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Do the adult criminal careers of African Americans fit the "facts"?

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Abstract

Purpose—A major gap in the criminal career research is our understanding of offending among African Americans, especially beyond early adulthood. In light of this gap, this study describes the criminal career patterns of a cohort of African American males and females.

Methods—This paper uses official criminal history data spanning ages 17 to 52 from the Woodlawn Study, a community cohort of 1,242 urban African American males and females. We use basic descriptive statistics as well as group-based modeling to provide a detailed description of the various dimensions of their adult criminal careers.

Results—We find cumulative prevalence rates similar to those for African Americans from national probability sample estimates, yet participation in offending extends farther into midlife than expected with a substantial proportion of the cohort still engaged in offending into their 30s.

Conclusions—The descriptive analyses contribute to the larger body of knowledge regarding the relationship between age and crime and the unfolding of the criminal career for African American males and females. The applicability of existing life course and developmental theories is discussed in light of the findings.

Introduction

In 1986, the National Academy of Sciences (NAS) published a two volume report entitled "Criminal Careers and 'Career Criminals'" (Blumstein, Cohen, Roth, & Visher, 1986), which sparked some resurgence in research investigating the criminal career, defined as "the longitudinal sequence of crimes committed by an individual offender" (Blumstein et al., 1986, p. 12). Fueling this revitalization of criminal career research in the 1980s was the debate regarding the invariance of the age-crime curve (Hirschi & Gottfredson, 1983). Criminal career researchers argue that the age-crime curve varies substantially across time and social conditions (Farrington, 1986; Steffensmeier, Allan, Harer, & Streifel, 1989) and propose that the aggregate age-crime curve accommodates a variety of offending

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trajectories. One important implication of this notion is that the age-crime curve should be disaggregated so that participation in offending can be studied separately from frequency of offending.

The ability to study criminal careers in detail was facilitated in the 1980s by the fact that the subjects of several longitudinal research studies on crime and delinquency were reaching adulthood at that time.[1] These longitudinal studies, which follow the same individuals over a long period of time, were essential to investigate the various dimensions of the criminal career such as the prevalence (participation), incidence (frequency), and seriousness of offending, as well as recidivism, onset, termination, and career length, to name a few (Blumstein, Cohen, & Farrington, 1988). Since the 1986 NAS report, there have been considerable advances in our understanding of the criminal careers among white populations, males in particular. However, the core issue is that although our knowledge is growing with respect to participation, onset, and offending careers into *early* adulthood among African Americans and Hispanics (i.e., from adolescence to the late 20s) (e.g., Loeber, Farrington, Stouthamer-Loeber, & White, 2008; Reingle, Jennings, & Maldonado-Molina, 2011; Tracy & Kempf-Leonard, 1996) and into later adulthood for Hispanics (Jennings, Zgoba, Piquero, & Reingle, 2013) we still know very little about the long-term criminal careers among African Americans.

For instance, the two longest criminological longitudinal studies, the Glueck follow-up study (see, e.g., Laub & Sampson, 2003) and the Cambridge Study of Delinquent Development (see, e.g., Farrington, Piquero, & Jennings, 2013), follow individuals into late adulthood shedding light on the adult criminal career into the 30s, 40s, and 50s, yet both focus on white males only. With respect to non-white populations, Jennings et al. (2013) recently reported on the offending trajectories of a cohort of Hispanic males from age 18 to 50. Yet, a major gap in the criminal career research that remains is our understanding of offending beyond early adulthood for African Americans. In a response to this gap, this study provides a systematic descriptive account of the criminal career patterns of an African American community cohort of males and females followed from age 17 to age 52.

The “facts” of adult criminal careers

In the 2003 issue of *Crime and Justice*, Piquero, Farrington, and Blumstein conducted an extensive review of the criminal career research spanning close to 150 pages, which outlines the state of the evidence with respect to the dimensions of the criminal career, theoretical contributions, and methodological considerations (see also DeLisi & Piquero, 2011; Farrington, 2003). With respect to the criminal career dimensions, several “facts” have emerged. For instance, 1) prevalence tends to peak in late adolescence such that fewer individuals continue offending into adulthood; 2) yet among the smaller group who remain active offenders, the frequency of offending remains high and does not decline with age; 3)

[1]For instance, the 1945 Philadelphia birth cohort subjects were 25 in 1970 (see Wolfgang, Thornberry, & Figlio, 1987), the boys in the Cambridge Study in Delinquent Development were 25 in 1978 (see Farrington, 1983), and the 1958 Philadelphia birth cohort subjects were 25 in 1983 (see Tracy & Kempf-Leonard, 1996). Thus, these studies, as well as others such as the Glueck follow-up study (Laub & Sampson, 2003; Sampson & Laub, 1993) and the Causes and Correlates studies (Huizinga, Weiher, Espiritu, & Esbensen, 2003; Loeber et al., 2003; Thornberry, Lizotte, Krohn, Smith, & Porter, 2003) have played a significant role in advancing our understanding of the criminal career and have had significant theoretical and policy implications for the field.

an earlier age of onset is related to a longer criminal career and an increased recidivism probability; and 4) the majority of offenders desist, although perhaps at different times throughout the life course. However, these "facts" have largely been based on white male populations.

Recently, several samples that follow African Americans into young adulthood have begun to inform our understanding of the criminal careers of this population. For instance, with respect to the age-crime curve, the Pittsburgh Youth Study, which includes 56% African Americans, finds evidence similar to those of other studies with respect to the age-crime curve; arrests for moderate and serious violence peak in adolescence and decline in the early 20s (Loeber et al., 2008). However, Elliott's (1994) analysis of serious violent offending among the National Youth Survey (NYS) sample shows that as this timeline extends into the thirties, the trends for black males decrease in the early twenties before beginning to increase again in the mid-twenties and continuing to increase into the early thirties (Elliott, 1994).

In light of these studies into early adulthood, one multifaceted area of research that is needed is extensive descriptive data on the criminal career dimensions of African American males and females, especially those that extend into late adulthood (see DeLisi & Piquero, 2011; Piquero, Farrington, & Blumstein, 2003). Moreover, the foundation of several contemporary theories that explain offending over the life course has been restricted to certain populations for which we have data, largely neglecting key demographic categories and bringing their applicability into question. With respect to race and the criminal career, contemporary theoretical questions include 1) Do chronic or acute stressors common in the lives of many African Americans influence patterns of African American offending over the life course (e.g., Agnew, 1992)?; 2) Do African Americans have a unique lived experience requiring a race-specific theory to explain offending (Unnever & Gabbidon, 2011)?; 3) Do African American desisters differ from their persisting peers with respect to adult life events and social bonds, as predicted by Sampson and Laub (1993)? 4) Are African Americans more likely to desist if they have multiple stakes in conformity, or the "respectability package," as suggested by Giordano, Cernkovich, and Rudolph (2002)? 5) How might the continued substance use of African Americans into midlife (see Doherty, Green, & Ensminger, 2008; French, Finkbiner, & Duhamel, 2002) impede the processes of desistance (Schroeder, Giordano, & Cernkovich, 2007)?

While there are notable studies that have begun to investigate these types of questions using samples that include African Americans (e.g., Doherty & Ensminger, 2013; Edin, Nelson, & Paranal, 2001; Giordano et al., 2002; Nielsen, 1999; Piquero, MacDonald, & Parker, 2002), we view these questions as "premature," in that they "cannot be approached until a more fundamental base of knowledge exists" (Lieberson, 1985, p. 9) regarding the criminal career patterns of African Americans. This is not to say that there have not been great strides in our understanding of criminal careers over the past 30 years; however, there has yet to be a detailed account of the criminal careers of African American males and females similar to the accounts of whites that expand across the majority of the life course. This basic gap in our knowledge base still exists due to the fact that, to date, there have been no developmental longitudinal studies of offending that focus specifically on African American

males and females and extend into mid adulthood. This lack of detailed data is particularly troubling in light of the findings *suggesting* that African Americans persist in criminal offending longer than whites and therefore, may not follow the typical age-crime curve (Elliott, 1994).

This paper uses official criminal history data spanning ages 17 to 52 from the Woodlawn Study in order to provide a detailed description of the various dimensions of the criminal career for African Americans. The Woodlawn Study is a prospective developmental study of a community cohort of first grade, African American males and females from the Woodlawn neighborhood of Chicago (N = 1,242). Specifically, we ask a series of descriptive research questions: 1) What are the rates of participation and frequency among this cohort of African Americans? 2) What are the rates of serious offending (i.e., violence) among this cohort? 3) What are the criminal career trends with respect to onset, termination, and career length? 4) Is there an association between age of onset and recidivism? 5) What is the shape of the longitudinal patterning of individual-level offending over the life course for this African American cohort? In answering each of these questions, we also consider the importance of differentiating these dimensions by gender.

Data and methods

The Woodlawn Study

The Woodlawn Study is an epidemiological, prospective study focusing on a cohort of African American children and their families. In 1966, nearly all first grade children (N = 1,242; 636 females and 606 males) in Woodlawn, a neighborhood community on the South Side of Chicago, were included in the study (see Kellam, Branch, Agrawal, & Ensminger, 1975). At the start of the study in 1966, Woodlawn was overcrowded with 90,000 people living in an urban area built to house 45,000. While Woodlawn was a community of low to median incomes and high unemployment, it was somewhat economically heterogeneous, including working-class, middle-class, and welfare families due to residential segregation of African Americans at the time. By the 1970s, when the cohort was around 10 years old, the population of Woodlawn had decreased to 54,000 people, remained largely African American (97%), and had the 8th highest percentage of families living below the poverty line (27% as compared with 12% in Chicago). Moreover, at that time, Woodlawn had the highest rate of male juvenile delinquency (Council for Community Services in Metropolitan Chicago, 1975).[2]

In the 1966–67 school year, the cohort was in first grade in the nine public and three parochial schools in Woodlawn. At this time, teachers and mothers (or mother surrogates) reported on the children's social adaptational status, their mental health, and the family and classroom contexts. The cohort was again assessed in adolescence (approximately age 16),

[2]While the Woodlawn Study is well-suited to answer the research questions posed, the subjects comprise a well specified population – all first graders from a specific community in Chicago during a time of segregation (1966) resulting in all of the individuals in the community being from one racial category. Similar to longitudinal studies of all whites or delinquents, this specificity brings the applicability to other populations into question and limits a direct comparison across race. However, taken together with our understanding of offending from other longitudinal data we can begin to construct a more complete picture of long-term criminal offending across populations.

at age 32, and again at age 42 (see Doherty et al., 2008; Ensminger, 1990; Ensminger, Anthony, & McCord, 1997; Fothergill, Ensminger, Green, Robertson, & Juon, 2009; Green, Doherty, Stuart, & Ensminger, 2010; Kellam et al., 1975). Table 1 provides an overview of the cohort characteristics in adulthood with respect to several dimensions of life. In general, by the age 42 interview, this cohort had moved out of Woodlawn but 62% remained in the Chicago area, 40% lived in neighborhoods with a drug and/or gang presence, and one-quarter remained below the poverty threshold.

Official criminal record data

Collecting and coding the criminal records—Criminal records from the Chicago Police Department and the Federal Bureau of Investigation (FBI) were searched for the entire cohort in 1993 and spanned the age of majority (age 17 in Illinois) to age 32. In the 1990s, the criminal history information was coded combining arrests over the 17 to 32 age period. In order to capitalize on the annualized nature of the data, in 2008, with the support of a grant from the National Institute on Drug Abuse, we coded the criminal history data for each age and crime type for ages 17 to 32 from the paper "rap" sheets.[3] In 2012, to supplement the existing data to age 32 (Elder & Taylor, 2009), we received a grant from the Harry Frank Guggenheim Foundation to access the criminal history record information through the Illinois State Police and the Illinois Criminal Justice Information Authority (ILCJA) for the full Woodlawn cohort extending these histories to age 52.[4]

We established extensive coding decisions and schemes similar to those used by Laub and Sampson in coding the Glueck data (Laub & Sampson, 2003). This process began with coding the arrest date, type of arrest charge (up to 3 charges), type and method of disposition, and sentence.[5] We then categorized the charge types based on the Illinois Criminal Code to synthesize the data for analysis. Examples of the crime types include violent (e.g., homicide, assault, rape, and robbery), property (e.g., burglary, larceny, auto theft, fraud, and criminal damage), drug/alcohol offenses (e.g., narcotics, both selling and possession, and driving under the influence[6]) and other offenses (e.g., public order crimes, non-violent sex crimes, and weapons offenses[7]). Total offending is the sum of these four offense types. We exclude all traffic offenses.

[3]The arrest data were entered jointly by two researchers (the first author and a data manager) to ensure reliability in data input.
[4]Since the data collection occurred in two waves, this resulted in two sources of data for ages 17 to 32 for the full cohort. While there was considerable agreement between the two sources for these years, there was not complete overlap. Of the 2,426 arrest incidents occurring by 1993, 62.8% appear in both the original paper rap sheets and the more recent ILCJA electronic files (11.5 % are in the ILCJA electronic file only and 25.7% are in the original paper "rap" sheets or FBI only). All offenses appearing in both files or in either file were included in the criminal histories. For ages 17 to 32, 7.0% of all arrests occurred outside of Illinois and thus, were gleaned from FBI data only. One limitation of the follow-up data (age 33 to 52) is that we were not able to collect information from the FBI. This likely underestimates official offending for ages 33 to 52 as any arrests that occurred outside of Illinois are not included.
[5]We reduced the charge data to include up to three unique and most serious charges in an attempt to achieve an accurate account of offending and to err on the conservative side. As a result, we reduced the number of charges in 6% of arrest incidents in which we thought that separate yet similar charges were part of the same incident. The decision to include up to three charges, as opposed to more or fewer, was based on the fact that 99% of the arrest entries had three or fewer charges per arrest (91% had only one charge).
[6]We include driving under the influence as a drug offense. Driving under the influence of alcohol or another substance is an illegal activity that has serious public health consequences in terms of injury. Moreover, the vast majority of this category includes non-alcohol related offenses with less than 5% of those arrested for a drug offense being arrested for driving under the influence.
[7]Weapons offenses were not included in the violent crime categorization to provide a conservative measure of violence. A weapons offense, while it may be indicative of violence, is not in and of itself violent. These offenses include unlawful use of a weapon as well as violations regarding licensing (e.g., failing to register a firearm) and possession of a weapon.

Creating longitudinal criminal histories—The final step of the coding process included converting the data to represent the number of offense counts by crime type at each age (17 to 52) for each individual. Mortality information was integrated into the longitudinal criminal histories to safeguard against presuming someone had stopped offending who had instead died. Mortality is assessed through searches of the National Death Index (NDI) as well as by corroborating reports of deaths from families and friends (n = 132 as of 2009, 11% of the original cohort).

Among the 565 subjects who were arrested (46% of the original cohort), 35% were sentenced to jail or prison at least once between ages 17 and 52 (20% of the 181 arrested women and 42% of the 384 arrested men). The inclusion of days incarcerated would be ideal to safeguard against underestimating the actual level of offending in any given year (Eggleston, Laub, & Sampson, 2004; Piquero et al., 2001). Unfortunately, we do not have the exact number of days incarcerated at each age. As a proxy, we incorporate the sentencing data from the arrest records into the criminal histories such that a person is considered incarcerated in any year where he or she has zero offenses and is known to have been sentenced to more than one year in prison at that age. Using this strategy, we attempt to reduce the chances of presuming someone has desisted from offending who in fact was incarcerated.[8]

Final sample

Although 568 cohort members were arrested between the ages of 17 and 52, we removed three of those cases due to the extent of conflicting data in the multiple sources of information, leaving a final arrested sample of 565 individuals. Of the 674 with no arrest record, we removed 8 who died before age 17 as well as 14 who self-reported being incarcerated for more than 6 months at the age 32 interview yet had no arrest record, which also represented conflicting data. This left a final sample of 1,217 individuals with valid criminal history information from ages 17 to 52 (565 arrested and 652 not arrested).

Analytic strategy

Adult criminal career dimensions[9]—We estimate the trends in prevalence and seriousness of offending over the life course using the percent arrested at each age for any crime (prevalence) and for violence in particular (seriousness). We estimate the frequency of offending using the mean number of offenses each year among the active offenders (3-year smoothed). Age of onset and age of termination are defined as the age of the first adult arrest (i.e., age 17 or older) and the age of last arrest, respectively. Finally, we estimate the relationship between age of onset and recidivism using conditional probabilities of a second arrest (given a first arrest) by age of onset.

[8]This coding decision resulted in altering 20 percent of the 565 arrested cohort's criminal histories to reflect potential time in prison (N = 114).

[9]Although we are able to map the adult criminal careers of these cohort members, the lack of official juvenile criminal history information precludes inclusion of the early criminal career, including adolescence. Also, these analyses are based on official criminal histories, which introduces the requirement of an official reaction to crime in addition to the commission of a criminal offense. Although the Woodlawn study has self-reported offending data from the adolescent, young adult, and mid-adult interviews, these data are limited in that there is no information on the frequency of offending in each year or on the precise timing of the criminal offenses, two advantages of official criminal records (Weis, 1986).

Long-term offending trajectories—In order to model the long-term patterns of offending from ages 17 to 52, we use a group-based trajectory method. Specifically, we employ the group-based semiparametric mixed Poisson model, which estimates the predicted number of offenses per year at each age for each trajectory group. The semiparametric mixed Poisson model (Jones, Nagin, & Roeder, 2001; Nagin, 1999, 2005) allows a disaggregation of offending trajectories to reveal variability in offending over time and is particularly effective for descriptive purposes. This model assumes that the population is comprised of discrete Poisson distributions with a λ rate of offending resulting in a number of different groups of individuals who demonstrate similar patterns of offending over time. Each developmental trajectory assumes a cubic relationship that links age and offending (Nagin, 2005, p. 33). This type of method is specifically designed to identify and depict discrete groups of individuals who are homogenous in their behavior within their trajectory yet distinct from those following other trajectories (e.g., those who persist through adulthood versus those who desist). As a result, this technique has been used by several criminal career researchers to disentangle the individual level offending trajectories across numerous longitudinal samples (for a review, see Jennings & Reingle, 2012; Piquero, 2008).

Results

Our research questions span several of the common criminal career dimensions, namely participation, frequency, seriousness, onset, career length, and the identification of persisters (e.g., career criminals or chronic offenders) and desisters. While it is informative to highlight the criminal career dimensions of the Woodlawn cohort, it is also important to situate our findings with what is known about the adult criminal careers of offenders among other longitudinal cohorts. Although there is a wealth of knowledge regarding criminal careers from a multitude of longitudinal studies (see e.g., Blumstein et al., 1986; DeLisi & Piquero, 2011; Piquero et al., 2003), we simplify this comparison by focusing on Laub and Sampson's follow-up study of Sheldon and Eleanor Glueck's classic *Unraveling Juvenile Delinquency* study (Glueck & Glueck, 1950; Laub & Sampson, 2003) and Farrington's Cambridge Study in Delinquent Development (CSDD) (Farrington et al., 2013). [10] Although these studies and the Woodlawn study differ with respect to selection into the study, race, and gender, they are similar in their extension into late adulthood (into the 50s and beyond). Moreover, the extent of published information and the impact of the findings on criminological scholarship also make these studies important comparisons when situating our findings.

Participation and frequency

Participation and seriousness—Estimates from the National Longitudinal Survey of Youth 1997 (NLSY97), a national probability sample, show that close to 30% of African American males are arrested by age 18 (29.6%) (including juvenile arrests) with this risk

[10]The Gluecks' delinquent sample is comprised of 500 males selected from two reform schools in Massachusetts, born between 1925 and 1932. Laub and Sampson collected the annual criminal histories and death information for these delinquent boys to age 70 (for more information on the full follow-up effort, see Laub & Sampson, 2003: Chapter 4). The Cambridge Study in Delinquent Development studies 411 males from working class London who were born in 1953. The study has collected conviction records from the Criminal Record Office in London from age 8 to age 56. These convictions typically do not include minor crimes such as traffic violations, drunkenness, or common assault (for more information, see Farrington et al., 2013).

increasing to close to 50% by age 23 (48.9%). Similarly, 11.8% of African American females are arrested by age 18 rising to close to one-fifth arrested by age 23 (18.4%) (Brame, Bushway, Paternoster, & Turner, 2014, p. 6). Although the Woodlawn data does not include juvenile arrests, the corresponding percentages are 46.3% of the males and 14.5% of the females arrested between ages 17 and 23. These percentages increase to 65.2% of the 589 males (n = 384) and over one-quarter of the females (28.8% of the 628 females (n = 181)) arrested at least once by age 52 (see Table 2). Indeed, this 65.2% figure for the Woodlawn males is over twenty percentage points higher than the 42% of the Cambridge men convicted up to age 56 (Farrington et al., 2013, p. 16).

Table 2 highlights these high rates of total arrests as well as the high rates of violence among this cohort with over one-quarter of this community cohort having at least one violent arrest (28.4%; 45.8% of the male cohort and 12.1% of the female cohort). Moreover, 65.3% of those with at least one violent arrest committed multiple violent offenses with 46.0% of the 346 violent offenders being arrested 3 or more times for violence (7.8% had 10 or more arrests) (data not shown).

In general, criminal career researchers have found that participation declines with age; however the timing of the decline varies from sample to sample based on the data used and age range studied (see Piquero et al., 2003). Laub and Sampson report criminal activity among the Glueck delinquent sample that continues well into middle adulthood (30s and 40s) before eventually declining with age. For instance, 65% of the Glueck men (representing a juvenile delinquent sample) were arrested between ages 25 and 31, 60% were arrested between the ages of 32 and 39, and 44% between ages 40 and 49 (see Laub & Sampson, 2003, p. 90). The corresponding percentages for the Woodlawn men are 47% between 25 and 31, 40% between ages 32 and 39, and 29% between ages 40 and 49. While the magnitude of the percentages are lower for the Woodlawn men (representing a community cohort sample), the percent change over the life course is similar; the prevalence in offending from age 25 to 49 declined 32% for the Glueck men compared to a 38% decrease in the percentage of offending Woodlawn men.

Fig. 1 displays the rates of participation in offending by crime type for males and females across the life course. For the males (see Fig. 1a), property crime participation declines from a peak of 27.8% of the male cohort being arrested between the ages of 17 and 21 to 7.5% of the male cohort arrested for a property offense between the ages of 47 and 52. The corresponding percentages for the females are a 7.8% peak between ages 17 and 21 falling to 1.4% of the female cohort arrested for a property offense at some point between the ages of 47 and 52 (see Fig. 1b). For both genders, participation in drug and alcohol offending remains relatively stable; around 10% of the males and 2% of the females were arrested for drug and alcohol crimes at each age across the life course.

These patterns are similar to the Glueck sample of white male delinquents who show a decline in property and stability in drug and alcohol offending into midlife (see Laub & Sampson, 2003, p. 90). However, unlike the Glueck sample who decline precipitously in their rates of violent crime participation (from 33% between 17 and 24 to 16% between 25 and 31) (Laub & Sampson, 2003, p. 90), violence trends among the Woodlawn men show a

steady to increasing pattern from the early 20s into the 30s before falling to close to 20% of the males from this community cohort arrested for violence into their mid-30s. In fact, the prevalence rates of property and violence are similar throughout the 20s and 30s for the Woodlawn men (see Fig. 1a). Violence among the females also shows a steady rate even farther into adulthood (throughout the 40s) with approximately 3% of the cohort arrested for violence between ages 17 and 41 before falling to below 1% by age 52 (see Fig. 1b).

Moreover, with respect to violence (a measure of seriousness of offending), 70% of the 384 male offenders were arrested for a violent crime, which is comparable to the 75% arrested for a property offense (data not shown). Importantly, the male violent offenders (n = 270) are responsible for 90% of all of the male cohort's arrests and are also likely to be violent recidivists with the majority of violent males having three or more violent arrest incidents (52.6%). Among the violent female offenders (n = 76), the majority have only one violent arrest incident (52.6%) with over three-quarters arrested once or twice for violence (77.6%); yet these 76 female violent offenders are responsible for 77% of all of the female cohort's arrests (data not shown).

Participation and frequency—One core debate about deciphering the relationship between age and crime is whether the age-crime curve reflects a decline in participation or a decline in frequency of offending. Prior research into late adulthood has found that while participation declines in late adolescence, active offenders continue to offend at high rates into adulthood (see Laub & Sampson, 2003). Fig. 2 depicts a comparison of participation and frequency of total offending by gender. Fig. 2a clearly shows stability in participation into the early 30s before declining precipitously into mid-adulthood for the males; among the active offenders, the mean number of offenses committed (i.e., frequency, 3-year smoothed) remains stable throughout adulthood. In contrast, the female age-crime curve appears to be driven by both participation and frequency (see Fig. 2b). Females peak in participation in the early 30s before declining while the frequency of offending increases to the mid-40s before declining.

Another "fact" in criminology is that a higher percentage of males participate in crime than females. However, there is more limited evidence of male to female estimates of frequency of offending, which shows a lower differential in rates of offending than in participation (see Piquero et al., 2003). Yet, again, it is unclear how these ratios are similar or different for African Americans followed across the life course. Fig. 3 depicts the ratio of males to females by age with respect to both participation and frequency for the Woodlawn cohort. What is clear from this figure is that, with respect to participation, males are arrested at much higher rates throughout their 20s than their female counterparts (between 4:1 and 5:1). However, looking across the full life course, the trend reveals that this differential in participation falls to a ratio of 2:1 in the early 30s through mid-40s. This change in trend could be driven by the change in types of offenses committed, as some researchers have found larger male to female differentials in participation among more serious offenses (see Piquero et al., 2003, p. 419–421). Interestingly, the ratio of males to females with respect to frequency is stable with males offending at a rate twice that of females throughout adulthood. Thus, the gender differential in the Woodlawn cohort seems to be driven by differences in participation, yet this differential is limited to early adulthood.

Age of onset, termination, and career length

The age of onset of antisocial behavior is one of the most studied criminal career dimensions due, in part, to the fact that the age of onset has been closely linked with the seriousness and frequency of offending (Farrington et al., 1990). Thus, the issue of recidivism and its relationship to age of onset is important to consider as research shows that an earlier onset of offending is associated with a higher probability of recidivism (e.g., Wikstrom, 1990). However, an in-depth investigation of onset of offending is complicated by the fact that this analysis is based on adult official records only. Thus, it is assumed that most if not all of the offenders had an "onset" of offending before first being arrested. With that said, there is still much to be learned about the age of "onset" and subsequent offending, defining "onset" as the age of first adult arrest.

For the Woodlawn sample, the age of onset of adult arrest peaks at age 17 for property crimes and 23 for violent and drug/alcohol crimes with an overall mean age of first adult arrest for all offenses of 22.07 for males and 25.55 for females (see Table 3). With respect to age of termination, research to date has found careers ending by the 30s and little variation by race (Piquero, Brame, & Lynam, 2004). These estimates vary based on the type of sample (serious offenders vs. general population), type of data (self-report vs. official) and length of follow-up. As mentioned earlier, offending continues later into adulthood for the Woodlawn community cohort than expected from studies of white offenders (see Fig. 1). For instance, while the majority of arrest incidents occurred before age 32 for the Woodlawn cohort (59.9%), 40.1% of the arrest incidents occurred after age 32, an age when many believe desistance has already occurred. Moreover, females are more likely to extend their criminal careers into midlife with 47.0% of the arrest incidents occurring after age 32 compared with 38.6% of the male arrest incidents ($X^2 = 20.26$, $p < .001$). The later ages of termination is apparent for all crime types with the average age of last arrest ranging from the early to late-30s for both genders (see Table 3).

The average adult criminal career length for those with at least 2 arrests is over 18 years for males and close to 15 years for females (see Table 3), which is on the longer end of prior estimate ranges (see Piquero et al., 2003, p. 446). Moreover, the career lengths tend to be evenly distributed for both males and females, ranging from one year to 36 years with less than 5% of the offenders in each of the career length categories (data not shown). Crime type comparisons by gender indicate longer careers for the males, especially for violent careers which are close to twice as long as the female violent careers, on average (10.32 years for males and 5.88 years for females) (see Table 3).

Fig. 4 reports the conditional probabilities of being arrested a second time given a first adult arrest for males and females separately and broken down by age of onset group.[11] One stark finding is the amount of re-arrest that occurs among the male cohort with 94% of the males first arrested at age 17 incurring a second arrest; this percentage falls to 80% for those with a first arrest at age 23 and falls again to close to 50% as the age of first arrest increases into the 30s. Thus, while delaying a first adult arrest for these males is associated with a lower

[11]We omitted the age of onset groups 37–41, 42–46, and 47–52 due to low numbers of cases who onset at those ages.

probability of a subsequent arrest, as evidenced by the consistent decrease in recidivism probability with age of first adult arrest, close to half of those first arrested as late as in their 30s experience a second arrest. This pattern is consistent with the Cambridge men whose probability of recidivism decreases from 91% among those with a pre-adolescent onset but remains around 40% among those with a first conviction in their 30s, 40s, and 50s (Farrington et al., 2013, p. 21).

In contrast to the males, the pattern of recidivism probability by age of first adult arrest for the females is more stable across age of onset with the probability of recidivism hovering around 60% to 70% (see Fig. 4).[12] Thus, for females in particular, delaying a first adult arrest might do little to alter the probability of being arrested a second time.

Long-term adult trajectories of crime

To examine the developmental unfolding of persistence and desistance of offending over time, we construct a detailed mapping of individual trajectories by age across the life course, adjusted for death and incarceration. Based on model diagnostics[13] and parsimony, the five group model was selected to best describe the adult offending patterns for this community cohort of African American males and the three group model was selected to best represent the offending patterns of the females (age 17 to 52) (see Fig. 5).

Fig. 5a shows that the majority of the males were classified as low-rate desisters (32.0%) or non-offenders (44.0%), based on these official records. The remaining three groups, while they all decline in their offending by the 40s, vary in their patterns of decline with two persistent groups (one high-rate and one low-rate) still offending into their 50s. The final group is labeled high-rate desisters who begin their adult career with an offending level similar to the high-rate persisters yet who reach a near zero rate of offending by age 40. The small group of high-rate persisters and the large groups of low-rate and non-offenders is consistent with past findings (e.g., Piquero, 2008). In fact, although they are labeled somewhat differently,[14] the trajectory groupings for the Woodlawn men are quite similar to those from the Glueck delinquent sample and the Cambridge men with similar trajectory patterns for the desisters and high-rate and low-rate persisters (see Farrington et al., 2013, p. 45; Laub & Sampson, 2003, p. 104). The major difference is that the Woodlawn high-rate persisting men, in particular, offend at a *lower* magnitude than the high-rate chronic group among the Glueck sample of white male juvenile delinquents and at a *higher* magnitude than the high-rate chronic group among the Cambridge men from working-class London.

The vast majority of the females were classified as non-offenders (82.5%), based on these official records (see Fig. 5b). Among the offenders, 13.8% display low rates of offending

[12]It should be noted that these probabilities from ages 17 to 34 for the females are based on smaller numbers with an average of 8 new female offenders at each age (range: 3 – 20) compared to an average of 20 new male offenders at each age (range: 4 – 91).

[13]We assess several diagnostics, such as the Bayesian Information Criterion (BIC), the average posterior probability of assignment, a comparison between the group probabilities and sample proportions, and the odds of correct classification (OCC) described by Nagin (2005) to better assure we select a model that is adequately capturing the heterogeneity in the sample. For both the males and females, the group population and sample proportion were similar, the average posterior probabilities were relatively high (ranging from .88 to .97), and the odds of correct classification were above the recommended number five.

[14]However, it should be noted that these group labels are not meant to reflect groups that occur in reality and are assigned relative to other groups in this male cohort. For instance, the label “high-rate persister” is relative to others in this male cohort.

throughout the life course before falling to near zero by age 52, leaving a small percentage of high-rate persistent or “chronic” offenders (3.7%).

Discussion

A major goal of this paper is to further build the knowledge base of criminal careers by providing a detailed descriptive account of the offending careers of a community cohort of African Americans. Overall, we found both similarities and differences between the criminal career patterns of existing published studies and the Woodlawn cohort. For instance, based on these official records spanning adult arrests into midlife, we found rates of participation similar to those for African Americans from national probability sample estimates. However, the offending patterns of this cohort show an elongated age-crime curve with offending extending well past the teens and early 20s. In fact, a substantial and stable proportion of this cohort was engaged in both property and violent offending into their 30s with the violent offenders responsible for a large majority of all arrests for both genders. This finding is in contrast to the current contention based on largely white samples that “the incidence of violence is rare in one’s criminal career except for a small group of chronic offenders who are responsible for a majority of the violent offenses” (Piquero, Jennings, & Barnes, 2012, p. 171). It is also in contrast to the trends revealed in the Pittsburgh Youth Study, which show a decline in the 20s for violence. However, the published data on the Pittsburgh study do not separate trends by race and do not extend the analysis into midlife. Moreover, although we found gender differences in the patterns of participation, as expected, further analysis indicated that this gender differential is driven by participation as opposed to frequency and limited to early adulthood.

Finally, despite the extension of criminal activity further into the life course than seen in other samples, the developmental trajectory patterns of offending for males were surprisingly similar to those found among other longitudinal samples into midlife or beyond of both whites (e.g., Laub & Sampson, 2003) and Hispanics (Jennings et al., 2013). In fact, in a review of over 80 empirical studies, Piquero finds that “on average, between three and five groups tend to be identified by trajectory methodology” (2008, p. 49) and that “generally, there tends to be a low-rate group, a high rate group, a moderate but declining group, and a late onset group” (2008, p. 49–50) (see also Jennings & Reingle, 2012). These groupings are somewhat similar to the patterns identified by the group-based trajectory method among the Woodlawn males, in particular. In sum, these descriptive analyses contribute to the larger body of knowledge regarding the relationship between age and crime and the unfolding of the criminal career for African American males and females.

Theoretical and policy implications

One rationale for systematically identifying these patterns is to inform theory and policy regarding African American offending and ultimately to understand the similarities and differences we find. Research on criminal careers guides theoretical questions and developments. In essence, it provides “a way of structuring and organizing knowledge about certain key features of offending” (Blumstein et al., 1988, p. 4) that result from the social context of both the criminal justice system and the overall structure of society. As a result, in

the 1990s, several theories were developed to highlight the importance of the relationship between age and crime. In light of the findings from the Woodlawn cohort depicting the descriptive longitudinal patterns of African Americans, we can begin to think about the applicability of these life-course and developmental theories to African American offending over the life course.

To begin, our findings have implications on understanding variation in the age-crime curve. Hirschi and Gottfredson (1983) assert that the age-crime curve is invariant, meaning that the same curve depicts a range of deviant behaviors across time, space, and social context resulting in age having a direct effect on crime through maturation (see also, Laub & Sampson, 2001). In 1994, Elliott's analysis of the National Youth Survey revealed that the trends for black males, while decreasing in the early twenties, showed an increase in the mid-twenties that continued into the early thirties (Elliott, 1994, p. 5–7). In line with Elliott (1994), the findings from this study indicate that offending among this African American cohort continues well beyond the late teens and early twenties, as the age-crime curve among whites would predict, not declining until the mid-thirties. Thus, among African American offenders, the question becomes, how can life-course and developmental theories, which are based on the relationship between age and crime, fit this "fact"?

One prominent developmental theory stemming from the relationship between age and crime is Moffitt's dual taxonomy theory (Moffitt, 1993), which predicts the existence of a group of abstainers (i.e., non-offenders) along with two distinct groups of offenders with different criminal career trajectories and different typology-specific etiologies. The first offending typology is comprised of a small group (5%) of life course persisters. These offenders continue to offend throughout the life course and tend to be more serious offenders. The second offending typology comprises adolescent-limited offenders who begin their offending around puberty and desist upon reaching adulthood. This group consists of the remaining 95% of offenders. These adolescent-limited offenders desist once they achieve adult status and their crimes tend to be more trivial.

In line with Moffitt's theory, the age and crime patterns in this study revealed a small percentage of high-rate persistent offenders among the Woodlawn cohort of African Americans. However, one-fifth of the males were arrested for violence through age 36, which matched the participation rates of property offending. One contingency in Moffitt's theory is that not all adolescent limited offenders will desist as expected due to becoming ensnared by the consequences of crime. Given that African Americans have high rates of arrest and incarceration (e.g., Brame et al., 2014) and do not tend to age out of substance use similarly to whites (French et al., 2002), future research could investigate the role of the criminal justice system and drugs in exacerbating criminal offending among African Americans and in delaying or derailing desistance (see also Schroeder et al. 2007). Indeed, among the males, a preliminary investigation into the bivariate associations between the offending trajectory groupings (see Fig. 5a) reveals that the two persister groups (high-rate and low-rate) were the most likely to have a drug abuse diagnosis at age 42 (25% and 40%, respectively) compared with approximately 20% of each desister group and 5% of the non-offenders (data not shown).

A second prominent life course theory that is grounded in the relationship between age and crime is Sampson and Laub's age-graded theory of informal social control (1993), which draws on the life-course framework (see Elder, 1985) and Travis Hirschi's social control theory (Hirschi, 1969). Using data from the Gluecks original *Unraveling Juvenile Delinquency* (1950) sample of 500 juvenile delinquent males, Sampson and Laub found that persistence in crime is a result of criminal propensity and the severance of adult social bonds while desistance occurs due to the development of stakes in conformity, stemming from salient adult life events (e.g., marriage, employment).

Applying this theory to the criminal career patterns identified in this study, the delay in the decline in offending, in the aggregate, could be a result of a lack of opportunities for or delays in marriage and employment. For instance, African Americans are less likely to marry and, if they do, they are more likely to marry later in the life course (Dixon, 2009). Thus, although research has found that marriage is related to individual-level desistance from offending for African Americans, males in particular (Doherty & Ensminger, 2013), the low rates and delay in marriage, in the aggregate, may influence the criminal career patterns of African Americans, extending their criminal careers to later in the life course. Could "age" in the "age-crime" curve refer less to chronological age and more to the age at which opportunities are available and key social roles are achieved? In line with this rationale, we conducted a preliminary bivariate test to investigate the association between marriage and employment at age 42 with the male trajectory groups in Fig. 5a (data not shown). The two desister groups were more likely to be currently married and employed with close to 35% married and 75% employed when compared with the high-rate persister group (17% married and 35% employed) and the low-rate persister group (25% married and 64% employed).

With respect to policy, this study is consistent with the notion of criminal justice epidemiology and the efforts to strengthen "research connections between the fields of criminal justice and public health to inform evidence-based criminal justice practice" (Vaughn, DeLisi, Beaver, Perron, & Abdon, 2012, p. 165). Specifically, the consistent finding of a small group of high-rate persisters (for the men in particular) highlights the policy implication that, if possible, resources might be best utilized if targeted to these high-rate persisters through both criminal justice and public health interventions (see Vaughn, Salas-Wright, DeLisi, & Maynard, 2014). Of course, the success of these efforts hinges on overcoming the challenge of accurately (and prospectively) predicting the long-term trajectories of continuity and change (Sampson & Laub, 2003).

Conclusion

Overall, the Woodlawn Study provides data from an epidemiologically-defined community cohort of urban African American males and females with over 35 years of criminal history data (ages 17 to 52). The initial study included virtually all children in first grade (only 13 families did not participate), resulting in little selection bias. In this study we have described the criminal career patterns of these African Americans, compared the findings to existing evidence on criminal careers, introduced the idea that these findings somewhat cast doubt on

the traditional understanding of the age-crime curve, and have situated the findings within existing life-course and developmental theories.

Future research should focus on replicating these findings as existing longitudinal study participants of mixed races, ethnicities, and genders age. There is great value in understanding crime among a variety of high-risk and select samples to provide an in-depth evaluation of criminal careers among a variety of different populations. While nationally representative samples contribute to the larger picture, one would not rely on a national average weather report when traveling to a certain location. Thus, we would like to emphasize that in order to advance our foundational understanding of age and crime across the full life course, for minorities and females in particular, existing longitudinal studies that include both national and special population samples need to be financially supported to extend beyond the 30s. Then, research can begin to expose how current theories that incorporate age and crime can (or cannot) explain the criminal careers of offenders across a variety of demographic categories.

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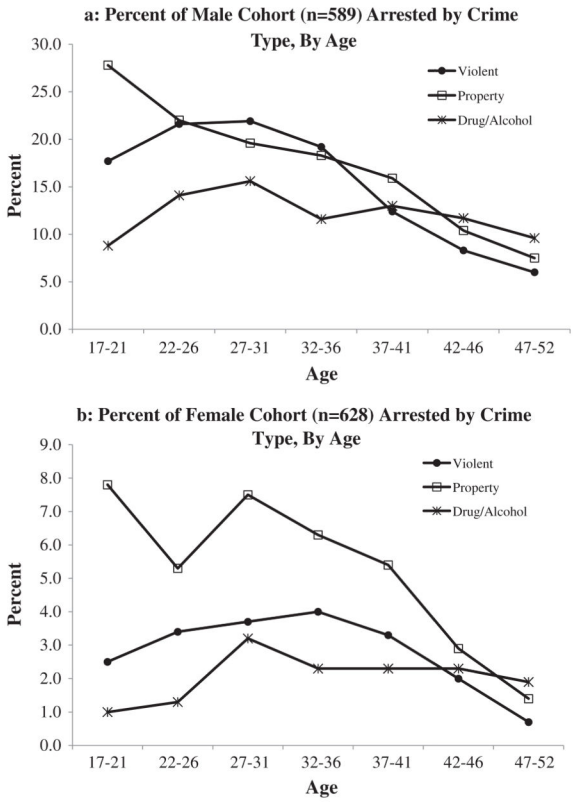

Fig. 1.
Participation by Gender and Crime Type.

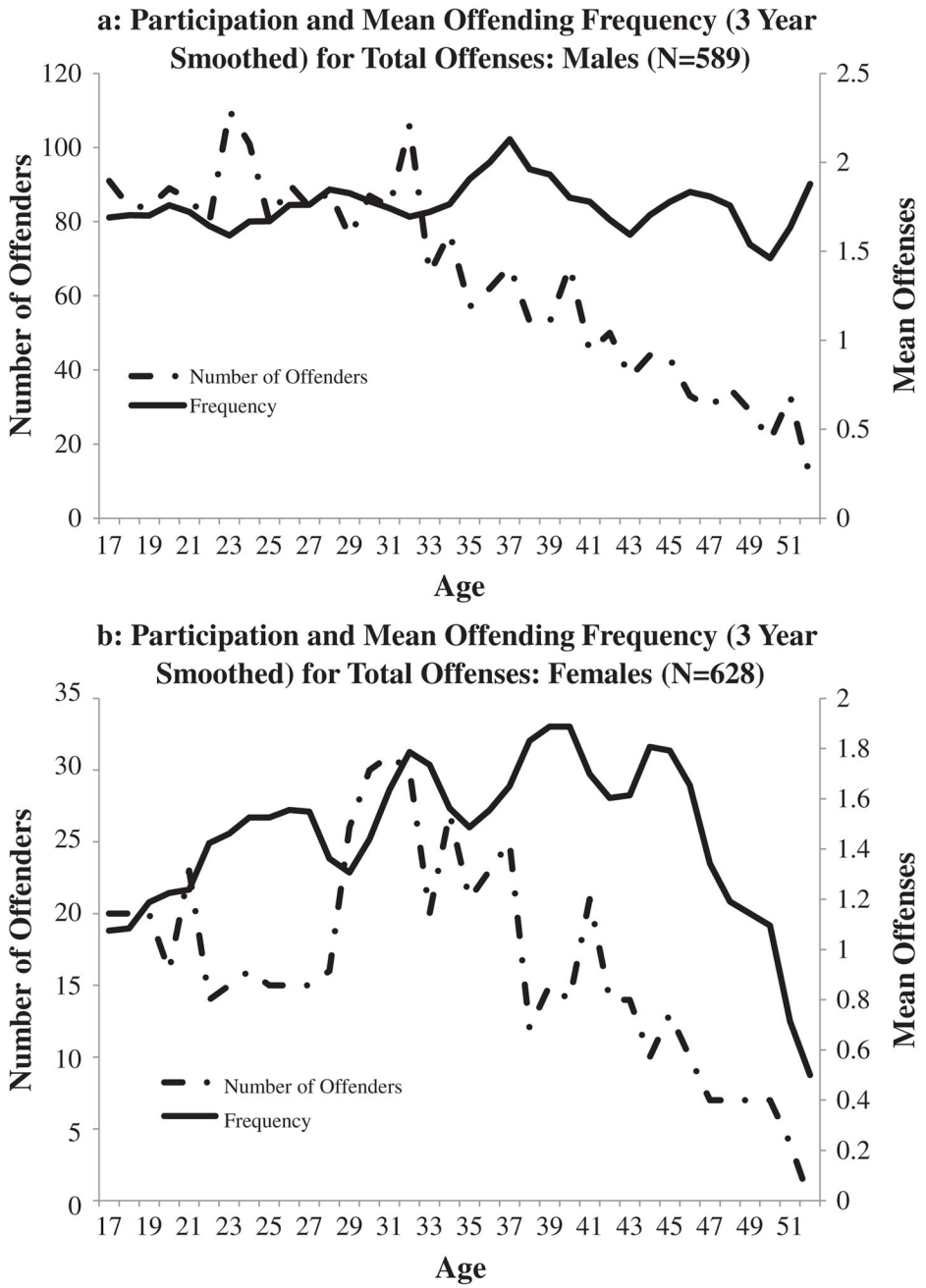

Fig. 2.
A Comparison of Participation and Frequency of Total Offending, by Gender.

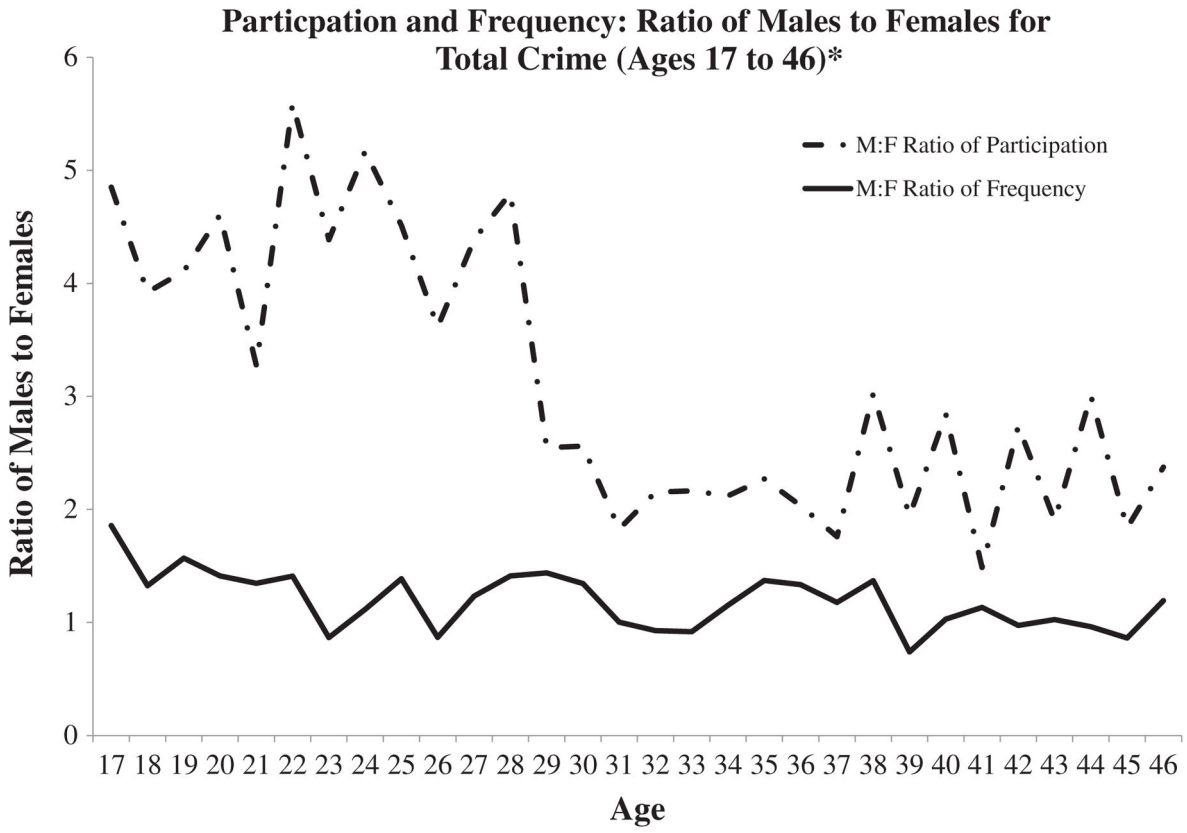

Fig. 3.

Participation and Frequency: Ration of Males to Females for Total Crime (Ages 17 to 46)*.

*These estimates to do not extend to age 52 due to the number of female offenders falling below 10 offenders, producing unstable results.

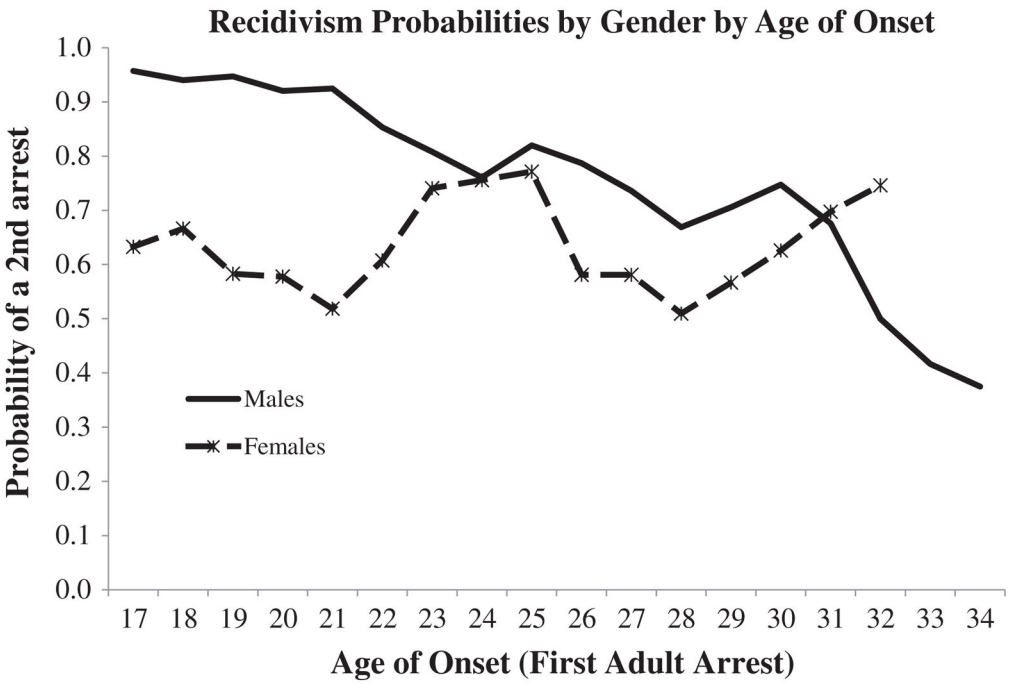

Fig. 4.
Recidivism Probabilities by Gender by Age of Onset.

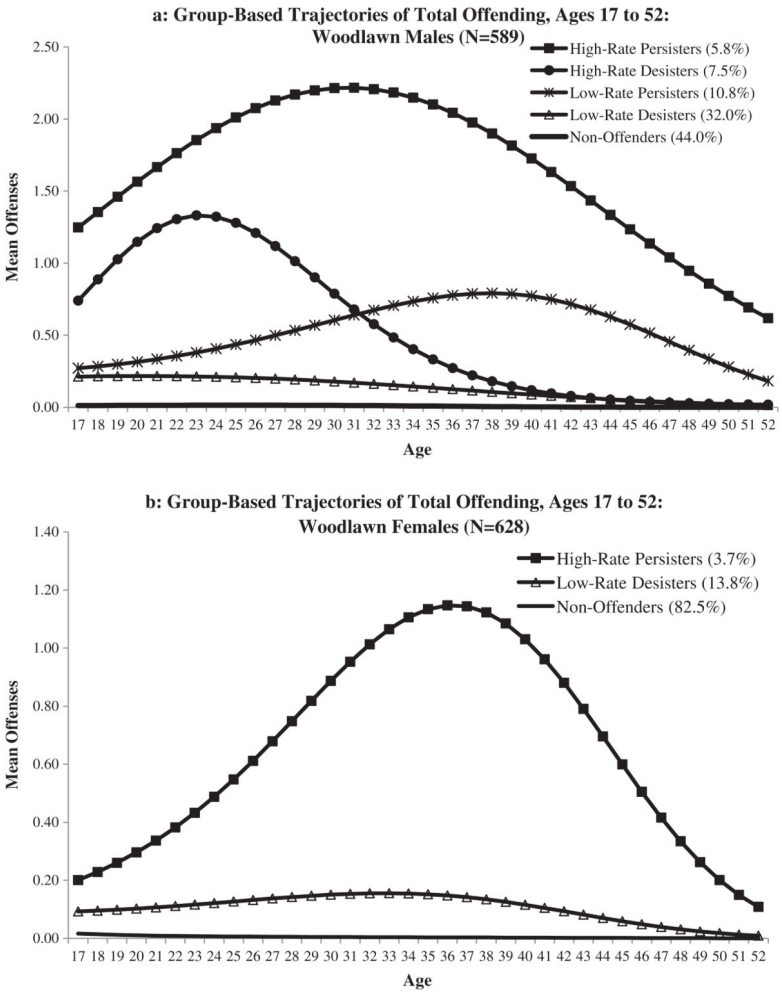

Fig. 5.
Group-Based Trajectories of Total Offending: Ages 17 to 52, by Gender.

Table 1

Description of Woodlawn respondents at ages 32 and 42 from self reports

	Early Adulthood (age 32, 1992) n = 952, 47.9% males	Mid-Adulthood (age 42, 2002) n = 833, 44.9% males
Current residence:		
Within Woodlawn	9.3%	6.5%
In Chicago Area	75.0%	61.8%
Outside Chicago	15.7%	31.7%
Neighborhood environment:		
Drug trafficking moderate to heavy	61.9%	40.1%
Gang presence	66.3%	41.5%
Currently married or cohabiting	35.8%	41.7%
Completed high school	79.7%	81.6%
Employed in the last week	63.1%	73.7%
Below Federal poverty threshold	38.9%	25.6%

Table 2

Particpation and frequency of offending by crime type

	Total Cohort (n = 1217)			Males (n = 589)			Females (n = 628)		
	%	Mean (sd)[a]	Range	%	Mean (sd)[a]	Range	%	Mean (sd)[a]	Range
Total	46.4	8.84 (12.70)	1 to 93	65.2	10.68 (13.87)	1 to 93	28.8	4.94 (8.57)	1 to 83
Violent	28.4	3.73 (4.48)	1 to 32	45.8	4.17 (4.89)	1 to 32	12.1	2.16 (1.19)	1 to 10
Property	33.9	5.13 (8.11)	1 to 80	49.1	5.73 (8.08)	1 to 56	19.6	3.73 (8.02)	1 to 80
Drug/Alcohol	23.7	3.03 (3.02)	1 to 20	39.6	3.24 (3.24)	1 to 20	8.9	2.13 (1.61)	1 to 7

[a]The mean and standard deviation are assessed among those arrested for that crime type.

Table 3

Adult criminal career onset, termination, and length by crime type

	Males (n = 384)			Females (n = 181)		
	Mean Age of First Arrest	**Mean Age of Last Arrest**	**Mean Career Length[a]**	**Mean Age of First Arrest**	**Mean Age of Last Arrest**	**Mean Career Length[a]**
Total	22.07	36.88	18.48	25.55	33.55	14.81
Violent	25.07	34.00	10.32	28.84	32.96	5.88
Property	23.27	33.31	11.96	25.81	32.00	10.40
Drug/Alcohol	28.46	36.68	9.91	32.41	38.05	7.72

[a]Career length is calculated for those with at least two offenses, n = 324 for males; n = 103 for females.