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Moffitt, Terrie E.: A Developmental Model of Life-Course-Persistent Offending

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The relationship between age and crime presents a wonderful conundrum for criminologists. It is simultaneously one of the most accepted and yet least understood empirical realities of the field. The aggregate age distribution of crime is nearly universal. On average, criminal offending starts in pre-adolescence, increases rapidly during adolescence, peaks around age 17 (for most offenses), and then rapidly declines during the transition to young adulthood. Criminologists are in agreement on this point—and have been for quite some time.

There is considerable disagreement, however, as to what this aggregate age-crime curve represents. Specifically, do individual patterns of criminal offending mimic the aggregate curve? What conclusions about individual patterns of behavior can be reached based on the age-crime curve? One school of thought articulated and embodied by Travis Hirschi and Michael Gottfredson is that the age-crime curve is invariant. That is, it is essentially the same for all individuals. The counterposition is that the age-crime curve conceals heterogeneity of offending patterns, and that there is notable variation in the age-crime curve across individuals. This latter perspective is expressed by David Farrington, among others. This interpretation of the age-crime curve is also the cornerstone of Terrie E. Moffitt's developmental taxonomy of offending.

Theoretical Summary

Moffitt (1993) originally offered her account of antisocial behavior in order to address a persistent reality of criminal behavior: continuity and change. Lee Robins observed in 1978 that while “adult antisocial behavior virtually requires childhood antisocial behavior,” it is also true that “most antisocial delinquents do not become antisocial adults” (p. 611). The fundamental implication of this paradox is that criminal behavior is characterized both by stability over time (as in the case of persistent offending) and by marked change. This observation has sparked heated—and as yet unresolved—debates, particularly with respect to the age-crime curve. The core of the debate is the extent of homogeneity that exists among offenders and their involvement in crime over time.

Moffitt offers a theoretical proposition to enlighten the debate. She proposes that the age-crime curve comprises two qualitatively distinct types of offenders, each with their own etiological path into, and out of, delinquent and criminal behavior. Life-course-persistent offenders (LCPs) are characterized by an early onset of problem behavior and marked continuity across much of the life course. Adolescence-limited offenders (ALs) experiment with delinquency during the teen years, but their delinquency is a behavioral anomaly and they will return to prosocial behavior as they age out of adolescence. In detailing the two types of offenders, each with distinct routes to delinquency, Moffitt is able to account for both the continuity and discontinuity of criminal behavior.

[p. 646 ↓]

Explaining Continuity

The notion that the age-crime curve conceals distinct groups of offenders with different patterns of behavior is not unique to Moffitt's theory. Marvin Wolfgang, Robert Figlio, and Thorsten Sellin were the first to observe that 6 percent of the subjects in a Philadelphia birth cohort were responsible for more than half of the offending among the cohort. The presence of a group of persistent and high-rate offenders was noted in other studies as well, and it serves as the basis for Moffitt's idea of the LCP offender.

LCPs begin offending at an early age and continue offending across most of the lifespan. They comprise about 10 percent of the population, yet they account for about 50 percent of the offenses that are committed. Moffitt locates the causal factors of the LCPs' antisocial behaviors early in childhood. Neuropsychological deficiencies formed before or shortly after birth place a child in a disadvantaged position. The difficult child then has little hope for effective socialization due to the high probability of a detrimental response from caregivers. The original neuropsychological disruptions interact negatively with the environment, which is itself more likely than not to be criminogenic. The result is the early initiation of offending and continuous pathological offending behavior thereafter.

These neuropsychological deficits may be either inherited or acquired. Disrupted neural development during gestation, for example, may be the result of maternal drug abuse, inadequate prenatal nutrition, exposure to toxins, brain insult during delivery, or heritable conditions. Postnatal neurodeficiencies may result from inadequate nutrition, harsh and inconsistent parenting, or lack of stimulation and affection. In addition, child abuse could lead to organic brain damage with neuropsychological implications. A sizable body of research links neuropsychological deficits to antisocial behavior.

Whether inherited or acquired, these neuropsychological deficiencies likely are manifested in the form of undercontrolled or difficult temperament, delayed motor development, low intellectual functioning, poor verbal and execution function, and hyperactivity, as noted by Moffitt and Avshalom Caspi. Outcomes observed among LCPs include weak family bonds, school dropout, alienation and impulsivity, and violent offending, mental health problems, substance use, financial problems, and violence, and adverse physical health outcomes. The high incidence of negative outcomes in domains other than criminal behavior illustrates Moffitt's concept of heterotypic continuity, or behavioral coherence, whereby an underlying trait is expressed across a range of behaviors.

Moffitt is careful to highlight that her approach is neither a pure trait theory nor a pure environmental theory. Continuity of antisocial behavior is one potential product of the interaction between individual traits or characteristics and one's environment; early vulnerabilities may be exacerbated over time to facilitate the continuity of antisocial behavior. Children with cognitive and temperamental disadvantage are more likely born into disadvantaged environments. Parents of difficult children are also less likely to have the resources required to manage their child's disadvantage in a productive or prosocial manner.

Explaining Discontinuity

While LCPs account for the observed continuity of criminal behavior, Moffitt theorizes that a group of ALs is the source of the observed change, or discontinuity, in offending. Adolescence-limited offending is far more common and, in fact, is very nearly normative. For the ALs, delinquency is confined to the period of adolescence. Causal

factors must therefore be proximal and able to account for the discontinuity of offending that is the hallmark of ALs.

Given the limited nature of adolescence-limited offending, the theory of causality must be specifically related to the time frame in which they offend—that is, adolescence. Moffitt proposes that a maturity gap has resulted from the earlier occurrence of biological maturity coupled with the lengthening of adolescence. The ALs' offending is the result of their attempts to bridge that gap. As the maturity gap closes with time, inducements for offending behavior disappear and the adolescence-limited offending behavior stops.

ALs do not have a history of antisocial behavior in childhood, which means that they have an established repertoire of conventional, prosocial behavior. Their offending behavior is the result of temporary experimentation with delinquency that emerges alongside puberty. It is ultimately rooted [p. 647 ↓] in social processes; ALs mimic the antisocial behavior of their LCP peers. As they reach mature status and acquire the consequent autonomy, the strain of the maturity gap lessens and ultimately disappears, and the ALs return to conventional behavior. Adolescence-limited offenders, by definition, desist as they emerge into young adulthood.

Empirical Status

Life-Course-Persisters

The empirical status of Moffitt's theory can generally be regarded as favorable, with some suggestions in the literature for further specification and refinement of the theory. Much of the empirical research focuses on the life-course-persisters. The existence of a group of LCP-like offenders is empirically supported by a host of studies. Daniel Nagin and Kenneth Land, for example, identified four patterns of offending in a sample of 403 British males studied from ages 8 to 32. These four groups included non-offenders, low-level chronics, adolescence-limiteds, and high-level chronics.

Moffitt's own empirical tests have been conducted on data from the Dunedin Multidisciplinary Health and Development Study, a 33-year longitudinal study of a birth cohort of 1,037 New Zealanders born in 1972 and 1973.

Using data from a birth cohort of several hundred New Zealand males, Moffitt, Donal Lynam, and Phil Silva found that neuropsychological deficits were associated with early onset of delinquency and persistent offending thereafter. Poor verbal ability is particularly predictive of LCP offending. In addition, neuropsychological status did not appear to be significantly related to adolescent-onset delinquency.

In a study of the males and females from the Dunedin data, Moffitt and Caspi found that early onsetters had childhoods marked by inadequate parenting, neurocognitive problems, difficult temperaments, and behavioral problems. Those who experienced adolescent-onset of delinquent behavior did not evince these childhood risk factors.

In an important follow-up of the Dunedin cohort to age 26, Moffitt et al. (2002) tested an essential assertion of the theory: "that childhood-onset, but not adolescent-onset, antisocial behavior is associated in adulthood with antisocial personality, violence, and continued serious antisocial behavior that expands into maladjustment in work life and victimization of partners and children" (p. 180). Their findings support the original tenets of the theory and also demonstrate the presence of heterotypic continuity, or behavioral coherence, whereby antisocial tendencies are expressed across a variety of behavioral domains.

Adolescence-Limiteds

Additional empirical evidence supports Moffitt's hypothesis that adolescence-limited offending is motivated by the co-occurrence of strain resulting from a maturity gap and social mimicry of persistent delinquent peers. From the Dunedin data, Moffitt and Caspi observe that offending among ALs is more strongly correlated with peer delinquency than that of LCPs. In their 2001 analysis of the Youth in Transition data, Alex Piquero and Timothy Brezina found that adolescence-limited offending is motivated, at least in part, by a desire for autonomy. Their findings suggest that the delinquency of the ALs is rebellious but not aggressive, and their research supports Moffitt's hypothesis that

the interaction between the onset of puberty with a craving for adult social roles and autonomy is a causal factor in the ALs' delinquency.

David Fergusson, L. John Horwood, and Nagin identified a group of adolescent-onset offenders in their examination of the Christchurch Health and Development study data, which tracks 900 New Zealand children from birth through age 18. They also identified a group that resembled the LCPs, a group of abstainers, and a group they referred to as moderate risk offenders. They used semi-parametric group-based modeling to examine the etiological trajectories of each group. They found that deviant peer affiliations were an important factor in adolescent-onset of offending, but only when such affiliation occurs in the presence of pre-existing moderate risk. These findings suggest that Moffitt's theoretical explanation for ALs' offending behavior may require some consideration of an interaction effect.

Additional Groups

Fergusson and his colleagues are not the only ones who have found evidence of an offending [p. 648 ↓] pattern not posited in Moffitt's taxonomy. A third offending prototype emerges across multiple studies and from multiple datasets: the low-level chronics. They offend at low but consistent rates into adulthood, regardless of whether they onset or begin offending in childhood or adolescence. This group was originally given the misnomer "recoveries." Longer term follow-up revealed, however, that what was first thought to be early recovery—that is, a fully realized desistance—was in fact a period of intermittency (Moffitt et al., 2002).

The existence of this group demanded some theoretical revision and extension. According to the original articulation of the theory, those individuals who experience early onset of problem behavior are predicted to continue on to persistent and serious offending, while those who onset during adolescence will experiment only during adolescence and then will desist as they enter young adulthood and take on the attendant adult social roles. The low-level chronics defy these predictions on both counts. The 26-year follow-up data suggest that this group is indistinguishable from the LCPs in childhood but differs in adulthood in that their pathology is internalized. Low-

level chronics exhibit depression, anxiety disorders, neuroticism, and social isolation as young adults (Moffitt et al., 2002).

The follow-up study also prompted Moffitt and her colleagues to revisit the parameters of adolescence-limited offending. A nontrivial number of the ALs were still offending at age 26. Moffitt asserts that the explanation for this observation lies in the prolonged maturity gap experienced by later birth cohorts. It is possible that for more contemporary cohorts, true adulthood now begins after age 25. In this case, the continued antisocial behavior at age 26, even among those designated as ALs, is still consistent with the original tenets of the theory. Further bolstering this possibility is the relative success of the ALs compared to the LCPs in the domains of work, education, relationships, health, and mental well-being.

Criticisms and Controversies

John Laub and Robert Sampson have described Moffitt's dual taxonomy as one of the most influential developmental accounts of persistence and desistance in offending. They are also among her most vocal critics. Their concerns with Moffitt's taxonomy take two general forms. Broadly speaking, Sampson and Laub question the assumption that offender typologies are necessary for understanding continuity and change. Specifically, they are concerned that Moffitt overstates the persistence of the LCP, and that prospective identification of offending trajectories is futile, as criminologists are unable to do so with any degree of accuracy given the actuarial strategies currently at their disposal.

Laub and Sampson feel that Moffitt overstates the continuity of the LCPs, or put differently, she understates the possibility for change in the LCPs. Based on their follow-up of to age 70 of a sample of boys from Boston initially studied starting in the 1930s by Sheldon and Eleanor Glueck, Sampson and Laub conclude that everyone desists at some point. As such, there is no such thing in the literal sense as the "life-course" persister. The theoretical implication of this observation is that childhood characteristics are not sufficient to accurately predict long-term trajectories of offending. They criticize the post-hoc nature of Moffitt's typology, and they offer data and analysis to suggest that, when tested prospectively, the precepts of Moffitt's taxonomy do not hold. "One

fundamental problem is that most typological approaches in criminology are atheoretical and post hoc” (Laub & Sampson, 2003, p. 287). According to Laub and Sampson, Moffitt's theory is defined prospectively but is always tested retrospectively, and this has led to disingenuous support for the theory.

Their analysis of the follow-up Glueck data suggests that early childhood predictors do not prospectively distinguish the various groups of offenders. That is, group membership is not predictable based on individual, childhood, and adolescent risk factors. They interpret this finding as a significant challenge to Moffitt's position that the causal factors of life-course-persistent offending are located in early childhood. All of those goes to echo Sampson and Laub's enduring point that heterogeneity in adult criminal trajectories cannot be explained by childhood differences.

The Meaning of Groups

There are several sources of debate inherent in any use of a typology or offender classification [p. 649 ↓] system. A logistic question concerns how many groups are necessary to completely but parsimoniously characterize the population. The debate on this point has both theoretical and methodological facets. Moffitt originally proposed two offending groups, but much research has noted the existence of four, five, or even six groups of empirically identified patterns of offending. Additionally, the reality of intermittency in offending is underdeveloped in most developmental theory (Piquero & Moffitt, 2005). Gaps in offending are widely observed and readily acknowledged, but we know little about the causal pathways in and out of offending in the short term. Moffitt is relatively silent on the topic of intermittency, but the recently identified low-level chronics may be a step in a fruitful direction.

Theoretically, criminologists must ask what these groups actually represent. Are they meaningful groups with clear delineation, or are they an organizing heuristic with applications for theory development but little practical applicability? Barbara Maughan describes debates that have arisen in conjunction with developmental theory exploration, including the differing contributions of categorical versus dimensional approaches to conceptualizing antisocial behavior. She concludes that both approaches have much to offer.

Empirical Concerns

Continued testing and verification of offending patterns remains an empirical priority, but there is also a paucity of empirical work on race and sex differences and the applicability of the theory to females and racial minorities. Persephanie Silverthorn and Paul Frick, for example, question whether the taxonomy applies to girls. They assert that there is no early-starter pathway for girls. Rather, female offending is characterized by a single developmental trajectory and by late onset of offending. Both Fergusson and Horwood (2002) and Moffitt and Caspi (2001) offer evidence to contradict this notion and conclude that Moffitt's theory provides a parsimonious account of the etiology of antisocial behavior for both males and females.

Policy Implications

Moffitt's taxonomy of offending has important implications for prevention and intervention policy, in terms of both identifying the best subjects for intervention and for the appropriate causal variables to target. Although adolescence-limited offending is near ubiquitous, it is a less troubling form of delinquency. According to Moffitt's theory, it essentially resolves itself within a relatively short period of time. While the ALs are the larger of the offending groups, their delinquent and criminal behavior is not the most harmful. The offending of the LCPs, on the other hand, is more likely to be serious and by definition continues over a much longer period of time. The LCPs, then, represent the most efficacious target for prevention and intervention.

Several of the neuropsychological deficits implicated in the etiology of LCP offending are preventable. Poor prenatal nutrition, prenatal drug and alcohol abuse, and organic damages from injury or exposure to toxic substances, for example, represent ideal venues for intervention to disrupt the causal process toward persistent offending. Recall, though, that the continuity evinced by the LCP is the product of an interaction between their neuropsychological vulnerabilities and their socializing environment. It is possible, then, that increased support for parents and caregivers of children with

these challenges could also provide a helpful venue for prevention as well (Farrington & Welsh, 2007).

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See also

- [Criminal Career Paradigm](#)
- [Farrington, David P.: The Integrated Cognitive Antisocial Potential Theory](#)
- [Giordano, Peggy C., and Stephen A. Cernkovich: Cognitive Transformation and Desistance](#)
- [Le Blanc, Marc: An Integrated Personal Control Theory of Deviant Behavior](#)
- [Loeber, Rolf, and Magda Stouthamer-Loeber: Pathways to Crime](#)
- [Maruna, Shadd: Redemption Scripts and Desistance](#)
- [Sampson, Robert J., and John H. Laub: Age-Graded Theory of Informal Social Control](#)

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