42	.27	.27	.19	
Family Size	-.03	.05	.08	.06	
Socioeconomic Status	.08	.09	-.03	.07	
Crowded Household	-.07	.22	-.28	.21	
Residential Mobility	-.06 *	.03	-.03	.03	
Maternal Criminality	-.16	.20	-.06	.22	
Paternal Criminality	-.37	.24	.11	.20	
Some High School Education (parent)	.49 *	.21	.33	.22	
Supervision	-.50 **	.17	-.06	.13	*
Family Cohesion	-.33	.19	.15	.20	
Parental Attachment	.11	.12	.09	.16	
Erratic/harsh Discipline	-.36 *	.15	-.28	.15	
Delinquent Peer Attachment	.46 *	.19	-.20	.22	*
Grade Repetition	.13	.11	.07	.12	
School Attachment	-.04	.08	-.05	.06	
Truancy	.22 *	.18	.09	.17	

Notes: Overdispersed Poisson model, robust standard errors with PQL estimation.
* p < .05; ** p < .01; *** p < .001.

A slightly different pattern emerged when differences in the effect of predictors on one's rate of involvement in alcohol/drug crime was assessed (see Table 7.6). The results revealed that a number of family and school variables differed in magnitude and sometimes direction in predicting offending among native-born and immigrant boys. Family process variables seemed to be particularly influential for native-born boys. That is, parental monitoring and family cohesion were significantly associated with the rate of

alcohol/drug crime for native-born boys, yet these variables evidenced no statistically significant relationship with offending for immigrant boys. This pattern was also present when looking at the effect of grade repetition. Native-born boys who had a history of grade repetition had an increased rate of alcohol/drug crime; grade repetition was not significantly related to alcohol/drug crime among immigrant boys.

Table 7.6 Hierarchical Models of Alcohol/Drug Crime Counts for Native-born Boys and Second Generation Immigrant Boys, Glueck Data

	model 1 native-born boys (n = 156)		model 2 immigrant boys (n = 195)		model 3
	Coefficient	(se)	Coefficient	(se)	*z* test
Intercept	-3.06 ***	.24	-2.99 ***	.24	
Age	-.48	1.11	.50	1.14	
Age2	.01	.04	-.01	.04	
Verbal IQ	.03	.02	-.01	.01	
Antisocial Attitude	.28 *	.13	.14	.16	
Impulsive	-.31	.16	-1.55 ***	.38	*
Early Onset	-.26	.22	.80 ***	.23	*
Family Structure	-.11	.24	.09	.26	
Family Size	.15 *	.06	.14	.08	
Socioeconomic Status	-.10	.06	.11	.09	
Crowded Household	-.20	.22	-.14	.26	
Residential Mobility	-.01	.04	-.04	.03	
Maternal Criminality	-.87 ***	.25	.66 **	.25	*
Paternal Criminality	.25	.21	.59 *	.23	
Some High School Education (parent)	.45	.28	.68 *	.27	
Supervision	.31 *	.15	-.33	.19	*
Family Cohesion	-.59 **	.18	.38	.24	*
Parental Attachment	.33	.21	.17	.14	
Erratic/harsh Discipline	-.05	.22	-.22	.16	
Delinquent Peer Attachment	.07	.24	.08	.21	
Grade Repetition	.39 *	.19	-.13	.14	*
School Attachment	-.02	.06	-.29 ***	.08	*
Truancy	.13	.22	.42	.25	

* $p \leq .05$; ** $p \leq .01$; *** $p \leq .001$.

Whereas some parental high school education was not significantly associated with the rate of alcohol/drug offending among native-born boys, some parental high school education was found to be positively associated with the rate of alcohol/drug offending among immigrant boys. The resultant increase in offending with increased parental education is inconsistent with theoretical expectations that greater parental human and social capital should reduce offending among the children of immigrants (see Portes and Zhou 1993).

Finally, maternal criminality was significantly related to offending for both native-born and immigrant boys, however, its relationship to offending differed for each subsample of boys. Specifically, whereas maternal criminality was associated with a decrease in alcohol/drug crime for native-born boys it was associated with an increase in alcohol/drug crime for immigrant boys. The finding that maternal criminality was associated with a decreased rate of offending among native-born boys was not expected. Notably, the effect of maternal criminality was only found when assessing involvement in alcohol/drug crimes.

The importance of the school was evident among both native-born and immigrant boys. Specifically, the effect of school attachment was of a greater magnitude and attained statistical significance only among immigrant boys. This relationship was in the expected direction as higher levels of school attachment were associated with a decreased rate of offending for all boys in the sample. Repeating a grade in school was found to be particularly detrimental to native-born boys such that grade repetition was positively associated with alcohol/drug offending; this relationship was not observed among immigrant boys.

Robustness Analyses. A number of additional analyses were conducted to assess the robustness of the general finding of no difference across native-born and immigrant groups. First, I examined the extent to which immigrant nationality group influenced the findings. Although the small sample sizes of the nationality groups restricted running the models for Italian, Irish, and English immigrant groups separately, the addition of these variables to the model did not alter the substantive results. Moreover, the nationality group variables evidenced a non-significant relationship with crime, further demonstrating support for the finding that immigrants from specific nationality groups pose no greater criminal threat than immigrants in general or their native-born peers as presented in Chapters 5 and 6. Second, because of the high prevalence of zero's in the data (where a zero equals no arrest in a given year), logistic models were also analyzed. Overall, the substantive story remained the same. In sum, regardless of immigrant status, the role of family, peer, and school variables was similar for all boys in the sample.

Conclusion

Overall, the lack of differences comparing native-born boys with immigrant boys is noteworthy. Although a lack of variation likely influences the analysis, recall that mean differences did emerge when looking at the descriptive statistics (see Table 7.1). Differences were most evident when examining the influence of the family process variables. Contemporary literature gives some insight into the lack of influence of parental measures among immigrant boys. Research has shown that attachment means different things in different cultures and therefore, typical Euro American notions of attachment may not be observed in different cultures (see e.g., Harwood, Miller and Irizarry 1995). The extent to which these differences hold true among early 20th century

families is unknown; however, the lack of significance of the family process measures is suggestive that the measures included in this analysis did not capture attachment behaviors as displayed in immigrant cultures included in this sample.

Even in this sample of delinquent boys, analyses indicated that immigrant boys were significantly more disadvantaged than native-born boys. That is, immigrant boys had lower family socioeconomic status levels. Additionally, many had parents with no formal education, and there were few immigrant parents who obtained some high school level education. Regardless of these disadvantages, immigrant boys evidenced crime rates comparable to their native-born peers. Similar to previous research noting a "Latino Paradox" the findings here appear to suggest that an "immigrant paradox" may be consistent with the data. Interestingly, this paradox may not be a nascent immigrant development.

Although I did not formally test the utility of segmented assimilation theory, relationships observed in the analyses were both supportive of and counter to the expected relationship between human capital and advancement among immigrants. Segmented assimilation theory suggests that when first generation immigrants have greater capital (e.g., a high school education) it results in the availability of resources that aid in the advancement of their second generation children (Portes and Zhou 1993; Zhou 1997a). The finding that parental high school education was associated with a decreased rate of total offending – even within a high-risk sample – may be tapping into this process. In subsequent analyses not presented here, I found that among immigrant boys when cultural conflict existed in the home, the rate of offending was significantly increased. Although these preliminary findings seem supportive of the segmented

assimilation hypothesis, the results also reveal associations counter to the segmented assimilation notion. That is, once the analyses were disaggregated by crime type, the proxy for human capital (parental high school education) was associated with an increased rate of alcohol/drug offending. Although segmented assimilation theory was proposed as an explanation of the experiences of contemporary immigrants, these preliminary findings provide justification for future research assessing the utility of segmented assimilation theory in explaining variation in offending among early 20th century immigrants. That is, the influence of differential levels of human and social capital may be more general than segmented assimilation theory suggests.

EXPLAINING VARIATION IN OFFENDING, NLSY97 DATA

Mean Difference Test

Parallel analyses from the previous section analyzing differences within the Glueck data were conducted with the NLSY97 data.[95] Specifically, I estimated a series of χ^2 and *t* tests to examine mean differences for the independent variables across immigrant and native-born groups.[96] Three different comparisons were made. First, mean differences between native-born youth and second generation immigrants were compared; the results are presented in column "a" of Table 7.7. Second generation immigrants were significantly more likely to live in intact households and have larger families. Native-born youth had higher family socioeconomic status and had more mothers and fathers who were high school graduates. Additionally, native-born youth

[95] Recall that these data differ in respect to their sample composition as the Glueck data are a sample of delinquent boys whereas the NLSY97 data are a general population sample.
[96] Differences tended to be in expected directions (Hernandez and Darke 1999).

reported greater maternal affection. Native-born youth had higher mean intelligence scores on the PIAT test. There were no significant differences comparing delinquent peer associations. Only one school factor reached significance: native-born youth reported lower rates of school tardiness. Finally, second generation immigrants were exposed to significantly lower rates of environmental risk compared to their native-born peers.[97]

Second, in column "b" of Table 7.7, I compared differences in the mean levels of the variables for native-born youth with first generation immigrants. Similar to the comparison of native-born youth to second generation immigrants, many of the significant differences that emerged were related to family measures. First generation immigrants were significantly more likely to come from intact families (living with both biological parents) and larger families. Native-born youth had a significantly higher family socioeconomic status, and more mothers and fathers who were high school graduates or had some college level education. Only one individual characteristic difference emerged: native-born youth had a higher mean intelligence score on the PIAT test. Finally, the results indicate that first generation immigrants were significantly less likely to report having experienced school related victimization. No significant

[97] Seven of the original eight significant difference findings held when comparing second generation immigrants to native-born white only youth, while five new mean differences emerged (results not shown). Differences were in the expected direction as the significance of family structure was negated when African American youth were removed from the sample. Additionally, parental college education, delinquent peers, truancy, and the victimization variables attained significance when second generation immigrants were compared to their native-born white peers. The direction of these differences indicate that second generation immigrants grow-up in more adverse environments as they were less likely to have college educated parents, had lower levels of parental monitoring, perceived more of their peers as involved in delinquent behaviors, were more likely to report being suspended from school, and were more likely to report victimization experiences prior to their 12th birthday compared with their native-born white peers.

Table 7.7 Descriptive Statistics for Native-born individuals, Second Generation Immigrants, and First Generation Immigrants, NLSY97 Data

	Native-born (n = 2,681)				Second Generation (n = 393)				First Generation (n = 158)				Mean Differences		
	mean	s.d.	min	max	mean	s.d.	min	max	mean	s.d.	min	max	a	b	c
Individual															
Age	17.00	2.71	12	22	16.97	2.71	12	22	16.97	2.71	12	22			
Gender	.51	.50	0	1	.55	.50	0	1	.40	.49	0	1			*
PIAT	72.45	16.32	1	100	69.70	17.03	0	99	66.58	19.66	0	100	*	*	
Early Onset	.05	.22	0	1	.07	.25	0	1	.03	.18	0	1			*
Family Context															
Family Structure	.53	.50	0	1	.63	.48	0	1	.69	.46	0	1	*	*	
Household Size	2.43	1.17	1	8	2.66	1.26	1	6	2.82	1.37	1	7	*	*	
Socioeconomic Status^{+}	15.82	6.92	0	40.3	14.11	7.12	0	40.3	12.23	6.80	0	40.3	*	*	*
Parent High School Grad	.36	.48	0	1	.21	.41	0	1	.17	.38	0	1	*	*	
Parent College Education	.54	.50	0	1	.47	.50	0	1	.40	.49	0	1		*	
Attachment	.06	.96	-4.91	1.17	-.07	1.02	-4.17	1.17	.03	.83	-2.18	1.17	*		
Emotional Tie	.03	.99	-3.51	1.14	-.02	.97	-3.51	1.14	.09	.97	-3.51	1.14			
Supervision	.07	.97	-2.84	1.97	-.02	.96	-2.84	1.76	.08	1.06	-2.84	1.76			
Peer Associations															
Delinquent Peers	1.88	.86	1	5	1.92	.91	1	5	1.79	.85	1	4.60			
School															
Days Truant^{+}	.79	.33	.01	1	.70	.37	.01	1	.79	.34	.07	1	*		
Suspended	.25	.43	0	1	.27	.45	0	1	.21	.41	0	1			
School Victimization^{+}	.69	.35	.01	1	.73	.33	.02	1	.80	.30	.06	1		*	
Neighborhood															
Environmental Risk	1.29	1.39	0	7	1.13	1.22	0	5	1.30	1.35	0	7	*		
Early Victimization	.26	.49	0	2	.29	.51	0	2	.16	.42	0	2			*

Notes: $^{+}$ variable was transformed to correct for skew. a = mean differences between native-born and second generation immigrants; b = mean differences between native-born and first generation immigrants; c = mean differences between second generation and first generation immigrants.
* $p < .05$.

Table 7.7 (continued) Descriptive Statistics for Native-born individuals, Second Generation Immigrants, and First Generation Immigrants, NLSY97 Data

	Native-born (n = 2,681)				Second Generation (n = 393)				First Generation (n = 158)				Mean Differences		
	mean	s.d.	min	max	mean	s.d.	min	max	mean	s.d.	min	max	a	b	c
Criminal Involvement															
Any Crime Prevalence	.21	.41	0	1	.21	.41	0	1	.12	.32	0	1		*	
Violent Crime Prevalence	.09	.28	0	1	.09	.28	0	1	.04	0.19	0	1			
Property Crime Prevalence	.14	.35	0	1	.15	.36	0	1	.09	.29	0	1			
Drug Crime Prevalence	.06	.24	0	1	.06	.24	0	1	.03	.16	0	1			
Any Crime Frequency	.94	2.49	0	10	1.06	2.66	0	10	.45	1.71	0	10		*	*
Violent Crime Frequency	.24	1.11	0	10	.25	1.13	0	10	.08	.59	0	10		*	*
Property Crime Frequency	.56	1.91	0	10	.70	2.16	0	10	.32	1.40	0	10		*	*
Drug Crime Frequency	.37	1.75	0	10	.35	1.67	0	10	.14	1.05	0	10	*	*	*

Notes: a = mean differences between native-born and second generation immigrants; b = mean differences between native-born and first generation immigrants; c = mean differences between second generation and first generation immigrants.
* $p < .05$.

differences were observed looking at the role of delinquent peers or neighborhood variables.[98]

Lastly, I assessed generational differences by comparing first generation and second generation immigrants. The results are presented in column "c" of Table 7.7. Most differences were observed looking at individual characteristics. Specifically, second generation immigrants were more likely to self report being arrested for the first time by 13 years of age or younger and they had a significantly higher number of males in the sample compared to first generation immigrants. Looking at the family context variables, the results revealed that first generation immigrants had a significantly lower mean socioeconomic level. Finally, second generation immigrants were more likely to report being victimized prior to 12 years of age compared to first generation immigrants.

Differences in self-reporting crime were also assessed (see Table 7.7). Few differences were observed when comparing criminal involvement (prevalence and frequency) for native-born youth with second generation immigrants. The only difference that emerged was for the frequency of involvement in drug crime where native-born youth reported a significantly higher rate of involvement compared to their second generation peers. Conversely, the findings revealed that the criminal behavior of first generation immigrants was significantly lower than their native-born and second generation immigrant counterparts. This finding held when criminal behavior was disaggregated by crime type.

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[98] When compared to native-born white youth, few additional differences emerged (results not shown). Similar to the findings comparing second generation immigrants to native-born white youth, the significant difference in family structure that emerged in the full sample analysis was negated. That is, there was no significant difference in family structure comparing first generation immigrants with their native-born white peers. Similarly, the significant difference in reports of school victimization was no longer evident. One new significant difference emerged in this sample. First generation immigrants reported greater levels of environmental risk compared to their native-born white peers.

Predicting Variation in Offending from Early Adolescence to Young Adulthood

I began the analysis by calculating the intraclass correlation coefficient values. ICCs values indicated that for the total crime outcome approximately three quarters (78, 86, and 73 percent for native-born, second generation immigrants, and first generation immigrants, respectively) of the variance lies at the within-individual level; while the remaining 22, 14, and 27 percent of the variance lies between individuals for native-born, second generation immigrants, and first generation immigrants, respectively. The results indicated that significant variation existed at the individual level to warrant the use of a multilevel modeling strategy.[99]

In accordance with previous research, the results revealed that the model worked well in explaining offending among native-born youth. As expected, a number of structural background factors were significantly related to offending for native-born youth (see model 1, Table 7.8). Living with both biological parents and a larger family size were associated with a decreased rate of offending. Conversely, living in disadvantaged neighborhoods and experiencing victimization prior to 12 years of age were associated with increased rates of offending. The positive effect of parental education was not expected. The relationship of parental education to offending is such that the rate of offending is significantly higher for youth who have at least one parental who had either graduated from high school or obtained some post secondary education

[99] Results from the unconditional growth models for native-born and second generation immigrants indicated significant variation for the linear age term; however, random variation for the age squared term was not significant. Therefore, in subsequent models the age squared term was fixed. Neither age nor age squared evidenced significant variation in the first generation immigrant model; these terms were fixed in all analyses. Because I am interested in comparing effects across models, the lowest order functional form was utilized in the models shown. Although the strength of many of the associations varied depending upon what functional form was used, the substantive story remained the same. Age and age squared terms are grand-mean centered. Therefore, the intercept represents the average rate of offending for youth at roughly 17 years of age.

compared with those youth whose parents did not graduate high school. The prevalence of parents who had not obtained at least a high school degree was extremely low in the native-born sample and thus this positive association between parental education and offending may be an artifact of the sample. However, the finding that the relationship between parental education and offending gets stronger with higher levels of education is noteworthy and was examined further in the crime specific models.

Table 7.8 Hierarchical Models of Total Crime Counts for Native-born Youth, NLSY97 Data (n = 2,681)

	Model 1		Model 2	
	Coefficient	(se)	Coefficient	(se)
Intercept	-.86 ***	.09	-1.08 ***	.09
Age	1.16 ***	.17	1.03 ***	.16
Age2	-.04 ***	.01	-.03 ***	.01
Gender	.93 ***	.05	.93 ***	.06
PIAT	.00	.00	.01 ***	.00
Early Onset	1.00 ***	.06	.50 ***	.08
Family Structure	-.36 ***	.06	-.24 ***	.07
Household Size	-.05 **	.02	-.04 *	.02
Socioeconomic Status[+]	.00	.00	.01	.01
Parent High School Graduate	.17 *	.08	.20 *	.09
Parent Post Secondary Education	.34 ***	.09	.41 ***	.09
Environmental Risk	.05 *	.02	.01	.02
Early Victimization	.37 ***	.04	.17 ***	.05
Attachment			-.14 ***	.03
Emotional Tie			-.11 ***	.03
Supervision			-.12 ***	.03
Delinquent Peers			.19 ***	.03
Number of Days Truant[+]			-.30 ***	.08
Ever Suspended			.34 ***	.07
School Victimization[+]			-.58 ***	.08

Notes: Overdispersed Poisson model, robust standard errors with PQL estimation. [+] Variable was transformed to correct for skew.
* $p < .05$; ** $p < .01$; *** $p < .001$.

Bonding variables were added to the equation in model 2. Specifically, I tested to see if the introduction of family, school, and peer variables lessened the significant effects of structural variables on the offending outcome. The results indicated support for the mediation hypothesis of the age-graded theory of informal social control.[100] Although some direct effects of structural variables were still apparent, when parental, peer, and school variables were added to the model, the effect of family structure, environmental risk, and early victimization were all reduced demonstrating a partial mediation effect. The mediation effect was particularly strong for early victimization. Moreover, net of controls for individual and structural variables, the results suggest that higher levels of familial bonding (i.e., attachment, emotional tie, supervision) were significantly associated with a lower rate of involvement in crime. In addition, a greater perception that ones peers were involved in delinquency was associated with a higher rate of criminal behavior.[101] Finally, the results revealed that higher rates of truancy, being suspended from school, and school victimization were associated with an increased rate of offending.[102]

Similar to their native-born counterparts, a number of structural background factors were significantly related to offending for second generation immigrants (see Table 7.9). In the second generation immigrant model 1, family structure, socioeconomic status, parental high school education, environmental risk, and early victimization were all significantly associated with offending. Second generation immigrants living with

[100] See Appendices E and F for the full mediation test results.
[101] Note that "perceptions of the delinquency of one's peers" does not directly measure the peer bonding concept. Drawing upon the notion of homophily, it is assumed that individuals will associate and bond with individuals who display characteristics similar to themselves. Although I acknowledge that this is a less than ideal measure of peer bonding, I use this measure as a proxy of peer bonding with the assumption that the more friends one perceives as delinquent the more bonded they are to delinquent peers.
[102] Recall that the inverse of the truancy and school victimization variables were used to adjust for severe skew.

Table 7.9 Hierarchical Models of Total Crime Counts for Second Generation and First Generation Immigrants, NLSY97 Data

	Second Generation Immigrants				First Generation Immigrants			
	Model 1		Model 2		Model 1		Model 2	
	Coefficient	(se)	Coefficient	(se)	Coefficient	(se)	Coefficient	(se)
Intercept	-.65 ***	.16	-.82 ***	.17	-2.34 ***	.51	-3.02 ***	.42
Age	1.38 ***	.36	1.21 ***	.34	2.74 **	.87	2.74 ***	.65
Age2	-.05 ***	.01	-.04 ***	.01	-.09 ***	.03	-.09 ***	.02
Gender	1.09 ***	.15	.89 ***	.14	1.20 **	.01	.95 **	.29
PIAT	.004	.004	.01	.004	.03 **	.01	.02 **	.01
Early Onset	1.29 ***	.15	.64 ***	.16	1.02 *	.39	-.87	.63
Family Structure	-.42 **	.13	-.22	.13	-.09	.41	.06	.30
Household Size	-.05	.05	.02	.06	-.10	.11	-.27 ***	.07
Socioeconomic Status[+]	.03 **	.01	.03 ***	.01	-.02	.05	.01	.03
Parent High School Graduate	-.34 *	.15	-.24	.18	.33	.81	.54	.58
Parent Post Secondary Education	.13	.17	.19	.18	.56	.41	.72 *	.28
Environmental Risk	.19 ***	.05	.11 *	.05	-.01	.17	-.01	.11
Early Victimization	.43 ***	.11	.28 **	.11	.85 ***	.22	.34	.24
Attachment			-.09	.06			-.07	.15
Emotional Tie			.01	.07			.01	.11
Supervision			-.15 *	.06			-.28	.16
Delinquent Peers			.25 ***	.07			.11	.14
Number of Days Truant[+]			-.51 **	.18			-1.40 ***	.35
Ever Suspended			.44 **	.14			1.50 **	.48
School Victimization[+]			-.46 **	.17			-.78 *	.36

Notes: Overdispersed Poisson model, robust standard errors with PQL estimation. [+] Variable was transformed to correct for skew.
* $p < .05$; ** $p < .01$; *** $p < .001$.

both biological parents had a decreased rate of offending compared to their second generation immigrant peers living in broken homes. Socioeconomic status was positively related to offending. Parental high school education functioned to decrease the rate of offending. Moreover, as neighborhood disadvantage and experiences with early victimization increased so too did the rate of offending among second generation immigrants.

The mediation hypothesis was tested in model 2. The results indicated that although many structural variables retained a significant relationship with offending, the addition of family, peer, and school variables to the model partially mediated the effects of these variables.[103] The direct effects of family structure and parental high school education were negated. Additionally, the effects of environmental risk and early victimization were reduced. As shown in model 2, net of individual and structural variables, parental supervision had a strong inhibiting effect on criminal involvement. Conversely, delinquent peers, truancy, school suspension, and school victimization functioned to increase the rate of offending among second generation immigrants.

Finally, the utility of the age-graded theory of informal social control was assessed among first generation immigrants. In comparison to their native-born and second generation immigrant peers, the model performed less well in explaining offending among first generation immigrant youth. In the first generation immigrant model 1, only early victimization was associated with an increased rate of offending. None of the remaining family structural background factors evidenced a significant association with offending for first generation immigrants.

[103] Similar results were found when the outcome variable was disaggregated by crime type.

The mediation model was partially supported (see first generation immigrant model 2 in Table 7.9). The introduction of family, peer, and school variables to the model reduced the effect of early victimization to non-significance.[104] Surprisingly, the addition of these variables to the model increase the magnitude of the effect of household size and parental post secondary education to significance suggesting the possibility of a suppression effect. The influence of parental bonds was absent in the first generation immigrant model. Conversely, the school environment was found to be particularly influential for first generation immigrants as truancy, school suspension, and school victimization were significantly associated with an increased rate of offending.

The aforementioned findings reveal that the age-graded theory of informal social control explains offending among native-born and second generation immigrant youth (nominal support was found among first generation immigrants),[105] however, the question as to whether there are differences in the relationship between predictors and offending for these subsamples of youth remains.[106] To assess statistical differences in the coefficients across models, I performed an equality of regression coefficients test (Paternoster et al. 1998) comparing the magnitude of the effects for native-born versus second generation youth and native-born versus first generation youth (see Table 7.10). The results revealed that many of predictors significantly differed for native-born and

[104] Similar results were found when the outcome variable was disaggregated by crime type.
[105] Parallel models were also conducted using a subsample of youth who reported a history of three or more arrests. This subsample is comparable to the Glueck data sample. Due to the increasingly small samples, analyses were conducted for only the total crime outcome for native-born youth and second generation immigrants (see Appendix G). Similar to the results from the Glueck data presented above, the theory performs poorly in explaining variation in offending within a delinquent sample.
[106] Although some variables are significant for one subsample and not the other, it is possible that the effect of the coefficients on the outcome variable is not statistically different from each other. When neither coefficient is significant in predicting variation in delinquency within each subsample, its effect is not compared across subsamples.

Table 7.10 Equality of Regression Coefficient Test of the Predictors of Total Offending Comparing Native-born Youth to Second and First Generation Immigrants, NLSY97 Data

	Native-born Youth compared to Second Generation Immigrants	Native-born Youth compared to First Generation Immigrants
Intercept	*	***
Age		**
Age2		***
Gender		
PIAT		***
Early Onset		**
Family Structure		
Household Size	*	***
Socioeconomic Status^{+}	*	
Parent High School Graduate	***	
Parent Post Secondary Education		
Environmental Risk	***	
Early Victimization		
Attachment		
Emotional Tie	***	**
Supervision		**
Delinquent Peers		
Number of Days Truant^{+}		***
Ever Suspended		***
School Victimization^{+}		

Notes: $^{+}$ Variable was transformed to correct for skew.
* $p < .05$; ** $p < .01$; *** $p < .001$.

immigrant youth. Although differences were clearly apparent, they generally reveal differences in the strength of the association rather than differences in direction.

Predicting Variation by Crime Type. Tests of the equality of regression coefficients were also conducted when analyses were disaggregated by crime type (see Tables 7.11 to 7.13 for property, violent, and drug crimes, respectively). A number of general trends were observed across models. First, across all models the absence of an influence of parent-child bonds (i.e., attachment, emotional tie) on offending among

immigrants is clear. Regardless of the crime type, strong parent-child bonds were associated with a decreased rate of offending for native-born youth, yet these variables evidenced a non-significant relationship with offending for immigrant youth (exception was found for drug crime offending among first generation immigrants). This finding is in line with previous research that examined the differential impact of family process variables across racial and ethnic groups (Smith and Krohn 1995). Caution is warranted when interpreting this relationship as it may not necessarily indicate that parent-child emotional bonds do not matter for immigrant youth. Rather, future research should be sensitive to differing cultural notions of parental attachment (Harwood et al. 1995). Although emotional bond measures did not appear to influence offending for immigrant youth, measures of parental supervision evidenced a strong negative association with offending for immigrant youth. This relational pattern of family bond measures is supportive of previous research which finds that parental authority and child obedience is often central in immigrant (especially Latino) families (Halgunseth, Ispa and Rudy 2006; Sommers, Fagan and Baskin 1994; Zayas and Solari 1994). This difference in parenting styles was also evident in Portes and Rumbaut's (2001) qualitative interviews with immigrant parents who commented on the generally permissive nature of American parents.

With the exception of drug crimes, the influence of delinquent peers on offending was significantly stronger for native-born youth. In fact, for violent and property crimes delinquent peers were insignificant predictors of offending for immigrant youth. Given that second generation immigrant youth were significantly less likely to live in disadvantaged areas this finding may be due to their decreased exposure to delinquent

peers compared to native-born youth. Yet, even though first generation immigrant youth were exposed similarly to disadvantaged areas compared to native-born youth it is interested that the role of delinquent peers was still negligible for first generation immigrant youth. As previous research has shown, immigrant families have been found to act as a protective barrier to negative influences in deleterious environments (see e.g., Harris 1999). The insignificance of a delinquent peer effect may be indicative of this protective mechanism.

Finally, the results revealed an interesting pattern of relationships between school variables and offending. For all crime types, the role of the school was significant and strong for native-born youth and first generation immigrant youth. However, the relationship between school variables was less strong among second generation immigrants. Research has noted that the optimism found among first generation immigrants does not always transfer to second generation immigrants particularly among those in more disadvantaged schools where educational advancement does not always translate to upward mobility (see e.g., Coll and Marks 2009; Zhou 1997a). As a result, the importance of the school may be less influential among these youth.

A few general findings regarding the influence of school variables were noted. First, it was clear that victimization – either at school or early in the life course – played a key role in understanding the etiology of violent crime for all youth in the sample.[107] Moreover, school victimization was predictive of property crime for all youth and drug crime for native-born and first generation immigrants. These findings are consistent with previous research that documents the relationship between victimization (both familial

[107] Although there were too few cases of violent crime among first generation immigrants to conduct a comparative analysis, preliminary results did indicate that school victimization was also a significant predictor of violent offending among first generation immigrants (results not shown).

Table 7.11 Equality of Regression Coefficient Test of the Predictors of Property Offending Comparing Native-born Youth, Second Generation Immigrants, and First Generation Immigrants, NLSY97 Data

	Native-born Youth		Second Generation Immigrants		First Generation Immigrants		a	b
	Coefficient	(se)	Coefficient	(se)	Coefficient	(se)	*z* test	*z* test
Intercept	-1.80 ***	.13	-.98 ***	.28	-3.34 ***	.41	***	***
Age	.79 **	.29	.60	.55	1.81 *	.81		
Age2	-.03 ***	.01	-.02	.26	-.06 *	.03		**
Gender	.76 ***	.10	.55 *	.01	.79 *	.33	*	
PIAT	.002	.003	.01	.01	.01	.01	**	**
Early Onset	.09	.13	.34	.33	-.43	.59		
Family Structure	-.21 *	.08	-.35 *	.16	.07	.28		
Household Size	-.04	.02	-.03	.06	-.24 ***	.07		***
Socioeconomic Status[+]	.01	.01	.03 *	.01	.01	.03	*	
Parent High School Graduate	.21 *	.11	-.46 *	.21	.74	.49	***	
Parent Post Secondary Education	.53 ***	.11	.13	.18	.73 **	.27	**	
Environmental Risk	-.01	.03	.11 *	.05	.02	.10	***	
Early Victimization	.14 *	.06	.16	.12	.43	.24		*
Attachment	-.14 ***	.04	-.03	.06	.02	.14	*	**
Emotional Tie	-.14 ***	.03	-.06	.08	.10	.11	*	***
Supervision	-.13 ***	.03	-.16 *	.08	-.39 **	.15		***
Delinquent Peers	.13 **	.04	.11	.09	.07	.14		
Number of Days Truant[+]	-.37 ***	.10	-.58 **	.21	-1.61 ***	.33		***
Ever Suspended	.22 **	.09	.17	.17	1.16 **	.43		***
School Victimization[+]	-.55 ***	.10	-.45 *	.21	-.70 *	.34		

Notes: a = mean differences between native-born and second generation immigrants; b = mean differences between native-born and first generation immigrants.
[+] Variable was transformed to correct for skew.
* $p < .05$; ** $p < .01$; *** $p < .001$.

Table 7.12 Equality of Regression Coefficient Test of the Predictors of Violent Offending Comparing Native-born Youth, Second Generation Immigrants, and First Generation Immigrants, NLSY97 Data

	Native-born Youth		Second Generation Immigrants		
	Coefficient	(se)	Coefficient	(se)	*z* test
Intercept	-2.13 ***	.12	-1.51 ***	.26	***
Age	-.77 ***	.19	-3.48 ***	.28	***
Age2	.02 ***	.01	.11 ***	.01	***
Gender	1.29 ***	.07	-.45 **	.16	***
PIAT	-.01 **	.002	.002	.01	***
Early Onset	.54 ***	.11	.84 ***	.18	*
Family Structure	-.24 **	.08	-.07	.18	
Household Size	-.001	.03	.10	.09	**
Socioeconomic Status[+]	-.02 **	.01	.05 ***	.01	***
Parent High School Graduate	.04	.12	-.31	.27	
Parent Post Secondary Education	-.01	.12	.06	.27	
Environmental Risk	.08 **	.03	.04	.08	
Early Victimization	.33 ***	.05	.76 ***	.16	***
Attachment	-.16 ***	.04	-.16	.10	
Emotional Tie	-.05	.04	-.06	.14	
Supervision	-.06	.03	-.06	.11	
Delinquent Peers	.29 ***	.04	.16	.09	**
Number of Days Truant[+]	.12	.08	-.53 *	.23	***
Ever Suspended	.58 ***	.07	.79 ***	.22	
School Victimization[+]	-.92 ***	.10	-1.19 ***	.23	

Notes: [+] Variable was transformed to correct for skew.
* $p < .05$; ** $p < .01$; *** $p < .001$.

and non-familial) and involvement in crime in adolescence and young adulthood (see e.g., Fagan, Piper and Cheng 1987; Gorman-Smith and Tolan 1998; Lauritsen, Sampson and Laub 1991; MacMillan 2001). More generally, experiencing school related problems (i.e., truancy, school suspension, and school victimization) increased the rate of offending across all crime types.

Table 7.13 Equality of Regression Coefficient Test of the Predictors of Drug Offending Comparing Native-born Youth, Second Generation Immigrants, and First Generation Immigrants, NLSY97 Data

	Native-born Youth		Second Generation Immigrants		First Generation Immigrants		a	b
	Coefficient	(se)	Coefficient	(se)	Coefficient	(se)	*z* test	*z* test
Intercept	-2.05 ***	.15	-2.80 ***	.23	-4.95 ***	.58	***	***
Age	2.27 ***	.31	4.44 ***	.69	8.20 ***	.54	**	***
Age2	-.07 ***	.01	-.14 ***	.02	-.26 ***	.02	***	***
Gender	.96 ***	.11	1.05 ***	.24	-1.10 ***	.20		***
PIAT	.01	.003	-.01	.01	.09 ***	.004	***	***
Early Onset	.50 ***	.09	.84 ***	.21	-4.35 ***	.50	*	***
Family Structure	-.35 **	.11	-.10	.17	.18	.39		*
Household Size	-.13 ***	.04	.09	.08	-.43 ***	.05	***	***
Socioeconomic Status[+]	.02 **	.01	.02 *	.01	.03	.04		
Parent High School Graduate	.10	.15	.13	.30	-.20	.88		
Parent Post Secondary Education	.20	.15	.74 **	.24	.09	.34	**	
Environmental Risk	.02	.04	.31 ***	.06	-.18	.14	***	***
Early Victimization	-.01	.08	-.01	.17	.34	.22		**
Attachment	-.16 ***	.05	-.09	.10	-.31 *	.13		*
Emotional Tie	-.15 ***	.04	.11	.10	.24 *	.10	***	***
Supervision	-.03	.05	-.30 ***	.08	-.42 *	.19	***	***
Delinquent Peers	.22 ***	.06	.49 ***	.12	.14	.08	***	
Number of Days Truant[+]	-.52 ***	.13	-.36	.27	-1.45 ***	.27		***
Ever Suspended	.47 ***	.11	.28	.21	2.63 ***	.59		***
School Victimization[+]	-.50 **	.17	.32	.29	-2.04 ***	.37	**	***

Notes: a = mean differences between native-born and second generation immigrants; b = mean differences between native-born and first generation immigrants.
[+] Variable was transformed to correct for skew.
* p < .05; ** p < .01; *** p < .001.

Although school related variables were important for all youth,[108] they were significantly stronger for first generation immigrants. Research has documented the strong achievement drive among first generation immigrants – among both parents and children (Portes and Rumbaut 2001; Wojtkiewicz and Donato 1995). Given the accentuated role of school success among newly arrived immigrants, failure in this context may result in a greater risk of deleterious outcomes including crime for immigrant youth. This is perhaps more true among immigrants today as educational opportunities (rather than occupational opportunities) hold the key to advancement (Alba and Nee 2003). It should be noted that this finding may be influenced by heterogeneity within the first generation immigrant sample such that immigrant nationality group, time in the United States, and/or language proficiency influences academic success and failure among first generation immigrants (Velez 1989).

The findings of the drug crime model help to explain the unexpected relationship between parental post secondary education and total offending. That is, second generation immigrant youth who had at least one parent with some post secondary education had an *increased* rate of drug crime compared to their second generation immigrant peers and native-born counterparts. Previous research has found a similar relationship between parental education and drug use (see e.g., Bachman, Johnston and O'Malley 1981; Wallace and Bachman 1991); however, less is known about the relationship between parental education and drug dealing. The association found in this study may tap into the fact that drug dealing requires a non-trivial amount of monetary resources - particularly for the initiation of drug dealing (see Jacques and Wright 2008).

[108] A notable exception to this pattern of educational importance was found in the analysis of drug crime among second generation immigrants where the school environment was found to be a non-significant factor in explaining involvement in drug crime.

Those youth from homes with college educated parents may have greater access to the funds needed to participate in drug crime.

Predicting Variation in Offending Across Immigrant Generations. The NLSY97 data allowed for an examination of immigrant generational differences. The results of the equality of regression coefficient calculations for total crime, property crime, and drug crime are presented in Table 7.14. Regardless of crime type, household size and school variables had a significantly stronger effect on offending for first generation immigrants than second generation immigrants. Particularly true of the school variables, differences were in degree rather than direction. Significant differences in family process measures were virtually non-existent. The influence of parental education was found to significantly differ across immigrant generations. Whereas parental high school education was found to be associated with a decreased rate of offending among second generation immigrants, among first generation immigrants parental post secondary education was associated with an increased rate of total and property offending.

Most of the differences comparing predictors of offending for first and second generation immigrant youth where found when involvement in drug crime was assessed. In addition to the influence of household size, truancy, and suspension already mentioned, environmental risk and delinquent peers were found to be significantly more influential for second generation immigrant drug offending. Although no differences were observed in mean levels of environmental risk or delinquent peers across immigrant generation, previous literature has found that immigrants are somewhat protected from the negative influences found in disadvantaged environments (Sampson et al. 2005; Martinez 2002; Lee et al. 2001; Butcher and Piehl 1998). This protection fades across

Table 7.14 Equality of Regression Coefficient Test of the Predictors of Offending Comparing Second Generation Immigrants to First Generation Immigrants, NLSY97 Data

	Total Crime	Property Crime	Drug Crime
	z test	*z* test	*z* test
Intercept	***	***	***
Age	*		***
Age2	***		***
Gender		*	***
PIAT	*		***
Early Onset	**		***
Family Structure			
Household Size	***	**	***
Socioeconomic Status[+]			
Parent High School Graduate		**	
Parent Post Secondary Education	*	*	
Environmental Risk			***
Early Victimization			
Attachment			
Emotional Tie			
Supervision		*	
Delinquent Peers			**
Number of Days Truant[+]	**	**	**
Ever Suspended	**	**	***
School Victimization[+]			***

Notes: [+] Variable was transformed to correct for skew.
* $p < .05$; ** $p < .01$; *** $p < .001$.

successive generations. As such, when first and second generation immigrants are exposed to similarly risky environments (and risky people in those environments) first generation immigrants may be more equipped to disregard the negative influences.

Robustness Analyses. A number of alternative analytic strategies were utilized to assess the robustness of the findings. I constructed a dependent variable that was a count of the number of various types of crime youth were involved in each year (range 0 to 6) in order to capture versatility in offending. Moreover, because of the high prevalence of zero's in the data (where a zero equals no self-reported criminal involvement in a

particular year), logistic models were also analyzed. Regardless of the form of the dependent variable, the substantive results remain intact.

I also tested to see if the results were possibly confounded by the racial/ethnic composition of the data. First, because African Americans are disproportionately involved in crime, I estimated the models using a native-born white only sample. Although differences in significance among some of the predictors varied, the general finding of similarity across groups was supported. That is, differences in the strength of the association of predictors with offending differed across native-born white and immigrant groups, but the direction of the effects were consistent across groups. Second, I examined the extent to which immigrant nationality group influenced the findings. The small sample sizes of the nationality groups restricted running the model for Mexican, Asian, Caribbean, and Central American immigrant groups separately. The addition of these variables as controls to the model did not alter the substantive results. Moreover, most of the nationality group variables evidenced a non-significant relationship with crime. Being from Central America was the only immigrant nationality group associated with an increased rate of offending. Of note, even though immigrants from Central America appeared to have the highest rate of involvement in crime among first generation immigrants, their level of criminal involvement was still significantly lower than that of their native-born and second generation immigrant peers (results not shown).

Conclusion

Overall the results suggest that regardless of immigrant status, family, peer, and school variables were predictive of offending for all youth in the sample. Specifically, the findings presented above reveal a high level of similarity between native-born and

immigrant youth, regardless of crime type as the differences that did emerge were largely differences in the magnitude of the effect rather than the direction. Support was found for two of the basic tenets of the age-graded theory of informal social control as social bonds were not only associated with offending for all youth, but the inclusion of bonds to the analysis functioned to mediate some of the direct effects of structural background factors on offending. In fact, the generally strong relationship between many of the predictors and average levels of offending in young adulthood was somewhat surprising given that the predictors were measured in early adolescence. It is clear from these findings that experiences in childhood/early adolescence have a lasting impact on behavioral trajectories into young adulthood.

Despite the high level of similarity in the findings, some differences were also apparent. First, the influence of family process variables differed depending on immigrant status. As was mentioned previously, this finding is consistent with previous research that found that measures of parent-child emotional bonds were significant for native-born youth whereas measures of supervision were significant for immigrant youth. This pattern of findings lends some credence to the argument regarding the need for cultural sensitivity in assessing the influence of family processes in a diverse sample.

Second, although the school environment proved to be important for all youth in the study, it was particularly influential for first generation immigrants. Additional analyses are needed that take into account the multiple levels of heterogeneity within the first generation immigrant group before too much weight can be given to these findings, however, the findings do provide preliminary support for the increasing importance of educational opportunities among newly arriving immigrants (see Alba and Nee 2003).

The pattern of findings regarding parental education deserves mention. Although not the focus of the present research, based on the notions of segmented assimilation theory increasing levels of parental education were expected to have a negative association with offending – especially among immigrant youth (Portes and Rumbaut 2001; Portes and Zhou 1993). Yet, as was previously shown, parental education and specifically the attainment of some post secondary education often evidenced a positive association with offending. It was suggested that this positive relationship may be due to the increased monetary resources affording youth the opportunity for the sale of drugs. However, this hypothesis does not explain the positive association between parental education and property crime among first generation immigrants. More research is needed to help uncover the reasons for this nuanced relationship.

Finally, it was clear from analyses in the previous two chapters that offending for first generation immigrants was significantly lower than that of their second generation peers. Yet, with the exception of drug offending, few differences were observed comparing the relationship between predictors and offending across immigrant generations. This finding is of greater curiosity as several differences were observed comparing first generation immigrants with their native-born peers who also have significantly higher rates of offending. Stated simply, the variables included in this analysis do not explain the generational gap in offending very well.

CHAPTER 8 CONCLUSION

There is a long history of research aimed at investigating the immigration-crime nexus. Since the turn of the 20th century, this body of literature has been characterized by the application of better statistical methods, samples, and measurement tools to unearth the "hidden" criminal behavior within the immigrant population. Overwhelmingly, this research indicates that immigrants are - at most - involved in crime at rates that mirror those of the native-born population. Nevertheless, concerns regarding the excessive level and/or serious nature of criminal behavior among immigrants continue to echo throughout the general U.S. population. Although impassioned media accounts fuel xenophobic and nativistic beliefs (Chaves 2001; Simon 1985), important gaps in the literature have been noted that weaken the findings of previous research (Horowitz 2001; Mears 2001; National Research Council 1996; Taft 1933, 1936). Specifically, the tendency of this body of research to rely upon aggregate level analyses using official data, to treat immigrants as a homogeneous entity, and to utilize cross-sectional analyses limits the generalizability of the findings. Moreover, nominal theoretical attention has been aimed at understanding the relationship between immigration and crime.

SUMMARY OF RESEARCH FINDINGS

The current study contributes to the body of literature examining the immigration-crime nexus by addressing many of the aforementioned gaps with the goal of increasing our understanding of the relationship between immigration and crime. Two broad questions drive this research: 1) How do the patterns of offending over the life course

differ across immigrant and native-born groups, across immigrant generations, and across specific immigrant nationality groups? and 2) What factors explain variation in offending for immigrants and does the influence of these predictors vary across immigrant and native-born individuals? To answer these questions, I utilized two datasets that contain information on immigration status and crime during two important periods of immigration during the 20th century. The *Unraveling Juvenile Delinquency* data and subsequent follow-ups capture early 20th century immigration and crime, while contemporary data came from the National Longitudinal Survey of Youth 1997 survey.

Throughout the analyses, the theme of similarity dominated the results. Specifically, the results revealed a remarkable level of similarity of involvement in crime comparing native-born individuals with immigrants. Average prevalence and frequency rates of involvement in crime were statistically identical for native-born and second generation immigrants. This finding was robust to crime specific measures. Notably, differences observed in the drug crime models indicated that native-born youth had a significantly higher rate of involvement in drug crime than their immigrant peers. The results from analyses that modeled the heterogeneity in offending were supportive of this finding as group-based trajectory analyses were more similar than different. If systematic variation in offending patterns across immigrant and native-born youth exists it was not uncovered in the analyses conducted in this research.

Although most analyses compared native-born offending with second generation immigrant offending, the National Longitudinal Survey of Youth allowed for an examination of offending among first generation immigrants. The results revealed that rates of offending were much lower among first generation immigrants compared to their

native-born and second generation immigrant counterparts. Although magnitude differences in the average level of involvement were evident, the general shape of offending over the life course was similar to that of their peers. This relatively low level of offending among first generation immigrants was also observed in crime specific analyses.

Moreover, the similarity theme emerged in models investigating the predictors of offending. That is, not only did family, peer, and/or school variables predict variation in offending for all youth, but differences in the relationship between these variables and offending most often differed in degree rather than kind for native-born and immigrant youth. Again, this general finding held regardless of crime type.

Research investigating the immigration-crime nexus has often failed to account for the substantial heterogeneity in the immigrant population. Often, the various contexts of reception – ranging from welcoming to hostile in nature – and therefore the experiences of immigrants are intricately tied to nationality group. In order to assess the robustness of the previous findings, immigrants were disaggregated by nationality group. Although the increasingly smaller sample sizes that resulted due to this disaggregation limited a full replication of the research questions, a clear picture emerged from the analyses that were conducted. In no instance were immigrants from a specific nationality group found to have systematically higher rates of offending compared to their native-born counterparts. In fact, the highest rates of offending were often observed among the native-born samples. Additionally, in no case did immigrant nationality group act as a "risk factor" for offending.

These findings would be noteworthy if revealed in one setting, but the consistency of the findings across two samples from different socio-historical periods, with different immigrant groups, and very different sample compositions and study designs makes the findings particularly striking. Although the ebb and flow of immigrants coming to America is an enduring characteristic of the history of the United States, the experiences of immigrants and their children differ depending upon the socio-historical context in which they arrive (Portes and Rumbaut 2006). In other words, immigration does not take place in a social vacuum, but is instead influenced by and in turn influences the social context in which it occurs. Looked at in the aggregate the immigrant experience including geographic mobility, adaptation to a new culture and society, and the outcomes of leaving one's family, are seemingly similar for all immigrants regardless of socio-historical context. Moreover, regardless of the socio-historical period, immigrant's entry to the United States has been met with cynicism and distrust among the native-born population. A more refined examination, however, reveals that important complexities exist. These complexities (e.g., racial and ethnic composition of the immigrant population, economic context, and human and social capital heterogeneity) have led some to suggest that contemporary immigrants may have greater difficulty succeeding in and progressing upward in mainstream American society (Borjas 1985; Gerstle and Mollenkopf 2001; Gurr 1989; Rumbaut et al. 2006). As this research reveals, regardless of socio-historical period, there is no evidence to suggest that immigrants are more crime prone than their native-born counterparts and in some cases the evidence suggests that immigrants are significantly less criminal than the native-born.

Importantly, the two samples used to investigate the immigration-crime nexus were dramatically different. One contained a sample of high-risk boys selected on the basis of their serious and/or persistent criminal behavior; the other was a general population sample with varying levels of criminal involvement. Moreover, whereas official reports of offending were examined in the early 20th century, self-reported offending data was examined among late 20th century immigrants. There are two ways of looking at the implication of these differences on the conclusions drawn from this research. On the one hand the sample composition and study design differences imply that the conclusions based upon similar findings across samples should be interpreted cautiously. That is, the studies are merely too different to warrant any comparison at all. However, it is perhaps more telling that the findings were so remarkably consistent even though the samples differed considerably.

Recently, Decker (2009) posed a question to the immigration research that asked "how do we reconcile the nearly unequivocal finding that in the 21st century, immigration and immigrants are related to lower rates of crime, while a century earlier immigrants and immigration were related to higher rates of crime." The findings presented here (as well as much of the early 20th century research) reveal that there is no need to reconcile the differential involvement in crime among immigrants during these two eras. That is, the evidence indicates that immigrant involvement in crime is nearly identical to involvement in crime among the native-born regardless of socio-historical era. It appears that by the second generation (i.e., first generation Americans), immigrants are for all intents and purposes indistinguishable from native-born individuals in regard to their participation, level, and patterns of involvement in crime.

LIMITATIONS

This research addressed a number of limitations found in the previous literature on immigration and crime; however it too suffers from a number of important limitations that deserve mention. Some of these limitations are general and apply to both datasets, while other limitations are dataset specific.

General Limitations

Although I examined involvement in crime from childhood/early adolescence through to young adulthood, this period of time provides a glimpse at a small slice of the life course. Importantly, although only a limited portion of the life course was analyzed, both datasets used in this research captured the peak years of offending. Moreover, given that patterns of offending in adolescence and young adulthood were so similar, I have no reason to suspect that immigrant involvement in crime would differ dramatically in mid-adulthood. This assumption, however, is merely speculative until research is conducted using data that cover a longer portion of the life course.

Additionally, I was unable to investigate differences in offending among legal and illegal immigrants. Importantly, much of the fear regarding immigration related increases in crime have been aimed at the general immigrant population (Perea 1996), however the fear of crime can be much stronger for those who enter the country illegally. This limitation is not unique to this research. At this point in time, general estimates of the number of illegal immigrants in the United States either does not exist or are unavailable to researchers (Decker 2009; Mears 2001); never mind information pertaining to their involvement in crime. Although general assumptions suggest that illegal immigrants pose a greater criminal threat than immigrants who enter the United

States legally, Gottfredson (2004) noted that this may not necessarily be the case. That is, there is reason to believe that illegal immigrants may be *less* criminally involved as they do not want to risk deportation by drawing attention to themselves. Like many other facets of immigration research, criminal involvement among illegal immigrants is likely influenced by substantial within-group heterogeneity.

Glueck Data Limitations

Limitations in variability in the Glueck data hampered the analysis in a few ways. First, because boys were selected on the basis of their criminal histories, variability on the dependent variable was limited particularly up to 14 years of age. This restricted variability hampered the examination of differences in the predictors of offending. It is important to note that the analyses conducted here indicated that even among this select group of boys, variation in offending over time was present. Second, because the boys came from similarly disadvantaged neighborhoods, I was unable to examine the extent to which neighborhood characteristics explained variation in offending. Third, the dataset is a male only sample. Although males are differentially involved in higher rates of crime compared to females, an examination of the extent to which their involvement patterns and explanations of offending differ by immigrant status from female offenders is impossible in this data. Finally, the examination of offending patterns such as those presented here is limited to the use of official records. Although self-reported involvement in crime was captured by the Glueck's, this information is only available during the first wave of data collection. As a result, like much of the previous research this data is limited by its reliance on official records.

National Longitudinal Survey of Youth Data Limitations

Perhaps the biggest limitation in this research was the reliance upon a number of proxy measures examining the influence of bonds in peer and school contexts using the National Longitudinal Survey of Youth data. The use of proxies was particularly problematic for the school variables as measures of truancy and school suspension could simply be measures of involvement in behaviors analogous to crime (Gottfredson and Hirschi 1990) resulting in a tautological relationship. Utilization of actual measures of school and peer bonds would strengthen the analysis and specifically, the test of the age-graded theory of informal social control.

While analyses were replicated taking into account immigrant nativity status, due to small sample sizes of specific nationality groups, regional groupings were used in this research. As a result, I was unable to fully examine differences due to heterogeneity within the immigrant sample. Moreover, information on immigrant nationality group was only available for first generation immigrants. Although information pertaining to second generation immigrant nationality group affiliation would help answer questions such as whether increases in crime across successive generations is a general process for all immigrants or is group specific, knowledge of nativity status is most important for analyses of first generation immigrants. By the second generation, both youth and their parents display behavioral tendencies more similar to mainstream American culture than their traditional culture (Zhou 1997b). Therefore, differences should be most apparent within the first generation immigrant sample.

Finally, while the NLSY97 data allowed for the investigation of generational differences in offending, substantial heterogeneity exists in the first generation immigrant

sample which limits the ability to make strong conclusions regarding their offending histories. Specifically, previous research indicates that the age at which immigrants migrate strongly influences their socialization experiences and their later life outcomes. Individuals who enter the United States in early and mid-childhood display behavioral tendencies that are more similar to the mainstream American culture than to their traditional culture (Zhou 1997b). Differences in the age of migration among the first generation immigrant sample may have influenced the results.

IMPLICATIONS

Research Implications

The findings of this research contribute to the growing body of literature examining the relationship between immigration and crime. Although previous empirical research has yielded very little evidence to suggest that immigrants are disproportionately crime prone, important limitations of previous studies weakened the strength of this conclusion. The tendency of previous research to rely upon official data has been a particularly damming limitation as the biases of official data are compounded when examining the immigration-crime nexus. That is, some suggest immigrant involvement in crime is exacerbated in official data because of differential treatment of immigrations at various stages of the justice process (Hagan and Palloni 1998) whereas others assert that official data offer a limited picture of the crime committed by immigrants because of underreporting in the immigrant population (Horowitz 2001). Using self-reports of involvement in crime, the findings of this research were consistent with earlier findings

using official data; immigrants appear to be no more criminally involved than their native-born counterparts.

By examining offending before, during, and after the peak years of criminal involvement at the individual level and disaggregating the analysis by crime type, nationality group, and immigrant generation, this research fills many of the gaps in the literature. Moreover, this research examined the immigration-crime nexus in two different socio-historical time periods that were particularly relevant to U.S. immigration. Regardless of the different contexts, sample compositions, study designs, and measurement of offending, the findings were remarkably similar in both eras. By addressing many of the limitations of previous research, this research adds weight to the findings discounting the chorus of voices declaring that immigrants pose a substantial criminal threat to the American public.

The findings of this research, like much research before it, reveal an increasing rate of crime across successive generations.[109] It seems that the immigrant-crime "problem" still lies among the children of immigrants. This finding suggests two important conclusions. First, there is a significant increase in the rate of offending among immigrants in a relatively short period of time (one generation). This increase is substantial and given the expectations of a rapid increase in the second generation population in the next few years it warrants a shift in research focus from first generation immigrants to second generation immigrants. Previous research suggests that increases

[109] This research was unable to measure differences in offending among first and second generation immigrants in the same family. Thus, the finding that crime increases among the second generation may be due to differences in the immigrant samples. That is, second generation immigrants have parents who migrated to the United States in the 1960s whereas first generation immigrants have entered the country in the last two decades. Longitudinal research that documents the criminal involvement of first generation immigrant parents as well as their second generation immigrant children is needed to fully assess whether criminal involvement increases across successive generations.

in deviant behavior across successive immigrant generations are because of changes in parent-child relations where acculturation is related to greater parent-child conflict (Gonzales et al. 2006; McQueen et al. 2003; Samaniego and Gonzales 1999; Smokowski and Bacallao 2006). Although a direct measure of family conflict could only be measured in one dataset used in this research (i.e., Glueck data), the findings from this study revealed few statistically significant differences in measures of family bonds or their relationships to offending comparing first and second generation youth. Conversely, significant differences across immigrant generations were observed on the school variables. This suggests that a potentially fruitful future research pursuit would be an examination of immigrant experiences at school and their effects on involvement in crime as it may aid in the understanding of the generational increase in immigrant crime.

Second, despite the finding of an increase in criminal behavior among second generation immigrants, no evidence was found that their rate of involvement was significantly higher than that of the native-born population. Rather, by the second generation, immigrants simply look like their native-born counterparts in regard to their level of offending.

Theoretical Implications

A number of theoretical implications are drawn from this research. First, support was found for one of the core tenets of the theory. That is, social bonds in childhood/adolescence were found to significantly predict offending later in the life course. Although early childhood experiences do not dictate later life outcomes, the cumulative nature of development does promote life course continuities (see McLeod and Almazan 2004:395). As such, as this research demonstrated, experiences early in the life

course have important implications for later life outcomes (e.g., criminal involvement). Moreover, some support was found for the mediation hypothesis of the theory as the influence of structural background factors on offending was mediated by social bonds. This last finding is particularly notable as limited empirical attention has been aimed at testing the mediation hypothesis (especially in comparison to tests of the continuity and change tenets of the theory).

Second, this research investigated the influence of a number of structural factors not included in the original statement of the theory. Because the boys in the Glueck data lived in similarly disadvantaged neighborhoods, variation in neighborhood characteristics was virtually nonexistent. The general population sampling design of the NLSY data allowed for the inclusion and examination of the influence of neighborhood variables, namely environmental risk and early victimization. The neighborhood variables were found to be particularly strong predictors of offending for native-born and immigrant individuals alike. Even after the addition of family, peer, and school variables to the model, these variables often retained their significant direct effects on crime. Examining the patterns in the mediation analysis reveals that although neighborhood variables affect offending via their influence on family, peer, and school processes for native-born individuals, neighborhood variables evidence no significant association with family process variables among immigrants; their effects are mediated by peer and school variables for immigrants. Although speculative at this point, this finding gives some insight into the "protective effect" finding in previous research. That is, immigrant family bonds appear to be resilient to contextual differences.

Third, although the theory did well at explaining variation in offending between delinquents and non-delinquents, it was unable to account for variation in offending within a delinquent sample. Although all the Glueck boys were selected on the basis of their high-rate and/or persistent level of offending, results from the group-based trajectory analysis revealed that even within the delinquent group differences in offending were evident. Yet, neither structural background factors nor social bonds to the family, school, or peers were significantly related to offending for this sample. Moreover, analyses of a subsample of delinquent youth from the NLSY97 dataset revealed similar findings providing further support for this conclusion.

Finally, and most important to the topic of immigration and crime, the findings of this research provide support for the general nature of the theory. That is, regardless of immigrant status, the age-graded theory performed well in explaining involvement in crime for native-born and immigrant youth alike – although less well for first generation immigrants. As was previously mentioned, support for the theory was not found in analyses using the Glueck data; however, previous research using both the delinquent and non-delinquent samples found strong support for the theory (Sampson and Laub 1993). Future studies examining the utility of the theory in explaining variation in offending among immigrant youth should test the theory using both the delinquent and non-delinquent samples.

Policy Implications

At least since the early 20th century, policies have been called for and often enacted that are aimed at reducing the inflow if undesirable immigrants to the United States. Support for the restriction of immigration often involves an impassioned warning

of the criminal element found among the immigrant population. In light of the burgeoning body of empirical evidence discounting the criminal immigrant myth, as well as evidence suggesting that immigration may reduce crime, it seems that efforts aimed at reducing crime by restricting immigration will not have their intended consequences.

The research findings presented here do not suggest that immigrants are not involved in crime. What the findings do reveal is that immigrants pose no greater criminal threat than the general native-born population. As a result, policies aimed at reducing crime by restricting immigration seem misguided. Instead, general crime reduction policies aimed at all persons regardless of immigration status should have the greatest crime reduction effects. For instance, there is no reason to suspect that efforts aimed at increasing academic success would differentially affect immigrants compared to native-born youth. Instead, efforts aimed at increasing attachments to school should be beneficial in reducing crime for all youth. In fact, evidence from this research revealed that variation in offending is explained similarly by a number of predictors of offending for native-born and immigrant youth. Although clear differences existed in the strength of the effect of many predictors, differences in the direction of the effect were rare. Simply put, regardless of immigrant status, stronger bonds to family and school were associated with decreased rates of offending.

As Decker (2009) noted, perhaps the biggest policy issue influencing research on immigration and crime is how to reconcile public perceptions of immigrant involvement in crime with the empirical evidence. For nearly 100 years, research has indicated that immigrants are not particularly crime prone, nor do they pose a particularly violent threat. Moreover, although the immigrant crime problem has been framed as a drug crime

problem (Martinez 2002), the evidence presented here tends to reveal that drug crime is more problematic among native-born youth. Given the growth in and strength of empirical evidence documenting a lack of an immigration-crime nexus, priority should be given to educating the public, media, and government officials about the myth of the "criminal immigrant."

FUTURE RESEARCH

A long history of research examining the relationship between immigration and crime exists. Despite this history, research on this nexus is just beginning to examine the various facets and nuances inherently tied to the study of immigration. As such, directions for future research are numerous. Here I identify three areas of inquiry that I think will advance our understanding in this important area of research.

First, although support was found for the application of the age-graded theory of informal social control in explaining variation in offending for native-born and immigrant youth, it was clear that the theory performed less well in explaining offending among immigrant youth. As was previously mentioned, this may be caused by a lack of culturally sensitive bonding measures. However, this finding may also have been due to the lack of inclusion of immigration specific variables. Specifically, future criminological research should look to theories of immigration such as segmented assimilation theory in examining explanations of immigrant offending. Segmented assimilation theory (Portes and Zhou 1993) highlights the importance of human and social capital (e.g., education and employment resources), time in the United States, language proficiency and bilingualism, and culture conflict. Many of the hypotheses of

segmented assimilation theory are consistent with the basic tenets of the age-graded theory of informal social control. For instance, segmented assimilation theory suggests that deficiencies in parental human and social capital are detrimental to the progress of youth. This is consistent with the hypothesis of the age-graded theory of informal social control which states that structural background factors such as parental education influence offending albeit via their influence on social bonds. Differences in length of time in the United States and language proficiency would likely influence the ability of youth to succeed in school and to bond to peers and educational institutions (Hirschman 2001). Additionally, experiences with culture conflict would likely hamper parent-child attachments (Sommers et al. 1994). Future research should draw upon immigration theories and incorporate immigration specific processes into the discussion of explanations of offending among immigrants.

In general, the findings of this research lend support to the basic tenets of the age-graded theory of informal social control. First, social bonds in childhood/adolescence were found to be significant predictors of offending for all youth regardless of immigrant status. Second, social bonds were found to partially mediate the influence of structural background factors on offending for youth in the sample. The age-graded theory of informal social control (Sampson and Laub 1993) and its revised form (Laub and Sampson 2003) are much more nuanced than what was presented and tested here. Specifically, as I noted in Chapter 3 (see page 49), "[a]t the heart of the life course perspective is an emphasis on the importance of both continuity and change in individual development across the life span." Future research should delve into the various facets of the theory such as explanations of continuity and change in offending and assess the

influence of adult social bonds on immigrant offending trajectories especially with regard to desistance from crime. Cultural differences in perceptions of, as well as differences in access to, marriage (and divorce), fertility and gendered familial obligations, and employment opportunities may result in different relationships between these bonds and offending among immigrants (see e.g., Bean, Berg and Van Hook 1996; Oropesa, Lichter and Anderson 1994; Waters and Eschbach 1995).

Finally, although much immigration-crime research has been conducted at the macro level and research is increasingly looking at immigration and crime at the individual level, to date, no study has examined the simultaneous and interactive influences of neighborhood and individual level factors on immigrant offending.[110] Unlike their early 20th century predecessors, today's immigrants settle in various neighborhoods that differ in regards to their socioeconomic, familial, and racial and ethnic compositions (Iceland 2009). The effect of these differential patterns of residential settlement, and the resultant differential exposure to risks, on individual level factors such as family, peer, and school processes should be investigated in future research. Similar to previous research (Butcher and Piehl 1998; Harris 1999; Lee et al. 2001; Martinez 2002; Sampson et al. 2005), this research found that even though immigrant youth experienced similar rates of exposure to environmental risks, first generation immigrants had lower rates of offending compared to their peers. Gaining a better understanding of how context influences individual level processes may shed light on the paradoxical findings whereby immigrants seem to be protected from deleterious environments.

[110] Sampson et al. (2005) indirectly test the simultaneous influence of individual and contextual factors on immigrant offending by including immigration generation as a control in their models.

CONCLUSIONS

This research sought to answer the question of whether or not immigrants are crime prone, or as Sutherland (1927) asked, whether there is "undue crime among immigrants." Based on evidence from this research, the simple answer to this question is no, immigrants are not crime prone. More specifically, compared to their native-born counterparts immigrants are not at a significantly greater risk for involvement in crime, immigrants are not involved in higher levels of offending, immigrants are not more involved in serious crimes or drug crimes, immigrants are not more likely to maintain a trajectory of chronic offending, nor are specific immigrant nationality groups crime prone. This conclusion holds for first and second generation immigrants. Moreover, the results remain the same whether examining immigrant offending in the early 20th century or today. In sum, immigrants and native-born individuals share an equivalent risk of offending. Additionally, evidence of an equivalent process appears to be at work as there was evidence to indicate that immigrants and native-born individuals are influenced similarly by family, peer, and/or school factors.

Evidence continues to accumulate – present research included – documenting that immigrants are not crime prone nor do they pose a particularly violent threat because of high rates of offending or because of a differential involvement in serious crimes. Perhaps it is time to focus research attention on a different set of questions such as: Given the disadvantaged contexts many immigrants initially reside in, why do first generation immigrants continually evidence relatively low rates of offending?[111] Moreover, why is it that after just one generation in the United States the rate of involvement in crime

[111] Although this question has been asked in previous studies, research has not been aimed at answering this question.

among immigrants quickly rises to levels that mirror those of the native-born population? Given that the second generation immigrant population (i.e., first generation Americans) is expected to grow exponentially in the next few decades, in addition to the finding that involvement in crime rises rapidly across successive immigrant generations, even if immigrants are not particularly crime prone the convergence of these two elements translates into an increase in the overall level of crime in the United States in the near future. Although acculturation has long been implicated as the reason crime increases across immigrant generations (see Sutherland 1924, 1934), an in depth understanding of (and empirical evidence supporting) what it is about becoming an American that increases one's involvement in crime remains elusive.

APPENDIX A. IMMIGRANT GENERATION CLASSIFICATION STRATEGY, NLSY97 DATA

In accordance with previous research on immigration and crime, the primary strategy used to determine immigration status utilized information on the place of birth of the youth and his/her biological parents. Based on this information, immigrant status was ascertained for 5,814 youth (65% of the total sample). Although complete birthplace information was not available for the entire sample, using information from other indicators including the birthplace of the biological grandparents and questions asking about the youth's citizenship status, I was able to infer immigration status for an additional 2,104 youth resulting in a final sample size of 7,918 youth (88% of the total sample).

In the outline below I discuss my strategy for classifying the 2,069 additional cases. The original crosstab of the youth's birthplace and their parent's place of birth is reported below and used for comparison purposes.

Original crosstab of youth's place of birth and parent's place of birth

		Youth Born Outside US					
		-9 Unknown		0 No		1 Yes	
Parents Born in US	-9 Unknown	**A**	144	**B**	2544	**C**	192
	0 No	**D**	57	**E**	953	**F**	387
	1 Yes	**G**	201	**H**	4474	**I**	32

Cell A: Birthplace is unknown for both the youth and the biological parents (N = 144)

- There is not enough information to classify these youth. These cases are excluded from the analysis.

Cell B: Birthplace is known for the youth (inside the US), but birthplace is unknown for the biological parents (N = 2544)

- Using data from the place of birth of the biological grandparents.
  - A total of 1,270 youth in this cell had all four biological grandparents born in the US

        - Because all four biological grandparents were born in the US and the youth was born in the US, I made the assumption that these were native-born youth
- Using data from the place of birth of the biological parents.
    - A total of 473 youth had information on the birth place for one biological parent (born inside the US).
        - Drawing upon the logic of assortative mating (Vandenberg 1972), I made the assumption that the other parent was native-born and therefore these are native-born youth
- There is not enough information to classify the remaining 801 youth. These cases are excluded from the analysis.

Cell C: Birthplace is known for the youth (outside the US) but birthplace is unknown for the biological parents (N = 192)

- Using data from the place of birth of the biological grandparents.
    - A total of 131 youth in this cell had at least one grandparent also born outside of the US
        - I made the assumption that these are first generation immigrants
    - A total of 47 youth had no information on the parents or grandparent's place of birth
        - There is not enough information to classify these youth. These cases are excluded from the analysis.
    - The remaining 14 youth had grandparents all born in the US, no information on parent place of birth
        - There is not enough information to classify these youth. These cases are excluded from the analysis.

Cell D: Birthplace is unknown for the youth, but birthplace is known for the biological parents (outside the US) (N = 57)

- Using data from the immigration status variable: asks what the immigration status of the youth is based on the parents residence at the youth's birth
    - A total of 14 of these youth were categorized as: citizenship unknown, not born in the US
        - These youth had at least one biological parent who was also not born in the US
        - I made the assumption that these youth were first generation immigrants (both the youth and at least one biological parent were born outside the US)
    - A total of 15 of these youth were categorized as: citizens, born in the US
        - These youth also had at least one biological parent not born in the US

        - I made the assumption that these youth were second generation immigrants (the youth born inside the US and at least one biological parent was born outside the US)
    - There is not enough information to classify the remaining 28 youth. These cases are excluded from the analysis.

Cell E: Birthplace is known for the youth (inside the US) and birthplace is known for the biological parents (outside the US) (N = 953)

- Based on this information these are the "known" second generation immigrants

Cell F: Birthplace is known for the youth (outside the US) and birthplace is known for the biological parents (outside the US) (N = 387)

- Based on this information these are the "known" first generation immigrants

Cell G: Birthplace is unknown for the youth, but birthplace is known for the biological parents (inside the US) (N = 201)

- Using data from the immigration status variable: asks what the immigration status of the youth is based on the parents residence at the youth's birth
    - A total of 201 of these youth were categorized as: citizens, born in the US
        - I made the assumption that these youth were native-born

Cell H: Birthplace is known for the youth (inside the US) and birthplace is known for the biological parents (inside the US) (N = 4474)

- Based on this information these are the "known" native-born youth

Cell I: Birthplace is known for the youth (outside the US) and birthplace is known for the biological parents (inside the US) (N = 32)

- There was not enough information to classify these youth. These cases are excluded from the analysis.

Final crosstab of youth place of birth and parent's place of birth with estimates of birthplace calculated

		Youth Born Outside US					
		-9 Unknown		0 No		1 Yes	
Parents Born in US	-9 Unknown	**A**	144	**B**	801	**C**	61
	0 No	**D**	28	**E**	968	**F**	532
	1 Yes	**G**	0	**H**	6418	**I**	32

APPENDIX B. UNITED NATIONS GEOSCHEME SUB-REGION GROUPINGS

Nationality Group	Country	Sample Size	Frequency
Mexican		201	
	Mexico		201
Caribbean		74	
	Bahamas		1
	Barbados		1
	Cuba		9
	Dominican Republic		23
	Haiti		1
	Jamaica		21
	Puerto Rico		14
	Trinidad		2
	Other Caribbean		2
Central American		63	
	Costa Rica		2
	El Salvador		12
	Guatemala		14
	Honduras		10
	Nicaragua		13
	Panama		12
Asian		49	
	China		3
	Hong Kong		2
	Japan		2
	Korea		4
	Taiwan		2
	Indonesia		2
	Laos		1
	Malaysia		1
	Philippines		16
	Thailand		6
	Vietnam		10
South American		30	
	Argentina		1
	Bolivia		2
	Brazil		1
	Colombia		9
	Ecuador		5
	Guyana		2
	Peru		8
	Uruguay		1
	Venezuela		1

APPENDIX B (CONTINUED). UNITED NATIONS GEOSCHEME SUB-REGION GROUPINGS

Nationality Group	Country	Sample Size	Frequency
Middle Eastern		23	
	Bangladesh (E. Pakistan)		1
	India		8
	Iran		2
	Armenia		3
	Israel		3
	Jordan		3
	Syria		1
	Other Middle East		2
European		31	
	Yugoslavia		1
	England		3
	France		2
	Germany		10
	Netherlands		2
	Switzerland		1
	Poland		4
	USSR		7
	Other Europe		1
African		15	
	South Africa		2
	Ghana		1
	Ivory Coast		1
	Liberia		4
	Nigeria		6
	Sierra Leone		1
Canadian		17	
	Canada		17
Melanesian		4	
	New Guinea		4
Other		12	
	Various		12

APPENDIX C. STEP 1 MEDIATION ANALYSIS, GLUECK DATA

	Supervision		Family Cohesion		Parental Attachment		Erratic/harsh Discipline	
	B	se	*B*	se	*B*	se	*B*	se
				Native-born Boys				
Family Structure	.084	.102	.317 ***	.097	-.020	.137	.062	.120
Family Size	-.007	.023	.014	.022	.011	.031	.016	.027
Socioeconomic Status	.011	.030	-.027	.029	-.112 **	.041	.081 *	.036
Crowded Household	.081	.080	.012	.076	.056	.108	.092	.094
Residential Mobility	-.018	.010	-.021 *	.010	.007	.014	.000	.012
Maternal Criminality	-.133	.089	-.160	.085	.014	.120	.150	.105
Paternal Criminality	-.251 *	.111	-.267 *	.106	-.116	.150	.123	.131
Some High School Education (parent)	-.022	.086	.073	.081	.084	.115	-.145	.101
				Second Generation Immigrants				
Family Structure	.075	.092	.416 ***	.079	.387 ***	.105	.112	.093
Family Size	-.004	.021	-.021	.018	.021	.024	.008	.021
Socioeconomic Status	.053 *	.027	-.028	.023	.002	.030	.016	.027
Crowded Household	.001	.072	.064	.062	-.010	.082	-.010	.072
Residential Mobility	-.021 *	.010	-.027 ***	.008	-.010	.011	.004	.010
Maternal Criminality	-.170 *	.088	-.207 **	.076	-.029	.100	.152	.089
Paternal Criminality	-.230 *	.095	-.103	.082	-.146	.109	.074	.096
Some High School Education (parent)	.129	.079	.017	.068	.054	.090	.134	.080

* $p < .05$; ** $p < .01$; *** $p < .001$.

APPENDIX C (CONTINUED). STEP 1 MEDIATION ANALYSIS, GLUECK DATA

	Delinquent Peer Attachment		Grade Repetition		School Attachment		Truancy	
	B	se	*B*	se	*B*	se	*B*	se
				Native-born Boys				
Family Structure	.054	.091	.150	.166	-.144	.281	.163	.097
Family Size	.035	.020	-.007	.037	-.003	.062	-.031	.022
Socioeconomic Status	.030	.027	-.036	.049	.065	.083	-.072 *	.029
Crowded Household	.024	.071	.123	.130	.088	.220	.145	.076
Residential Mobility	.000	.009	.019	.017	.021	.028	.019	.010
Maternal Criminality	.038	.079	.099	.146	-.046	.244	-.142	.085
Paternal Criminality	-.087	.099	.312	.181	-.479	.304	.029	.106
Some High School Education (parent)	-.012	.076	.247	.139	-.624 **	.232	.082	.081
				Second Generation Immigrants				
Family Structure	-.076	.071	.071	.150	.315	.236	-.204 *	.090
Family Size	.034 *	.016	.034	.034	-.138 **	.054	.066 ***	.020
Socioeconomic Status	-.022	.021	.068	.043	-.079	.068	-.054 *	.023
Crowded Household	-.012	.056	.148	.117	-.079	.189	-.032	.070
Residential Mobility	-.019 *	.007	-.004	.016	.015	.025	.020 *	.009
Maternal Criminality	.024	.068	.111	.143	-.019	.226	.007	.086
Paternal Criminality	-.034	.074	-.043	.155	-.225	.245	-.042	.093
Some High School Education (parent)	.005	.061	.066	.129	-.122	.203	.004	.077

* $p < .05$; ** $p < .01$; *** $p < .001$.

APPENDIX D. STEP 2 MEDIATION ANALYSIS, GLUECK DATA

	Any Crime		Property Crime		Violent Crime		Alcohol/Drug Crime	
	B	se	*B*	se	*B*	se	*B*	se
				Native-born Boys				
Family Structure	.110	.107	.144	.124	.002	.181	.065	.231
Family Size	.080 **	.027	.088 ***	.024	.052	.044	.183	.126
Socioeconomic Status	-.013	.035	-.022	.035	.037	.063	-.091	.149
Crowded Household	-.151	.083	-.122	.093	-.109	.152	-.174	.300
Residential Mobility	-.004	.013	-.013	.012	-.045 *	.021	.002	.047
Maternal Criminality	.089	.115	.091	.117	.014	.191	.456	.315
Paternal Criminality	-.014	.151	.243	.147	-.054	.231	-.621 *	.302
Some High School Education (parent)	-.015	.093	-.070	.096	-.191	.173	-.159	.305
				Second Generation Immigrants				
Family Structure	.111	.098	.134	.113	.263	.180	-.173	.176
Family Size	.044	.025	.057 *	.027	.062	.046	.082	.051
Socioeconomic Status	-.005	.029	.027	.032	-.059	.063	-.085	.066
Crowded Household	.031	.085	-.000	.088	-.090	.179	.076	.160
Residential Mobility	.019	.010	.013	.012	.016	.022	.013	.022
Maternal Criminality	.138	.104	.266 *	.108	-.041	.190	-.708 **	.251
Paternal Criminality	-.041	.097	-.179	.108	-.149	.197	.216	.205
Some High School Education (parent)	.116	.086	.131	.097	-.206	.166	.618 **	.189

* $p < .05$; ** $p < .01$; *** $p < .001$.

APPENDIX E. STEP 1 MEDIATION ANALYSIS, NLSY97 DATA

	Attachment		Emotional Ties		Supervision	
	B	se	*B*	se	*B*	se
	Native-born Individuals					
Family Structure	.124 **	.039	.123 **	.040	.181 ***	.039
Household Size	-.001	.016	.009	.016	-.014	.016
Socioeconomic Status	.004	.003	.003	.003	.003	.003
Parent High School Graduate	-.045 *	.023	-.008	.024	-.023	.023
Parent Post Secondary Education	.023	.024	-.010	.024	.028	.024
Environmental Risk	-.033 *	.014	-.032 *	.015	-.039 **	.014
Early Victimization	-.136 ***	.036	-.031	.037	-.145 ***	.036
	Second Generation Immigrants					
Family Structure	.158	.105	-.120	.100	.034	.099
Household Size	-.073	.041	.008	.039	.015	.039
Socioeconomic Status	.000	.008	-.006	.008	.001	.008
Parent High School Graduate	-.036	.074	.018	.070	.003	.070
Parent Post Secondary Education	.029	.074	-.031	.070	.027	.070
Environmental Risk	-.029	.041	-.092 *	.039	-.033	.039
Early Victimization	-.093	.099	-.073	.093	-.005	.095
	First Generation Immigrants					
Family Structure	.110	.134	.155	.149	.110	.170
Household Size	-.037	.047	.026	.053	-.110	.060
Socioeconomic Status	.010	.011	.025 *	.012	.006	.014
Parent High School Graduate	.007	.101	.119	.112	.043	.129
Parent Post Secondary Education	.025	.099	-.127	.110	-.114	.126
Environmental Risk	-.150 **	.049	-.096	.054	-.063	.062
Early Victimization	-.067	.153	.118	.170	-.361	.194

* $p < .05$; ** $p < .01$; *** $p < .001$.

APPENDIX E (CONTINUED). STEP 1 MEDIATION ANALYSIS, NLSY97 DATA

	Delinquent Peers		Number of Days Truant		Ever Suspended		School Victimization	
	B	se	*B*	se	*B*	se	*B*	se
Native-born Individuals								
Family Structure	-.158 ***	.034	.086 ***	.013	-.104 ***	.017	.073 ***	.014
Household Size	-.019	.014	-.014 **	.005	.023 ***	.007	.006	.006
Socioeconomic Status	-.007 *	.003	.000	.001	-.005 ***	.001	.001	.001
Parent High School Graduate	.034	.020	.008	.008	.006	.010	-.007	.008
Parent Post Secondary Education	-.039	.021	-.003	.008	-.015	.010	.015	.008
Environmental Risk	.053 ***	.013	-.023 ***	.005	.049 ***	.006	-.024 ***	.005
Early Victimization	.222 ***	.032	-.054 ***	.012	.123 ***	.015	-.118 ***	.013
Second Generation Immigrants								
Family Structure	-.209 *	.090	.124 ***	.037	-.108 *	.043	.068 *	.034
Household Size	-.073 *	.035	.004	.014	-.010	.017	-.003	.013
Socioeconomic Status	-.007	.007	-.003	.003	-.007 *	.003	-.002	.003
Parent High School Graduate	.073	.063	.007	.025	.065 *	.030	-.009	.024
Parent Post Secondary Education	-.094	.063	-.006	.026	-.073 *	.030	.022	.024
Environmental Risk	.065	.035	-.044 **	.014	.035 *	.017	-.035 **	.013
Early Victimization	.379 ***	.084	-.102 **	.034	.121 **	.040	-.057	.032
First Generation Immigrants								
Family Structure	-.369 **	.131	.073	.054	-.021	.063	.113 *	.046
Household Size	.019	.047	.008	.019	.029	.023	-.034 *	.016
Socioeconomic Status	.000	.011	-.005	.004	-.007	.005	-.004	.004
Parent High School Graduate	-.093	.099	.017	.041	-.016	.048	.004	.035
Parent Post Secondary Education	.083	.097	-.002	.041	.023	.047	.025	.034
Environmental Risk	.088	.048	-.003	.020	-.020	.023	-.014	.017
Early Victimization	.563 ***	.147	-.029	.062	.082	.072	-.110 *	.052

* $p < .05$; ** $p < .01$; *** $p < .001$.

APPENDIX F. STEP 2 MEDIATION ANALYSIS, NLSY97 DATA

Native-born Individuals

	Any Crime		Property Crime		Violent Crime		Drug Crime	
	B	se	*B*	se	*B*	se	*B*	se
Family Structure	-.350 ***	.055	-.317 ***	.074	-.459 ***	.102	-.434 ***	.093
Household Size	-.045 *	.020	-.039	.024	-.033	.036	-.141 ***	.037
Socioeconomic Status	.005	.004	.011 *	.005	-.011	.012	.020 ***	.006
Parent High School Graduate	-.004	.087	.023	.113	-.337 **	.124	-.222	.147
Parent Post Secondary Education	.234 **	.090	.345 **	.113	-.375 **	.128	-.048	.149
Environmental Risk	.068 ***	.019	.037	.026	.127 ***	.031	.097 **	.031
Early Victimization	.435 ***	.040	.383 ***	.056	.622 ***	.059	.335 ***	.068

Second Generation Immigrants

	Any Crime		Property Crime		Violent Crime		Drug Crime	
	B	se	*B*	se	*B*	se	*B*	se
Family Structure	-.432 ***	.119	-.467 **	.145	-.183	.175	.495 *	.203
Household Size	-.055	.053	-.050	.062	.034	.099	.007	.071
Socioeconomic Status	.028 **	.010	.030 **	.011	.017	.011	.010	.011
Parent High School Graduate	-.308	.169	-.655 ***	.194	-.557	.322	.299	.294
Parent Post Secondary Education	-.055	.167	.113	.176	-.321	.369	.621 **	.199
Environmental Risk	.177 ***	.048	.158 **	.051	.110	.092	.369 ***	.074
Early Victimization	.508 ***	.092	.409 ***	.108	1.023 ***	.152	.350 *	.155

First Generation Immigrants

	Any Crime		Property Crime			Drug Crime	
	B	se	*B*	se		*B*	se
Family Structure	-.116	.393	-.233	.467		.310	.758
Household Size	-.081	.076	-.132	.114		-.260	.153
Socioeconomic Status	-.004	.047	.018	.045		-.031	.083
Parent High School Graduate	.457	.858	.775	.783		.102	1.628
Parent Post Secondary Education	.676 *	.280	.505 *	.488		.149	.638
Environmental Risk	-.059	.145	-.071	.158		-.307	.261
Early Victimization	.841 ***	.132	.739 ***	.211		1.228 ***	.290

* $p < .05$; ** $p < .01$; *** $p < .001$.

APPENDIX G. EQUALITY OF REGRESSION COEFFICIENTS TEST OF THE PREDICTORS OF TOTAL OFFENDING COMPARING NATIVE-BORN YOUTH WITH SECOND GENERATION IMMIGRANTS, NLSY97 DATA

	Native-born Youth				Second Generation Immigrants				
	Model 1		Model 2		Model 1		Model 2		
	Coefficient	(se)	Coefficient	(se)	Coefficient	(se)	Coefficient	(se)	*z* test
Intercept	1.90 ***	.16	1.93 ***	.22	3.29 ***	.37	3.40 ***	.27	-5.02 ***
Age	1.17 *	.50	1.12 *	.47	-.01	1.02	-.21	.85	1.12
Age2	-.04 *	.02	-.04 *	.02	.01	.03	.01	.03	-2.39 *
Gender	.53 ***	.16	.57 **	.18	-.33	.33	-.19	.26	3.07 **
PIAT	.00	.00	.00	.00	.01	.01	.01 *	.01	-1.95
Early Onset	-.07	.13	-.35 *	.15	-.01	.37	-.28	.33	-0.27
Family Structure	.17	.14	.32 *	.15	-.51	.28	-.45	.24	3.71 ***
Household Size	.03	.06	.01	.06	.09	.08	.13	.10	-1.71
Socioeconomic Status[+]	.03 **	.01	.03 ***	.01	.00	.05	.04	.03	-0.92
Parent High School Graduate	-.09	.08	-.08	.08	-.25	.26	-.04	.21	-0.32
Parent Post Secondary Education	.08	.08	.06	.07	.13	.24	-.11	.20	1.55
Environmental Risk	-.07	.05	-.06	.05	.06	.08	.18 *	.07	-4.37 ***
Early Victimization	.04	.10	-.03	.10	.46 *	.23	.47 *	.20	-3.57 ***
Attachment			.02	.07			.09	.12	-0.83
Emotional Tie			-.14	.09			.23 **	.07	-3.90 ***
Supervision			.12	.07			-.11	.11	2.80 **
Delinquent Peers			.11	.07			.35 *	.13	-2.76 **
Number of Days Truant[+]			-.31	.17			-1.37 **	.46	2.78 **
Ever Suspended			-.08	.15			-.62 *	.24	2.60 **
School Victimization[+]			-.86 ***	.18			.57 *	.23	-6.140 ***

Notes: Overdispersed Poisson model, robust standard errors with PQL estimation. [+] Variable was transformed to correct for skew.
* $p < .05$; ** $p < .01$; *** $p < .001$.

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