A Life-Course View of the Development of Crime

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In this article, the authors present a life-course perspective on crime and a critique of the developmental criminology paradigm. Their fundamental argument is that persistent offending and desistance—or trajectories of crime—can be meaningfully understood within the same theoretical framework, namely, a revised age-graded theory of informal social control. The authors examine three major issues. First, they analyze data that undermine the idea that developmentally distinct groups of offenders can be explained by unique causal processes. Second, they revisit the concept of turning points from a time-varying view of key life events. Third, they stress the overlooked importance of human agency in the development of crime. The authors' life-course theory envisions development as the constant interaction between individuals and their environment, coupled with random developmental noise and a purposeful human agency that they distinguish from rational choice. Contrary to influential developmental theories in criminology, the authors thus conceptualize crime as an emergent process reducible neither to the individual nor the environment.

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In this article, we argue for a life-course perspective on trajectories of crime, focusing on the question of whether (and why) adolescent

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delinquents persist or desist from crime as they age across the adult life course. The growing tendency in developmental perspectives on crime, often called "developmental criminology," is to subdivide the offender population and assume different causal influences at different stages of the "criminal career." For example, it is now commonplace to assert that certain childhood factors uniquely explain persistent adult offenders, whereas another set of causal factors explain desistance in adolescence. A variation on this theme is that a small group of offenders continue to commit crimes at a persistently high rate as they grow older. In direct contrast, another view posits an "invariant" effect of age—that regardless of stable between-individual differences, all offenders will commit fewer crimes as they age.

Although at first it may seem counterintuitive, our fundamental argument is that persistent offending and desistance—and hence trajectories of crime—can be meaningfully understood within the same theoretical framework. We do not argue that offender typologies are without merit, and in fact some of our analysis will estimate group-based trajectories of crime. Rather, our strategy is to start with the assumption of generality and see how far it takes us in understanding patterns of criminal offending across the full age range of the life course. We explore this logic in five sections, beginning with a summary of results from our prior research. This work serves as our point of departure for new analyses and theoretical reflection on key issues in life-course criminology. We specifically review, albeit in brief, the main results from *Crime in the Making: Pathways and Turning Points through Life* (Sampson and Laub 1993) and the more recent *Shared Beginnings, Divergent Lives: Delinquent Boys to Age 70* (Laub and Sampson 2003) that bear most directly on this article. We then take on three major issues.

1. A life-course view of the idea of developmentally distinct groups that have unique causes. Here we revisit our position on typologies of crime, focusing on the dual taxonomy theory of Moffitt (1993) with the goal to identify points of agreement and disagreement. We present new analyses on the predictability of age at desistance and the life-course trajectory of crimes that are minor in nature. According to Moffitt (1993, 1994, forthcoming), to assess the validity of a life-course persistent versus adolescent-limited typology of offenders one must consider a sufficiently broad range of criminal and antisocial behaviors. We agree. We also concur that offender trajectory groups are of continuing analytic value and that there *are* men who offend at a high rate in adulthood. The main points of disagreement appear to be that (1) we find life-course desistance is the norm for all men and all crimes, including minor forms of deviance; and (2) we question the *prospective* or predictive power of offender groups and whether they are causally distinct with respect to later trajectories.

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2. A revised life-course view of turning points. Unlike unusual events (e.g., Great Depression, war), many events are frequently recurring—people move in and out of various states over the life course in a repeated events fashion. We ask, How is this fact reconciled with the notion of long-term "development" or "growth"? We observe that developmental theory works well with many phenomena—the question here is what about crime and its time-varying predictors? We use marriage as a prime example and highlight results of work in progress that attempts to estimate the causal effects of marriage on crime. We find that conditioning on long-term histories of both outcome and treatment, the *same* man exhibits lower rates of crime in the state of marriage compared to not being in the state of marriage. We discuss how this finding fits a developmental theory of crime and the general idea of turning points.

3. A life-course view that takes human agency seriously. Developmental criminology, in practice if not in theory, tends to emphasize the notion that people get "locked" into certain trajectories. One of the lessons of prospective longitudinal research is that there is considerable heterogeneity in adult outcomes that cannot be predicted in advance. In this section, we highlight a life-course view that emphasizes human agency and choice over the life span, underscoring how people construct their lives within the context of ongoing constraints. From this view, trajectories are interpreted not from a lens of unfolding inevitability but rather continuous social reproduction. We want to ask the hard question of how men with a criminal past go about prospectively *creating* their own trajectories.

The final section of the article considers the implications of these findings and theoretical reflections for the conception of development generally and life-course criminology in particular.

Crime in the Making and the Origins of Life-Course Criminology

Unraveling Juvenile Delinquency, along with subsequent follow-ups conducted by Sheldon and Eleanor Glueck of the Harvard Law School, is one of the most influential research projects in the history of criminological research (Glueck and Glueck 1950, 1968). The Gluecks' data were derived from a three-wave prospective study of juvenile and adult criminal behavior that began in 1940. The research design involved a sample of five hundred male delinquents aged ten to seventeen and five hundred male nondelinquents aged ten to seventeen matched case by case on age, race/ethnicity, IQ, and low-income residence in Boston. Extensive data were collected on the one thousand boys at three points in time—ages fourteen, twenty-five, and thirty-two. Over the period 1987 to 1993, we reconstructed, augmented, and analyzed these longitudinal data that, owing to the Gluecks' hard work over many years, are immensely rich and will likely never be repeated given modern institutional review board restrictions (e.g., wide-ranging interviews with

teachers, neighbors, and employers; detailed psychiatric and physical assessments; extensive searches of multiple agency records).

In *Crime in the Making*, we developed a theoretical framework to explain childhood antisocial behavior, adolescent delinquency, and crime in early adulthood. The general organizing principle was that crime is more likely to occur when an individual's bond to society is attenuated. Our analysis of the causes of delinquency shared much in common with the focus in classical control theory (Hirschi 1969) on adolescence, but the reality of later life-course milestones required us to develop a modified theoretical perspective. After all, the transition to young adulthood brings with it new social control institutions and potential turning points that go well beyond adolescence. We thus developed an *age-graded* theory emphasizing informal social controls that are manifested in shifting and possibly transformative ways as individuals age (see Sampson and Laub 1993). For example, we focused on parenting styles (supervision, warmth, consistent discipline) and emotional attachment to parents in childhood; school attachment and peers in adolescence; and marital stability, military service, and employment in adulthood. Although these are manifestly distinct domains that are age graded, we argued that there are higher-order commonalities with respect to the concept of social connectivity through time.

Stability and change in criminal behavior over the life course

The delinquents and nondelinquents in the Gluecks' study displayed considerable between-individual stability in crime and many problematic behaviors well into adulthood. This stability held independent of age, IQ, ethnicity, and neighborhood SES. Indeed, delinquency and other forms of antisocial conduct in childhood were strongly related to troublesome adult behavior across a variety of experiences (e.g., crime, military offenses, economic dependence, and marital discord). But why? One of the mechanisms of continuity that we emphasized was "cumulative disadvantage," whereby serious delinquency and its nearly inevitable correlates (such as incarceration) undermined later bonds of social control (such as employability), which in turn enhanced the chances of continued offending (see also Sampson and Laub 1997).

At the same time, we found that job stability and marital attachment in adulthood were significantly related to *changes* in adult crime—the stronger the adult ties to work and family, the less crime and deviance among both delinquents and nondelinquent controls. We even found that strong marital attachment inhibits crime and deviance regardless of that spouse's own deviant behavior and that job instability fosters crime regardless of heavy drinking. Despite differences in early childhood experiences, adult social bonds to work and family thus had similar consequences for the life-course trajectories of the five hundred delinquents and five hundred nondelinquent controls. These results were consistent for a wide variety of crime outcome measures, control variables (e.g., childhood antisocial behavior and individual-difference constructs), and analytical techniques ranging from

methods that accounted for persistent unobserved heterogeneity in criminal propensity to analyses of qualitative data.

Taken as a whole, these findings suggested to us that social ties embedded in adult transitions (e.g., marital attachment, job stability) explain variations in crime unaccounted for by childhood propensities. This empirical regularity supports a dual concern with continuity and change in the life course. A fundamental thesis of our age-graded theory of informal social control was that whereas individual traits and childhood experiences are important for understanding behavioral stability, experiences in adolescence and adulthood can redirect criminal trajectories in either a more positive or more negative manner. In this sense, we argue that all stages of the life course matter and that "turning points" are crucial for understanding processes of adult change. Drawing on the life-course paradigm (Elder 1985), we conceptualized a turning point as an alteration or deflection in a long-term pathway or trajectory that was initiated at an earlier point in time (see also Rutter 1996).

Shared Beginnings, Divergent Lives: An Overview

Crime in the Making raised many unanswered questions, and in its concluding chapter we highlighted directions for future research and theoretical development that appeared fruitful. Two of these directions seemed especially relevant for developmental/life-course theories of crime, namely, the merging of quantitative and qualitative data and further understanding of age and crime (Sampson and Laub 1993, 251-53). For example, what about crime in middle age? Older age? Is there really such a thing as a lifelong career criminal—or what have been dubbed "life-course persisters" (LCPs)? If so, can this group be prospectively identified? Another set of questions turned on the use of qualitative narratives to delve deeper into a person-based exploration of the life course. Can narratives help us unpack mechanisms that connect salient life events across the life course, especially personal choice and situational context? In our view, life-history narratives combined with quantitative approaches can be used to develop a richer and more comprehensive picture of why some men persist in offending and others stop. We made moves toward a narrative-based inquiry in *Crime in the Making* but were forced to rely on the Gluecks' written records rather than our own original interviews.

These motivations led us to follow up the Glueck men to the present. Our study involved three sources of new data collection—criminal record checks (local and national), death record checks (local and national), and personal interviews with a sample of fifty-two of the original Glueck delinquents. The sample of men to interview was strategically selected to ensure variability in trajectories of adult crime. More specifically, using criminal history records we classified eligible men into strata that reflected persistence in crime, desistance, and "zigzag" offending patterns, including late desistance and late onset of violence (see Laub and Sampson 2003, chap. 4, for more details). The combined data represent a roughly fifty-year window from which to update the Glueck men's lives at the close of the twentieth

century and connect them to life experiences all the way back to early childhood. We believe these data represent the longest longitudinal study to date in criminology of the same men. The following sections briefly summarize the key findings.

Age and crime

Our analyses showed that, on one hand, the aggregate age-crime curve is not the same as individual age-crime trajectories, lending apparent support to one of the major claims of the criminal career model. There is enormous variability in peak ages of offending, for example, and age at desistance varied markedly across the Glueck men (Laub and Sampson 2003, chap. 5). On the other hand, we found that crime declines with age even for active offenders and that trajectories of desistance cannot be prospectively identified based on typological accounts rooted in childhood and individual differences. That is, offenses eventually decline for all groups of offenders identified according to extant theory and a multitude of childhood and adolescent risk factors. Whether low IQ, aggressive temperament, or early onset of antisocial behavior, desistance processes are at work even for the highest-risk and predicted life-course persistent offenders. While prognoses from childhood factors such as these are modestly accurate in predicting stable differences in later offending, they did not yield distinct groupings that were valid prospectively for troubled kids. Not only was prediction poor at the individual level, our data raised questions about the sorts of categorically distinct groupings that dominate theoretical and policy discussions (e.g., "life-course persistent offender," "superpredator"). These groupings tended to wither when placed under the microscope of long-term observation (Laub and Sampson 2003, chap. 5; Sampson and Laub 2003).

We thus concluded that a middle-ground position was necessary in the criminal careers debate—yes, there is enormous variability in individual age-crime curves such that it renders the aggregate curve descriptive of few people, and yes, age has a direct effect on offending such that life-course desistance is the more accurate label. We believe this compromise position, which we subject to further testing in this article, has general implications for assessing key assumptions of developmental criminology and rethinking its conceptual meaning.

Mechanisms of desistance

A second goal of our book was to exploit life-history narratives to better understand patterns of stability and change in offending over the life course. In our narrative interviews, we asked the men to describe turning points in their life. We also had the men fill out life-history calendars so that we could more accurately determine the sequencing of major life events. Several turning points were implicated in the process of desistance from crime, including marriage/spouses, military service, reform school, work, and residential change. The mechanisms underlying the desistance process are consistent with the general idea of social control. Namely, what appears to be important about institutional or structural turning points is that they all involve, to varying degrees, (1) new situations that "knife off" the past from

the present, (2) new situations that provide both supervision and monitoring as well as new opportunities of social support and growth, (3) new situations that change and structure routine activities, and (4) new situations that provide the opportunity for identity transformation (for details, see Laub and Sampson 2003, chaps. 6-8). The lesson we drew is that involvement in institutions such as marriage, work, and the military reorders short-term situational inducements to crime and, over time, redirects long-term commitments to conformity. In making the case for the importance of the adult life course, we have referred to involvement in these institutions as turning points because they can change trajectories over time (Laub and Sampson 1993; Sampson and Laub 1993).

[W]e find life-course desistance is the norm for all men and all crimes, including minor forms of deviance; and . . . we question the prospective *or predictive power of offender groups and whether they are causally distinct with respect to later trajectories.*

A potential objection, however, is that turning points are a result of selection bias or, put differently, the unobserved characteristics of the person (e.g., Gottfredson and Hirschi 1990). To shed further light on life events, we exploited the longitudinal nature of the long-term data to examine within-individual change, where the unit of variation is across time. As such, stable characteristics of the person are held constant and we can exploit changes in social location, such as marriage, in terms of deviations from a person's expected trajectory. Holding age constant and allowing individual heterogeneity in age effects, we found that *when* in a state of marriage, the propensity to crime was lower for the same person than when not in marriage. Similar results were found for military service and steady employment. Quantitative models of within-individual change thus give statistical evidence of the probabilistic enhancement of desistance associated with life-course events like marriage, military service, and employment (Laub and Sampson 2003, chap. 9).

With this brief summary as a backdrop, we can now turn to the heart of the current article's concern with group-based typologies, turning points, and human agency.

Group-Based Typologies

> A small group of persons is shown engaging in antisocial behavior of one sort or another at every stage of life. I have labeled these persons *life-course-persistent* to reflect the *continuous course* of their antisocial behavior. (Moffitt 1993, 676, italics added)

> Thus, in defiance of "regression to the mean," extremely antisocial persons remain extreme on measures taken at later ages and in different situations. (Moffitt 1994, 10)

The "group" question is one of the most salient in modern developmental criminology. Here we revisit issues relating to Moffitt's (1993) dual taxonomy theory and group-based theories more generally (see Patterson and Yoerger 1993; Loeber and Hay 1997). One of the major strengths of our data is that they allow us to examine within-individual variability in crime over nearly the entire life course. Moreover, the original design in *Unraveling Juvenile Delinquency* targeted serious, persistent delinquents in adolescence, providing an important opportunity to assess patterns of continuity and change in crime for a population of high interest and concern to both criminal career theory and policy efforts that target high-risk children.

The question we address here is whether our tests to date set up a "straw man" argument. In response to our research, Moffitt (forthcoming) claimed as much, arguing first and foremost that nowhere does her theory predict a "flat rate" of criminal offending for LCPs. By persistent, in other words, she simply means "high rate" over time in the between-individual mode of comparison (i.e., stability). We acknowledge that we did (and still do) read in the original theory an insistence that adult crime should be relatively flat for the distinct group of LCPs, for that is how persistence is typically defined (e.g., "continuous," "degrading only slowly"). Moreover, if the differences of note are really on a continuum with respect to levels of offending, then the idea of a distinct group is weakened. In defense of our interpretation, we would note that many others apparently read the theory in a similar way. Consider the following independent assessment (other similar interpretations are found in Cullen and Agnew 2003, 450; Thornberry 1997, 2; Benson 2001, 86):

> The second group of offenders in Moffitt's taxonomy, "life-course-persistent," is hypothesized to engage in antisocial activities and criminal acts throughout the life span. . . . Unlike their adolescence-limited counterparts, life-course-persistent offenders continue their criminal involvement throughout most of their lives *(i.e., they are unlikely to desist)*. (Piquero, Farrington, and Blumstein 2003, 398, italics added)

Even more striking, consider Nagin's (2005, 183) recent book where he graphs a flat expectation trajectory derived from Moffitt's theory and states, "The life-course persistent trajectory is flat and high, whereas the adolescent-limited trajectory rises and falls with age" (p. 182).

Moffit's (forthcoming) clarification clears the air considerably, for if the theory is that "high rate yet declining with age" equals life-course persistent, then we have little or no disagreement, and in fact our data (and that of many others) clearly sup-

ports the assertion that there are high-rate offenders. We remain a bit puzzled, however, because this concept would then seem to revert back to the classic "chronic offenders" from the Wolfgang, Figlio, and Sellin (1972) birth cohort study. In other words, in the clarified or revised position, it is not clear to us what is new or different in the "life-course-persistent" concept versus "chronic" other than the label.

A second line of critique is that we did not examine a population-based study and as a result cannot fully test the dual taxonomy theory. We fully agree in one important sense—we cannot assess the validity of the adolescence-limited hypothesis. Much of the testing of Moffitt's (1993) theory requires a population-based sample, and the limitations of our data conflict with the ideal testing conditions she prefers. So we are in agreement here as well. The apparent exception is that we remain convinced that our data are quite relevant to examining long-term trajectories of crime and thus the existence of life-course persistent offender groups. As we have argued elsewhere (Laub and Sampson 2003, 113), it would be hard to write an analytic script that would be more conducive to finding troubled adult men than the one laid out in the behavioral story of the delinquent group in the Gluecks' *Unraveling Juvenile Delinquency* (Glueck and Glueck 1950). These five hundred men generated some ten thousand criminal and deviant offenses to age seventy.

[W]e highlight a life-course view that emphasizes human agency and choice over the life span, underscoring how people construct their lives within the context of ongoing constraints. From this view, trajectories are interpreted not from a lens of unfolding inevitability but rather continuous social reproduction.

Thus, it seems not at all a straw-man argument to say that if we cannot find convincing evidence that a life-course persistent group can be prospectively identified in these data based on theoretical risk factors at the individual level in childhood and adolescence, then that aspect of the theory is in trouble. Our finding confirms what some have called the Robins paradox, namely, antisocial behavior in children

is one of the best predictors of antisocial behavior in adults, yet most antisocial children do not grow up to be antisocial adults (Robins 1978). In retrospect, high-rate adult offenders will almost always be drawn from the pool of high-risk children, but looking forward from high-risk children, we cannot distinguish well who will persist or desist as adults.

A third line of critique of our work was advanced by Blumstein (2003), who suggested that if one calculated rates of offending ("lambda") among "active offenders" as well as offenders distinguished by crime types and various combinations thereof, evidence of LCPs might be found. We are open to the possibility that if one decomposes the data into smaller and smaller subgroups, a subset of men may be found that *in retrospect* appear to look somewhat flat in their offending for some period of the adult life course. But to our mind, these exceptions may merely prove the rule. Here we are admittedly old-fashioned in our approach to data—if one has to search hard and long for patterns that one cannot otherwise see, we are skeptical about the replicability and generality of the results, especially in light of sample selection strategies based on the dependent variable. We further wonder about the overall import of the findings for theory and public policy (for an earlier exchange along similar lines, see Gottfredson and Hirschi 1986; Blumstein, Cohen, and Farrington 1988). For us, the key question remains: Is there a predictable group of offenders who commit crime at a high rate and maintain that high rate of offending over the full life course with some degree of persistence?

Revisiting the predictability of persistence

We now turn to critiques of our work that we address with further data analyses. Moffitt (forthcoming) contends that we did not consider offenses by LCPs that are minor in nature from a legal perspective but that nonetheless capture important dimensions of deviant or antisocial activities in adulthood. Crime, in the sense of serious predatory offending, for example, might be declining over time but "bad behavior" will not. We assess this important argument by measuring within-individual variations in relatively minor offenses that tap various types of deviant behavior. Specifically, we calculated person-year counts of "other" offenses recorded in arrest histories—disorderly conduct, vagrancy, gambling, speeding, conspiracy, lewdness, impersonation of a police officer, resisting arrest, desertion, nonsupport, and hunting near a dwelling.

Although these offenses are by definition violations in a legal sense, they reflect the type of antisocial tendencies that Moffitt has emphasized, especially family conflict (see Moffitt 1993, 680; Moffitt, forthcoming). It is further true that the information we analyze is by definition based on official record keeping, but we would emphasize that our comparisons are *within* individuals. It is hard to imagine why a fifty-five-year-old man, for example, compared to the same man at fifty, would be any more or less likely to be arrested for nonsupport of children or gambling. Within-individual trajectories do not compare different groups or cohorts of men with different characteristics often thought to influence processing (e.g., race and social class). And it turns out that the Glueck men as adults engaged in all sorts

of deviant activities that the Boston police appeared only too happy to record—indeed, there were more than three thousand arrests for these minor offenses! We do not have data on things like being fired from jobs, but then again, that kind of behavior is not illegal or of a rule-breaking kind and thus remains outside the bounds of a theory of crime and deviance.

To assess the predictability of trajectories of offending relating to miscellaneous minor offenses, we employ the validated child-risk predictor used in Sampson and Laub (2003) based on a summary of thirteen measures listed in Table 1. These measures are derived from multiple sources (parents, teachers, official records, and the boys themselves) that tap classic *individual-difference* risk factors and the observed propensity to offend of the boys in their early years and adolescence. Measures of individual differences include some of the most venerable and sturdy predictors of crime, especially cognitive abilities (Moffitt 1994, 16), temperament (Moffitt 1993, 695), personality traits (Caspi et al. 1994; Hawkins et al. 2000), and childhood behaviors (Moffitt 1994, 15). In addition, guided by the substantial body of research on criminal careers, we focused on early and frequent involvement in crime and delinquency (Blumstein et al. 1986, 72, 94).

[C]rime is more likely to occur when an individual's bond to society is attenuated.

Verbal intelligence (see Moffitt 1993) was assessed using the Wechsler-Bellevue IQ test and coded into eight categories ranging from one (120 and above) to eight (59 and below). The mean verbal IQ for the delinquent sample was 88.6. We also examine the full-scale IQ score that includes both math and verbal skills, unrecoded. From detailed psychiatric assessments of the boy, we use four dichotomous variables of personality traits: extroverted ("uninhibited in regard to motor responses to stimuli"), adventurous ("desirous of change, excitement, or risk"), egocentric ("self-centered"), and aggressive ("inclined to impose one's will on others"). To capture the early onset of childhood behavior, we used self-reported age of onset of misbehavior, a dichotomous indicator based on teacher and parent reports of the subject engaging in violent and habitual temper tantrums while growing up, and a report from the mother as to whether the subject was overly restless and irritable growing up (we labeled this "difficult child").

The level of delinquent conduct in adolescence was measured in several ways. We used an indicator of the average annual frequency of arrests in adolescence while not incarcerated and a composite scale (ranging from 1 to 26) based on unof-

TABLE 1

CHILD AND ADOLESCENT RISK FACTORS MEASURED BEFORE ADULTHOOD (YOUNGER THAN SEVENTEEN)

Cognitive
Measured intelligence (IQ, Full-Scale Wechsler-Bellevue)
Verbal IQ (Wechsler-Bellevue)
Psychiatric assessments
Extroversion
Adventurousness
Egocentricity
Aggressiveness
Early onset/conduct disorder
Age of onset of misbehavior (self-reported)
Age at first arrest (police)
Age at first incarceration (correctional)
Violent temper tantrums (teacher and parent reports)
Difficult child behavior (mother reports)
Antisocial behavior
Frequency of arrest per days free (up to age seventeen)
"Unofficial" delinquency (self-, parent, and teacher reports)

ficial self-, parent, and teacher reports of delinquent behavior (e.g., stealing, vandalism) and other misconduct (e.g., truancy, running away) not necessarily known to the police. Following the logic of the criminal career approach, we also included measures of the age at first arrest and age at first incarceration for each boy. Overall, the delinquency measures capture both the level and the developmental pattern of official and unofficial behavior up to an average of about fourteen years of age for each boy.

To assess summary patterns, we followed the logic of risk factor theory by giving emphasis to the *combination of individual-level risks within the person*. We combined standardized indicators of all thirteen variables in a single child-risk indicator, with constituent items scored such that a high value indicated either the presence of antisocial behavior or an individual-level risk (e.g., low verbal IQ, engaging in tantrums, early age of onset of antisocial behavior, and so on). We then looked at the distribution across all boys and created a group at highest risk for what Moffitt would call *life-course persistent* offenders—namely, those boys in the upper 20 percent of the distribution. The bottom 80 percent group is defined as low risk. What is important to point out is that the groups were defined prospectively with respect to adult offending, as all the measurement was completed prior to age seventeen. Other than delinquency, which we separate out in a later analysis, the vast majority of measures refer to individual differences of the boys in childhood. The prospective ability of these measures to predict later involvement in crime was demonstrated in earlier work (Sampson and Laub 1993, 92). Thus, while retrospective reporting is a concern we fully acknowledge, the multimethod and multireporter approach, combined with the diversity of measures and their demonstrated validity in predicting stability of offending, speaks to the utility of

considering the link between childhood risk and trajectories of crime throughout life.

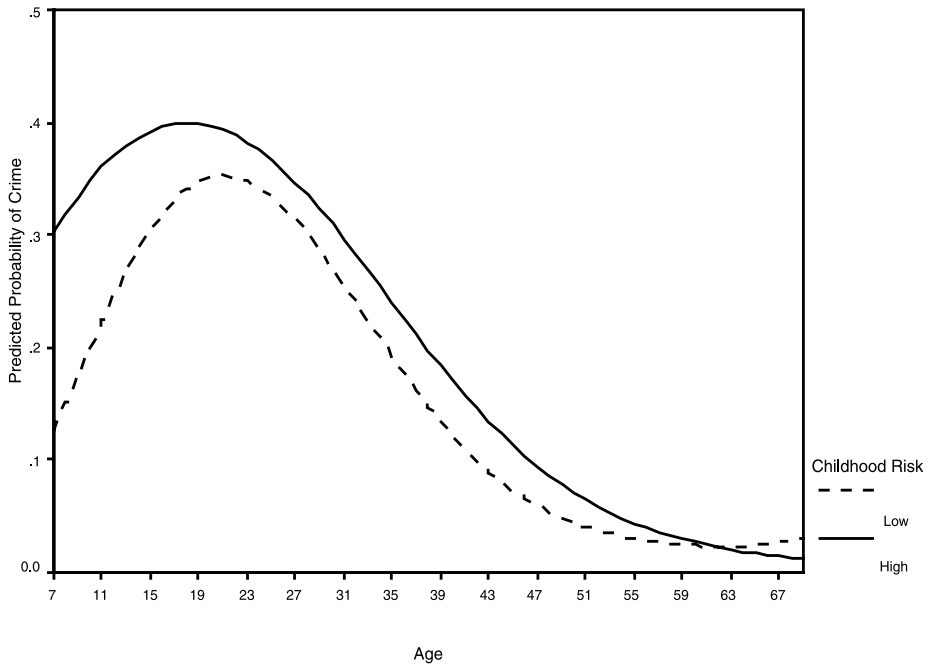
When we examine the predictive power of childhood risk groups, the dominant pattern is parallel offender trajectories by age and no evidence of distinct developmental pathways. We demonstrate this pattern in several different ways, beginning in Figure 1 with the predicted probability of offending for the most general outcome—total crime (sum of violent, property, alcohol/drug, and other offenses). This replicates the main picture painted in Laub and Sampson (2003, chap. 5). Next we turn to the "raw data" trajectories for the predatory crimes (violent and property offenses) emphasized in traditional criminological theory (see Figure 2). We present the raw data because some critics have wondered whether our smoothing of the data through age-expected trajectories might have masked subgroups of offenders. Even without smoothing, however, one sees a sharp rise and then decline in predatory offense counts for both risk groups, with the main difference in the level of offending. In Figure 3, even the relatively messy trajectories for alcohol- and drug-related offenses reveal remarkably similar patterns for each child-risk group. As predicted by Moffitt (1993, 1994), there are definitely men who offend well into middle age, yet as is also evident in our data, the same pattern holds for both childhood risk groups, and a sharp decline in offending (desistance) is the eventual pattern for all men.

In Figure 4, we turn to the key findings predicting the miscellaneous offenses described earlier from age seven to seventy by childhood risk. Once again the same pattern is displayed as found for other offense types—both child-risk groups show parallel patterns of offending with sharp declines in crime by age. Figure 5 replicates these results using smoothed age-crime trajectories, with strikingly similar patterns. In short, there is no prospective evidence of a flat-line offending trajectory when we examine raw or smoothed age-crime patterns for various crime types, including minor forms of illegal activity and deviance. In analyses not shown, these findings hold up when incarceration and active offender designations are taken into account and when we disaggregate childhood risk into constituent measures (see also Sampson and Laub 2003).

Childhood risk in family adversity

As another test, we conducted analyses that interacted individual-risk characteristics, both the overall scale and constituent measures, with criminogenic family environments during the turbulent years of child and adolescent development. A long history of research, including on the Gluecks' data, has shown that family structural conditions (e.g., poverty, large family size, and residential mobility) and family social processes (e.g., poor supervision, erratic/threatening discipline, and weak parental attachment) are strong predictors of adolescent delinquency (see Sampson and Laub 1993, chap. 4). Moffitt (1993) argued that when a child's vulnerability is compounded with such negative family conditions, life-course-persistent offending is most likely.

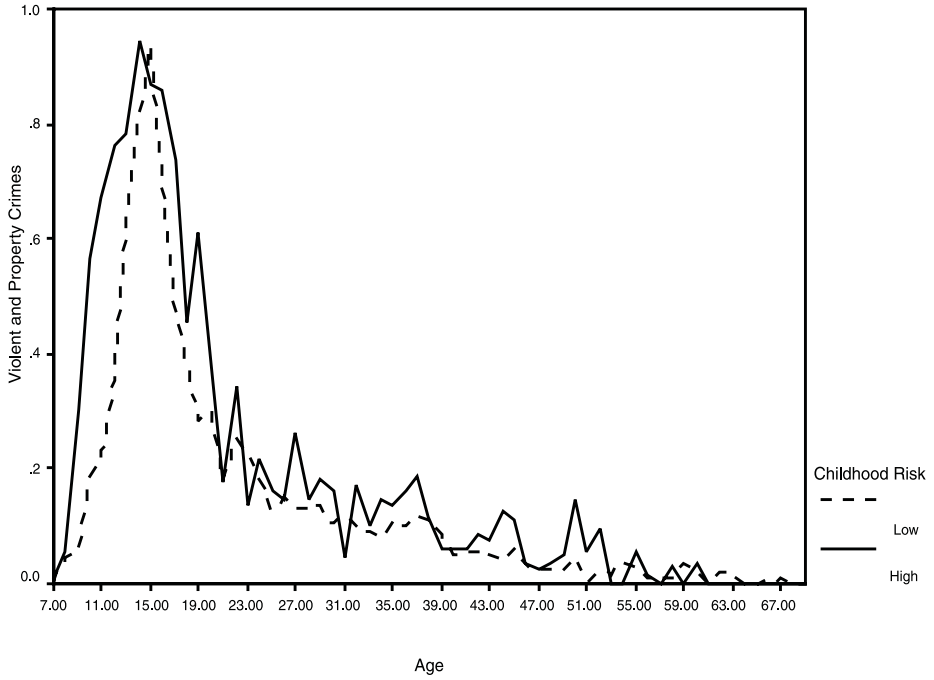
FIGURE 1
PREDICTED TOTAL OFFENSE TRAJECTORIES: AGE SMOOTHED, SEVEN TO SEVENTY, BY CHILDHOOD RISK



Drawing on Sampson and Laub (1993), we conducted a principal components analysis that reduced the dimensionality of a set of theoretically and empirically salient items measuring family adversity. Two key dimensions emerged, the first defined by high residential mobility, parental emotional instability, low maternal supervision, and hostility between father and son. Poverty, large families, and erratic/harsh methods of discipline defined the second dimension. We then selected those boys who were in the upper half of the distribution of each orthogonal factor (hence approximately 25 percent of the boys) *and* who were in the upper 20 percent of the distribution of the individual-level childhood-risk score. In other words, we examined the interaction of the multiple indicators, with the end result that approximately 4 percent of the delinquent group members are defined as truly high risk. These boys experienced not only the extremes of criminogenic family environments; they were vulnerable from the start based on multiple childhood risks.

In Figure 6, we present the raw plots of trajectories of "other" offending for the boys at the highest child and family risk compared with the rest of the delinquent group. Perhaps not surprisingly, the rate of offending for the high-risk group is

FIGURE 2
RAW TRAJECTORY OF PREDATORY OFFENSES: AGES SEVEN TO SEVENTY, BY CHILDHOOD RISK

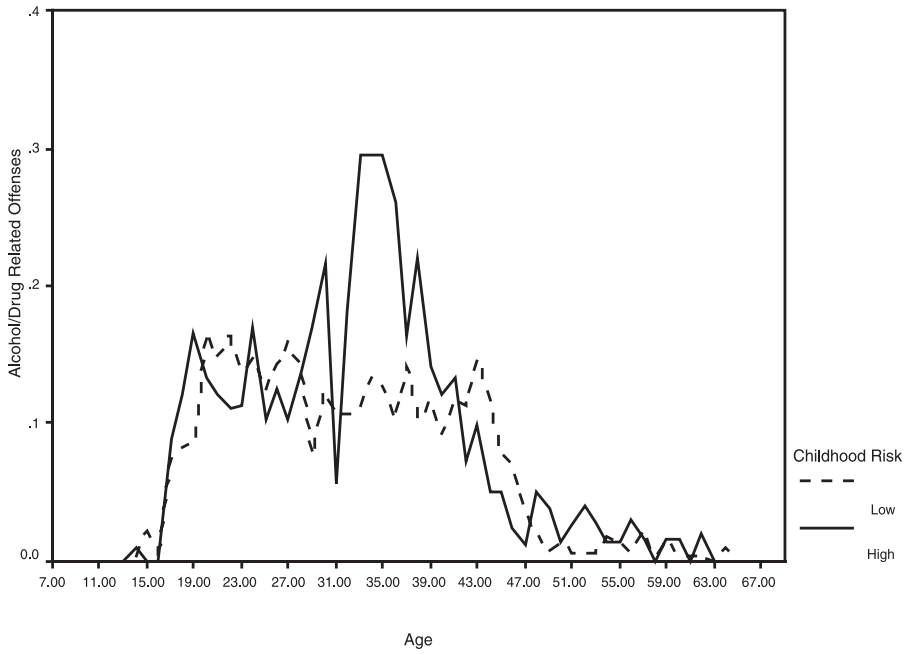


higher in the early years up to the point of the traditional peak age of offending—about age fifteen. Thereafter, the rate of offending drops off, and these boys desist just like all other boys in the study. Amazingly, in fact, the rates of offending are higher in later life for the group predicted to be at *lower risk* based on early child and family circumstances. But the big picture is clear—the age-crime curves look the same as in the earlier figures, where we see increasing and then declining involvement in crime for all risk groups. Our basic conclusion thus continues to hold, namely, that desistance and aging out of crime appear to reflect a general (almost fractal) process for all groups of offenders.

Latent class models of desistance

So far, we have restricted our analysis to prospectively defined groups of offenders based on childhood and adolescent risk factors. A quite different approach is to take the full life course as a given and ask whether there are distinct and latent offender groups based on ex post trajectories of offending. And if so, can the resulting trajectory groups be linked to preexisting or childhood differences? Despite its

FIGURE 3
RAW TRAJECTORY OF ALCOHOL OFFENDING: AGES SEVEN TO SEVENTY, BY CHILDHOOD RISK



prospective nature, in the analysis above we might have masked underlying trajectory groups, such as life-course persisters.

Nagin's (2005) semiparametric group-based modeling approach offers an innovative way to satisfy our objective. In general, the mixed Poisson model assumes that the population is comprised of discrete Poisson distributions with respect to the rate of offending. Each trajectory assumes a polynomial relationship that links age and crime. Based on our earlier analysis, we use a cubic function of age for the seven to seventy models and estimate the equation,

$$\log\left(\lambda_{it}^{j}\right)=\beta_0^j+\beta_1^j(AGE)_{it}+\beta_2^j\left(AGE^2\right)_{it}+\beta_3^j\left(AGE^3\right)_{it},$$

where λ_{it}^{j} is the predicted rate of offending for person i in group j for time period t, AGE_{it} is the age of person i for time period t, AGE_{it}^{2} is the squared age of person i for time period t, and AGE_{it}^{3} is the cubed age of person i for time period t; and the coefficients β_0^j, β_1^j, β_2^j, and β_3^j structure the shape of the trajectory for each group j. Although every individual in each group is constrained to the same slope and intercept of that trajectory, these parameters, which determine the level and shape of the trajectory, are free to vary by group.

FIGURE 4
RAW TRAJECTORY OF "OTHER" OFFENSES: AGES SEVEN TO SEVENTY, BY CHILDHOOD RISK

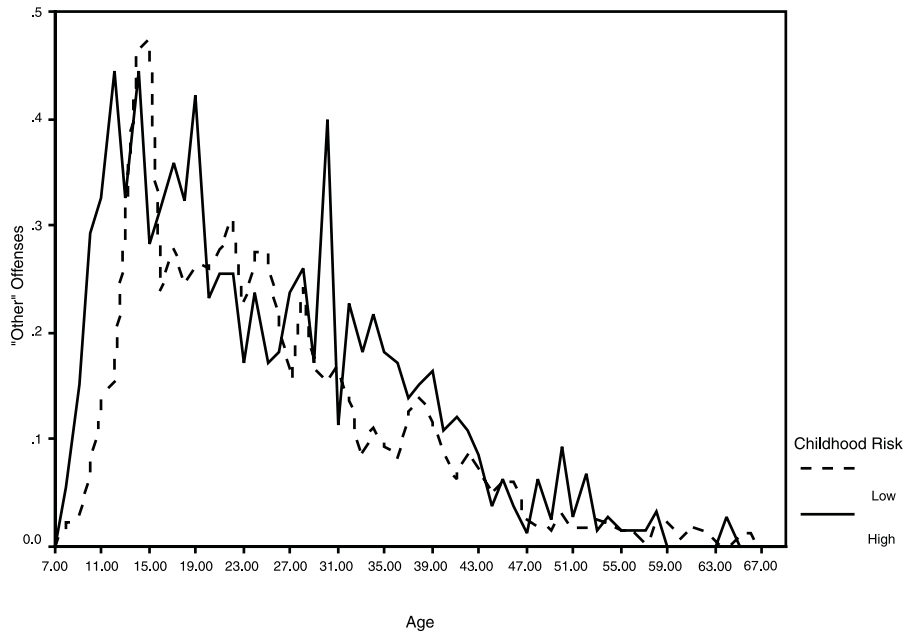
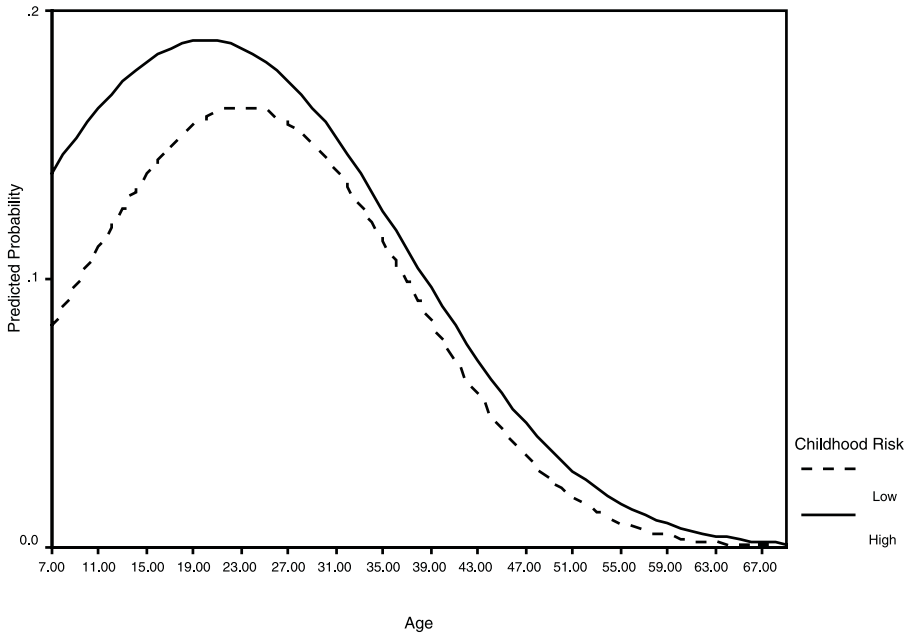


Figure 7 shows the results from semiparametric mixed Poisson models for "other" crimes. Again, heterogeneity in trajectories is present and the data firmly reject a simple typology of two offender groups. There are instead five groups of offending patterns by age for "other" offenses, similar to patterns for total offending as well as crime specific trajectories (see Laub and Sampson 2003, 104-6). Most important to our discussion here is that the differences across groups seem to be age at desistance and rate of offending, but with all groups eventually declining with age. Furthermore, we see in Table 2 that the different subgroups in the data for "other" offenses are not *systematically* predicted by key constituent indicators of our child-risk measure (for similar results for total crime, see Laub and Sampson 2003, 108-9).

For good measure, we also consider in Table 2 two measures of considerable interest in intergenerational studies of the transmission of crime risk—the criminality/deviance of parents and parental mental health status. Parental risk is not a consistent predictor. Interestingly, the group that peaks the latest in terms of other offenses (group 2, in their late thirties) has the *lowest* score on parental criminality and second lowest score on mental disturbance. Overall, the patterns in Table 2 are

FIGURE 5
PREDICTED "OTHER" OFFENSE TRAJECTORIES: AGE SMOOTHED, SEVEN TO SEVENTY, BY CHILDHOOD RISK

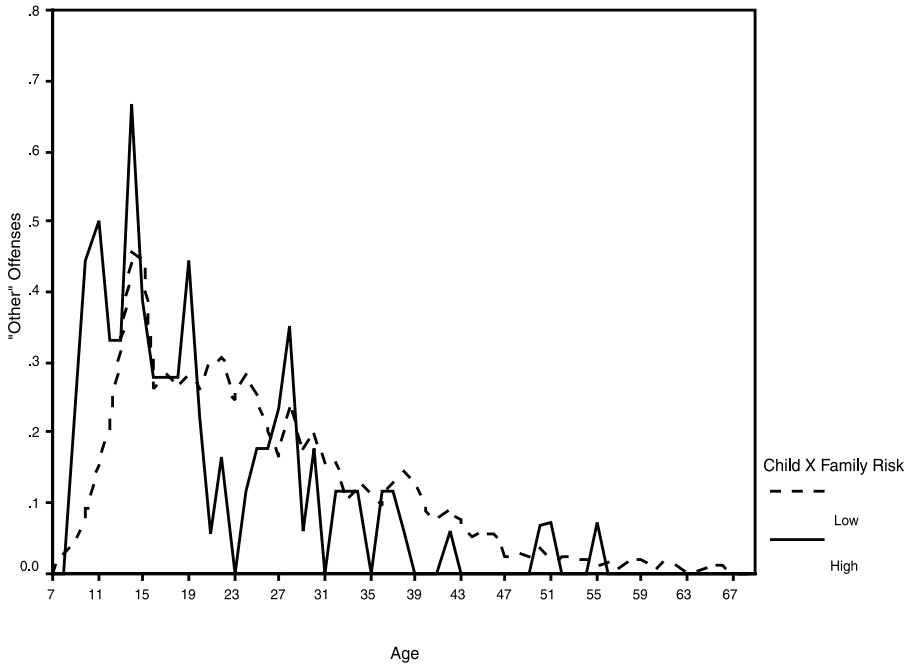


contradictory and do not add up to a consistent story about the past as prologue (cf. Glueck and Glueck 1968).

Age at desistance

Finally, we address in more detail the notion that it may not be the rate of individual offending that is at issue but the length of criminal career (Moffitt, forthcoming). More precisely, the question we pose is, Do those prospectively predicted to be high-rate offenders, or LCPs, offend to a later point in their lives than the low-risk group? Because we have not specifically addressed this argument before, we present in Table 3 the age at last offense for all crime types by the childhood risk factor. The bottom line is that we do not see consistent evidence of differential age at termination based on prospective childhood risk. Note that none of the mean ages at termination across five different crime types differ significantly by group. These results maintain when we examine the age at last offense taking into account both childhood risk and family risk factors together (see Table 4). Thus, there is no evidence in the Glueck data that prospectively defined life-course-persistent

FIGURE 6
RAW TRAJECTORY OF "OTHER" OFFENDING: AGES SEVEN TO SEVENTY, BY CHILD/FAMILY RISK

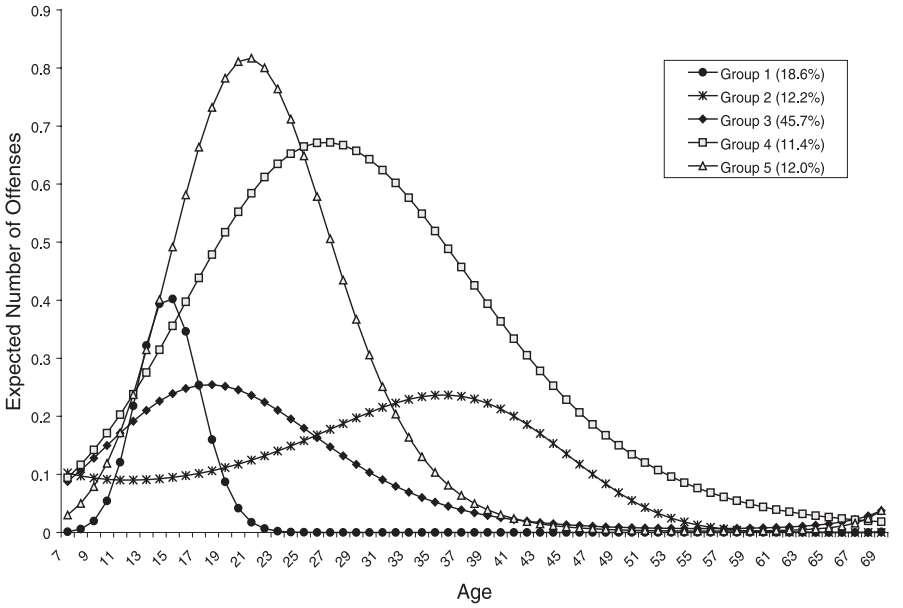


offenders display "unusually extended offending careers" (Moffitt, forthcoming) over the life course once conditioned on a troubled adolescence.

Summary

We believe our analyses on minor or miscellaneous offenses and age at termination, in conjunction with reanalyses of raw data trajectories from our previous work, again raise questions about what might be termed the causal theory of groups and the idea that offender groupings are prospectively valid. While our analyses focused on Moffitt's taxonomy, the most detailed and articulate statement of a group-based theory to date, our results have implications for other group-based theories of crime trajectories (e.g., Patterson and Yoerger 1993; Loeber and Hay 1997). We would add that empirical research has by now firmly rejected the notion that there are only two groups of latent-class offenders. Setting aside the present study, Piquero (2005) has recently and independently provided an exten-

FIGURE 7
TRAJECTORIES OF OFFENDING FOR "OTHER" OFFENSES: AGES SEVEN TO SEVENTY



sive review of more than fifty studies of trajectories of crime, *none* of which yielded a two-group solution. The extant evidence thus seems clear that while there are high-rate offenders who evince relative stability in their criminal and deviant offending patterns compared to others, they still decline with age. Second, there is little evidence that there are categorical groupings of men with distinct offender trajectories that can be accurately or meaningfully predicted in the prospective sense among high-risk adolescent delinquents.

If these are the facts, we hazard to guess that their overall interpretation is still like a glass half-full or half-empty scenario—a veritable Rorschach test. Although we were critical of Gottfredson and Hirschi (1990) in our earlier work (Sampson and Laub 1993), and still do maintain an age-graded theory, like them we are now inclined to see in the data from Figures 1 through 7 the overwhelming power of age in predicting desistance from crime. If age is the driving factor, it follows, as they originally argued, that typologies of offender trajectory groups are (inherently?) limiting when it comes to meaningful inferences about the developmental causes of crime.

TABLE 2

COMPARISON OF SELECTED CHILDHOOD AND ADOLESCENT RISK FACTORS BY "OTHER" CRIMES TRAJECTORY GROUP (*N* OF CASES APPEAR IN PARENTHESES)

	Group 1 (97)	Group 2 (52)	Group 3 (229)	Group 4 (51)	Group 5 (51)
Individual differences					
Full scale IQ	92.4 (97)	90.9 (52)	91.2 (229)	91.8 (51)	91.5 (51)
Verbal IQ	3.70 (97)	3.35 (52)	3.52 (229)	3.35 (51)	3.31 (51)
Percentage extroverted	54 (97)	62 (52)	57 (229)	67 (51)	51 (51)
Percentage adventurous	47 (97)	58 (52)	56 (229)	65 (51)	53 (51)
Percentage egocentric	16 (97)	10 (52)	14 (229)	8 (51)	12 (51)
Percentage aggressive	18 (97)	15 (52)	17 (229)	10 (51)	12 (51)
Parent/child disposition					
Parental crime/alcoholism	1.92 (97)	1.88 (52)	2.02 (229)	2.14 (51)	2.02 (51)
Parental instability	.84 (92)	.83 (48)	.87 (222)	1.10 (48)	.78 (51)
Percentage tantrums	35.0 (97)	26.9 (52)	41.0 (229)	45.1 (51)	51.0 (51)
Percentage difficult child	61.0 (95)	62.7 (51)	56.9 (225)	60.8 (51)	57.1 (49)
Percentage early onset	7.1 (84)	8.3 (48)	17.3 (197)	13.3 (45)	9.3 (43)
Adolescent delinquency					
Arrest frequency (ages seven to seventeen)	.376 (97)	.362 (52)	.443 (229)	.479 (51)	.447 (51)
Unofficial delinquency (younger than seventeen)	13.5 (97)	14.0 (52)	14.3 (229)	15.3 (51)	14.7 (51)

TABLE 3
AGE AT LAST OFFENSE BY CHILDHOOD RISK FACTOR

	Risk	*N*	Mean	Standard Deviation
Total crime	No	364	37.44	13.48
	Yes	92	38.65	13.64
Property	No	350	26.21	12.73
	Yes	89	26.92	11.58
Violence	No	196	31.10	13.39
	Yes	59	32.25	13.20
Alcohol/drug	No	209	36.10	12.04
	Yes	56	39.29	10.97
Other	No	356	32.72	13.23
	Yes	91	33.83	13.68

NOTE: No *t-test* comparisons are significant.

TABLE 4
AGE AT LAST OFFENSE BY CHILD/FAMILY RISK FACTOR

	Risk	*N*	Mean	Standard Deviation
Total crime	No	434	37.96	13.43
	Yes	18	33.39	14.59
Property	No	419	26.48	12.59
	Yes	17	23.76	11.17
Violence	No	241	31.42	13.28
	Yes	7	32.57	19.07
Alcohol/drug	No	252	36.94	11.87
	Yes	10	33.60	12.47
Other	No	425	33.07	13.26
	Yes	18	28.56	13.78

NOTE: No *t-test* comparisons are significant.

A Revised View of the Casual Importance of Turning Points

The second major issue to which we now turn is the role of "turning points" in development and growth. To date, our work has tended to conceptualize turning points in terms of singular, sometimes rare events (e.g., serving in military during wartime). Recently, we have begun to modify this view in light of the fact that many important life events are repeating in nature. For illustrative purposes, we examine here the institution of marriage.

Why is marriage important in the process of desistance from crime? There appear to be at least five mechanisms of desistance, none of which are to our knowl-

edge limited to the particular historical period or demographic subgroups represented in the Gluecks' data. Consistent with the general turning point processes discussed above, theoretically marriage has the potential to lead to one or more of the following in the lives of criminal men: (1) a "knifing off" of the past from the present; (2) opportunities for investment in new relationships that offer social support, growth, and new social networks; (3) forms of direct and indirect supervision and monitoring of behavior; (4) structured routines that center more on family life and less on unstructured time with peers; and (5) situations that provide an opportunity for identity transformation and that allow for the emergence of a new self or script, what Hill (1971) described as the "movement from a hell-raiser to a family man."

It follows from this theoretical conceptualization that the mechanisms associated with marriage are not a constant once set in motion and thus vary through time. The spousal monitoring of drinking patterns, for example, is predicted to vary over time depending on the state of whether one is in or out of a marital relationship. Consider further the demographic reality that people enter and exit (and often reenter) marriage over time. Sampson, Laub, and Wimer (2005) followed through on this observation by conceptualizing the potential causal effect of being in the state of marriage (which hypothetically could be randomly or exogenously induced) with the state of nonmarriage *for the same person*. In dynamic terms, marriage is thus not seen as a single turning point but as part of a potential causal dynamic over the life course. We further hypothesize that the effect of marriage on desistance from crime is independent of the developmental history of the person—in this sense, the marriage effect is "nondevelopmental."

Causal effects and the life course

The biggest threat to the validity of any analysis claiming causal effects of a social state like marriage is to account for the nonrandom selection of individuals into the state itself. Marriage is not a random event, and homophily in partner characteristics is well established, even though it is simultaneously true that fortuitous events influence mating patterns. To the extent that marriage is influenced by individual self-selection, the marriage-crime relationship is potentially spurious. Indeed, selection is the main critique put forth by those suspicious of social forces (e.g., Gottfredson and Hirschi 1990). Since marriage cannot be randomized in practice, the canonical solution to date has been to "control" for a host of potentially confounding factors, most notably lagged states of crime itself and other factors that may cause both crime and later marriage, such as prior crime and deviance, personality, unemployment, and so on. Instrumental variables are also possible, but in practice they have not proven effective. Moreover, controlling past values of the treatment or outcome results in biased estimates because such a method controls for the very pathways that are hypothesized to lead to crime.

In recent work, we have addressed this conundrum through a multipronged approach that combines a longitudinal fixed-effects analysis of changes in marriage and crime over the life course with recently pioneered methods for identifying

causal effects using observational data—what are typically called "counterfactual methods" of causal inference (Sampson, Laub, and Wimer 2005). Drawing from the language of randomized experiments, counterfactual methods conceptualize causal effects as the effect of a definable "treatment" (e.g., marriage) on some outcome (e.g., likelihood of committing a crime). In this case, one would divide the sample population into a treatment group (those who marry) and a control group (those who do not marry). When examining the causal effect of the treatment, counterfactual methods assume that each individual has two "potential outcomes," at least theoretically. The first is the outcome that the individual demonstrates under the treatment condition, which we will call Y_i^t. The second is the outcome that the individual demonstrates under the control condition, which we will call Y_i^c. For each individual, however, only one of these outcomes can be actually observed at the same time. We can thus recast questions of causality as a "missing data problem" of the unobserved counterfactual (Winship and Morgan 1999), one that is solved in experimentation through randomization. Assuming equivalence of controls and treatments, in other words, permits the estimation of the causal effect, $\overline{Y}_t - \overline{Y}_c$.

Observational data are another matter. When dealing with a treatment at one point in time, one statistical solution is propensity score matching (see Rosenbaum and Rubin [1983] for a formal discussion; see Morgan [2001] and Harding [2003] for empirical examples). With this technique, one can model the propensity that each individual receives the treatment and then create two groups by matching those who did or did not receive the treatment on this propensity score. This strategy has been shown to yield consistent and unbiased estimates of causal effects, as long as all potential confounding factors are included in the model used to create the propensity score. The surprising outcome is that matching on the propensity score fully balances the treatment and control groups on *all* of the covariates used in modeling the propensity of receiving the treatment, allowing the identification of the causal effect by $\overline{Y}_t - \overline{Y}_c$.

In a recent article, we applied this model, but because of space constraints we note here just the basic results (for details, see Sampson, Laub, and Wimer 2005). Our essential strategy was to exploit the rich individual baseline data and time-varying covariates over the full life course to model the propensity to marriage. Rather than control for the proverbial "kitchen sink" in estimating crime, the inverse proportional treatment weighting (IPTW) method forces conceptual clarity in the sense of distinguishing between pretreatment confounders and post-treatment outcomes. From IQ to the cumulative history of both the outcome and treatment itself, we accounted for twenty baseline covariates and approximately a dozen time-varying confounders measured from widely varying sources—many of which predict the course of marriage as theoretically expected. For example, all the childhood and family adversity risk factors noted earlier were considered as baseline (pre–first marriage) covariates, and employment, military service, offspring, and crime itself were modeled as time-varying covariates (cumulative history up to the year before a marriage observation).

To give an example, married men who had a high probability of being married at any given age based on their marital, criminal, employment, military, and offspring history were effectively "downweighted" in the IPTW analysis for that year. Such person-periods reflect a higher degree of "selection" into the observed treatment status given values on confounding covariate histories that make them especially likely to be married (or unmarried). As a result, we do not want them to contribute as much information to the estimation of the causal effect of marriage on crime. On the other hand, married men with low probabilities of being married (but who actually marry) at a given age based on the same histories provide more information, and they are therefore "upweighted" when estimating the final causal effect.

In sum, in our revised framework we see marriage not as a singular turning point but as a potential causal force in desistance that operates as a dynamic, time-varying process through time.

Applying this counterfactual modeling strategy that weights observations by the inverse probability of men being in the state of marriage as predicted by observed covariates and prior treatment history, we found that being married is associated with a 35 percent average reduction in the probability of crime for our sample of fifty-two men assessed from ages seventeen to seventy. This finding was maintained for our full sample of nearly five hundred men examined from ages seventeen to thirty-two (Sampson, Laub, and Wimer 2005). Thus, we view this basic finding as robust and consistent with the notion that marriage causally inhibits crime over the life course. Given the extensive list of baseline and cumulative history covariates, omitted confounders would have to be implausibly large to overturn the basic results we obtained under a number of different model specifications and assumptions.

In sum, in our revised framework we see marriage not as a singular turning point but as a potential causal force in desistance that operates as a dynamic, time-varying process through time. Changes in crime *or* marriage can happen in any year, and the explicit point of the counterfactual model is to estimate these associations with the cumulative history of both outcome and covariates explicitly controlled. Given the nature of the results, we raise the question whether the metaphor of development

is the proper one when it comes to understanding time-varying turning points over the adult life course. We return to this issue in the conclusion.

Reflections on the Importance of Agency and Choice

A vital feature that emerged from our life-history narratives was the role of human agency—the purposeful execution of choice and individual will (Matza 1964)—in the process of desisting from crime. As a result, the men we studied were active participants in the process of going straight. We discovered that personal conceptions about the past and future were often transformed as men maneuvered through the transition from adolescence to adulthood. Cohler (1982) has noted that a subjective reconstruction of self is especially likely at times of transition (see also Emirbayer and Mische 1998; Maruna 2001). Many men engaged in "transformative action" in the desistance process. Although informed by the past, agency points toward the future (and hence a future self). Projective actions in the transition from adolescence to adulthood that we uncovered were the advancement of a new sense of self and identity as a desister from crime or, perhaps more aptly, as a family man, hard worker, and good provider.

It also appears that human agency is vitally important for understanding persistent offending over the life course. Some men simply insist on a criminal lifestyle, not out of impulsivity or lack of knowledge of future consequences, but rather because of the rewards of crime itself (Katz 1988) or a willful resistance to perceived domination (Butterfield 1995; Sherman 1993). Persistent offenders knowingly engage in these activities at the expense of a future self. As revealed in many of our life-history narratives, crime was viewed as attractive, exciting, and seductive despite the future pains usually called forth as a result. Calculated and articulated resistance to authority was a recurrent theme in lives of persistent offenders. The men's defiance seemed to have been fueled by a perceived sense of injustice resulting from a pattern of corrosive contacts with officials of the criminal justice system, coupled with a general sense of working-class alienation from elite society. Many persistent offenders see "the system" (criminal justice and work alike) as unfair and corrupt (see also Willis 1977).

In crucial ways, then, persistent crime is more than a weakening of social bonds, and desistance is more than the presence of a social bond, as one might be led to conclude (mistakenly) from *Crime in the Making*. At a meta-theoretical level, our long-term follow-up data direct us to insist that a focus purely on institutional, or structural, turning points and opportunities is incomplete, for such opportunities are mediated by perceptions and human decision making. The process of desistance is complex, and many men made a commitment to go straight without even realizing it. Before they knew it, they had invested so much in a marriage or a job that they did not want to risk losing their investment. Drawing on the work of Becker (1960), this is what we call "desistance by default" (Laub and Sampson 2003, 278-

79). Even if below the surface of active consciousness, actions to desist are in a fundamental sense willed by the offender, bringing a richer meaning to the notion of commitment. Further support for this idea is that the men who desisted from crime, but even those who persisted, accepted responsibility for their actions and freely admitted getting into trouble. They did not, for the most part, offer excuses. Tough times due to the Great Depression, uncaring parents, poor schools, discrimination based on ethnicity and class, and the like were not invoked to explain their criminal pasts. One man captured this opinion the best when he was asked to assess his life and said, "Not because of my mother and father. Because of me. I'm the one that made it shitty."

[P]ersistent crime is more than a weakening of social bonds, and desistance is more than the presence of a social bond.

In ongoing work (Laub and Sampson 2005), we make what we believe is a crucial distinction between human agency and rational choice, one that runs opposite to the recent claim by Paternoster and Bushway (2004, 1) that "if you believe in agency you need to adopt a rational choice perspective." From a rational choice perspective, agency is a matter of preferences (e.g., attitudes toward time and attitudes toward others) and how preferences can be used to change or modify inputs or exogenous events like employment and marriage (Paternoster and Bushway 2004). In our view, the rational choice approach views agency as a static entity representing the stable part of the person as well as within-individual variation over time that is largely driven by age. What is lacking in rational choice is the recognition that we "construct our preferences. We choose preferences and actions jointly, in part, to discover—or construct—new preferences that are currently unknown" (March 1978, 596). At this time, we know little about how preferences are formed (see Vaughan 1998). It is thus not surprising that Hechter and Kanazawa (1997, 195) concluded that "the mechanisms for individual action in rational choice theory are descriptively problematic." Perhaps more important, we argue that human agency cannot be divorced from the situation or context, once again making choice situated or relational rather than a property of the person or even the environment; agency is constitutive of both.

In short, human beings make choices to participate in crime or not, and life-course criminology has been remiss to have left agency—which is essentially

human social action—largely out of the theoretical picture. We seek to reposition human agency as a central element in understanding crime and deviance over the life course (Laub and Sampson 2003, chaps. 6-8; see also Wikström 2004). To be sure, *Shared Beginnings* is an incomplete response, for we did not develop an explicit theory of human agency replete with testable causal hypotheses. Our theoretical claim here is simply that the data make clear that agency is a crucial ingredient in causation and thus will be a first-order challenge for future work in life-course criminology (see Laub and Sampson [2005] for further theoretical development).

Implications for Developmental (Life-Course?) Criminology

> Development . . . is literally an unfolding or unrolling of something that is already present and in some way preformed.
>
> —Richard Lewontin (2000)

We close by considering the implications of our analyses of group-based theories of crime, turning points, and human agency for a broader understanding of human development over the life course—issues that are at the very heart of developmental criminology. Relying on what Wordsworth argued was a central insight from Shakespeare—that the child is father to the man—criminologists have addressed in intense fashion how developmental processes are linked to the onset, continuation, and cessation of criminal and antisocial behavior. Much has been learned, and it is fair to say that developmental criminology is now ascendant.

In our view, however, the meaning of development in developmental criminology remains fuzzy and has not been subjected to theoretical interrogation. The biologist Richard Lewontin (2000, 5) has argued that "the term *development* is a metaphor that carries with it a prior commitment to the nature of the process." Using the analogy of a photographic image, Lewontin argues that the way the term *development* is used implies a process that makes the latent image apparent. From our perspective, this seems to be what much of developmental criminological theory is all about, that is, offering a perspective wherein the environment offers a "set of enabling conditions" that allow individual traits to express themselves over time. Although reciprocal interactions with the environment are often mentioned, the typical working assumption seems to be that offenders are following a preprogrammed line of development in a crucial respect—an unwinding, an unfolding, or an unrolling of what is fundamentally "already there." The underlying view of development as a predetermined unfolding is ultimately linked to a typological understanding of the world—different internal programs will have different outcomes for individuals of a different type.

Debates about development in the social sciences are not new (see, for example, the exchange between Dannefer [1984] and Baltes and Nesselroade [1984]), and

we are not saying that development reduces to biological processes only. Still, while most developmentalists allude to social interactions as real, in the end most embrace a focus that emphasizes the primacy of early childhood attributes that are presumed to be stable over the life course in a between-individual sense. How else can we understand the fixation on the prediction of later crime from childhood characteristics? It is indisputable that throughout the history of criminology, one of the dominant themes is past as prologue. This continues and finds full expression in the area of addiction research, where we seem to have come full circle from the crude biology of Cesare Lombroso to the current fascination with DNA sequencing and brain imaging as the promise of the future.

In our life-course theory of crime, we seek to return development to where it probably should have been all along, conceived as the constant interaction between individuals and their environment, coupled with purposeful human agency and "random developmental noise."

In our life-course theory of crime, we seek to return development to where it probably should have been all along, conceived as the constant interaction between individuals and their environment, coupled with purposeful human agency and "random developmental noise" (Lewontin 2000, 35-36). According to Elder (1998), human agency is one of the key principles of the life-course perspective. The principle states that "individuals construct their own life course through the choices and actions they take within the opportunities and constraints of history and social circumstances" (p. 4). The recognition of developmental noise implies that "the organism is determined neither by its genes nor by its environment *nor even by interaction between them*, but bears a significant mark of random processes" (Lewontin 2000, 38, italics added). The challenge is that human agency and random processes are ever-present realities, making prediction once again problematic. It further follows that long-term patterns of offending among high-risk populations cannot be divined by individual differences (for example, low verbal IQ, temperament), childhood behavior (for example, early onset of misbehavior), or even adolescent characteristics (for example, chronic juvenile offending).

A key difference between the present life-course perspective and most developmental criminology can be clarified by asking what would happen in an imagined world of perfect measurement. Even if *all* risk factors (including social controls!) were measured without error, our framework posits the continuous influence of human agency and randomizing events, leading again to heterogeneity in outcomes, emergent processes, and a lack of causal prediction. The logic of prediction that drives the search for early risk factors takes nearly the opposite view. Indeed, one gets the sense from "early interveners" that it is just a matter of time before risk factors are measured well enough (from the human genome?) that the false positive problem will finally become ancient history. From the perspective of our theory, this is simply wishful thinking, and we instead predict continued heterogeneity in criminal offending over the life course no matter what the childhood classification scheme of the future. Some "destined" offenders will always start late or refrain from crime altogether, whereas some "innocents" will always start early and continue for long periods of time. And a sizable portion of the offending population will always display a zigzag pattern of offending over long time periods.

Whither groups and offender typologies?

As noted, another strand of developmental theory has focused on offender typologies and the idea of causally distinct and durable groupings through time. We believe that tendencies to reify offender groups as categorically distinct rather than as approximations or heuristic devices runs a considerable risk of reinforcing a "metaphorical imagery." This risk of typologies is related to the larger issue of development as a packaged unfolding as discussed above. After many years of searching, however, there is little reliable or replicable evidence of a *foretold* LCP or career criminal on populations of interest, the organizing focus of the "prediction" paradigm in criminal justice generally and selective incapacitation in particular.

The problem was identified by Travis Hirschi more than thirty years ago—"The problem with the typological approach is that it begs the question of causal homogeneity by focusing exclusively on the question of behavioral homogeneity" (1969, 53). As we witnessed in our long-term follow-up data, it seems likely that offender groupings follow a fairly continuous distribution across predictor or etiological variables. A key finding from our analyses, for example, is that the underlying processes of desistance follow a remarkably similar path for *all* offenders, albeit at different rates and ages, and that age-graded factors (e.g., marriage in adulthood) predict the probability of crime conditioning on the cumulative (developmental) history of the person. It is therefore at least arguable that persistent offending and desistance from crime can be explained by a general age-graded theory of informal social control that emphasizes social ties, routine activities, and human agency (Laub and Sampson 2003).

By raising critical questions about typological approaches, we are not arguing that groups or grouping techniques have no place in criminology. As discussed ear-

lier, groups serve many useful purposes, and methods such as trajectory-group analysis (Nagin 2005) are some of the most innovative to come along in recent criminology. Moreover, the main innovator of the method, Daniel Nagin, has himself warned against the reification of groups and the dangers it presents (2005). The latent class method is not the problem any more than regression techniques are the problem when incorrectly interpreted in causal rather than associational terms.

We see, then, a growing consensus on the potential dangers and benefits of trajectory groups, a development we believe is healthy for the field. Our position is that the line of contention, if one remains, turns on the theoretical interpretation of an offender trajectory. Moving away from the metaphor of development, we see offender trajectories of the sort analyzed in Nagin (2005) and in Laub and Sampson (2003) as being *continually socially produced over time*. This conceptualization is a far cry from what we see as the dominant (and unreflective) interpretation in criminology that rests on a notion analogous to traveling by train—one gets on a trajectory and ends up at a later point directed by the plan set down at the beginning (barring an accident, of course, thereby limiting social influences to the error term; see also Dannefer 1984). We believe this distinction is not merely a matter of semantics and goes to the very heart of modern views of causality and prediction in the social sciences. Our conceptualization of crime as an emergent process can be accommodated by trajectory analysis but not necessarily by developmental theory as currently practiced in criminology.

Concluding thoughts

We view this article and our larger project as offering a dual critique of social science theory and current policy about crime over the life course. Developmentalists seem to believe that childhood and adolescent risk characteristics are what *really* matter—witness the undeniable rise and dominance of the "early risk-factor" paradigm. Our work simply pleads for balance in the other direction, but this move in no way denies the reality of the stability of individual differences. Again, the prescient work by Lee Robins (1978) and the ensuing idea of the Robins paradox discussed earlier serve as an excellent point of common reference.

Not to be overlooked and equally important, our work is inherently critical of "structuralist" approaches in sociological criminology wherein it is argued that location in the social structure, namely, poverty and social class, are what really matter. We hardly believe that all bad actors would simply desist from crime if they were given jobs. Pure deprivation or materialist theories are not just antediluvian but wrong by offenders' own accounts. Our recent work even questions the idea that some inferred from *Crime in the Making*—that institutional turning points are purely exogenous events that act on individuals. The men we studied in *Shared Beginnings, Divergent Lives* were not blank slates any more than they were rational actors in an unconstrained market of life chances. They were active participants in constructing their lives—including turning points. We were thus compelled to take seriously purposeful human action under conditions of constraint. At the same

time, we did see evidence that certain institutions, such as marriage, predicted crime even when each man served as his own control.

How can these seemingly opposite views be reconciled? Although not readily apparent at first glance, we believe the concept of *emergence* unifies the three themes of this article. By studying the group question, we learned that long-term outcomes cannot be easily predicted. By emphasizing time-varying events, we learned that stability and change do not neatly fit a simple linear "growth" model of development. By listening and taking seriously what the Glueck men told us about their lives, in their own words, we learned that human agency is an important element in constructing trajectories over the life course. Each theme shares in common the idea of criminal behavior as a socially emergent and contextually shaped property.

From our perspective, the implied next step is to reconcile the idea of choice or agency with a structural notion of turning points. We refer to this idea as "situated choice" (Laub and Sampson 2003, 281-82; 2005). As Abbott (1997, 102) has written, "A major turning point has the potential to open a system the way a key has the potential to open a lock . . . action is necessary to complete the turning." In this instance, individual action needs to align with the social structure to produce behavioral change and to maintain change (or stability) over the life course. Choice alone without structures of support, or the offering of support alone absent a decision to desist, however inchoate, seems destined to fail. Thus, neither agency nor structural location can by itself explain the life course of crime (cf. Wikström 2004). Studying them simultaneously permits discovery of the emergent ways that turning points across the adult life course align with purposive actions and, yes, stable individual differences.

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