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The SAGE Handbook of Criminological Theory

Life-Course and Developmental Theories in Criminology

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Chapter 13: Life-Course and Developmental Theories in Criminology

[p. 249 ↓] Developmental and life-course criminology (DLC) is concerned mainly with three topics: (a) the development of offending and antisocial behaviour from the womb to the tomb; (b) the influence of risk and protective factors at different ages; and (c) the effects of life events on the course of development. In this chapter, I will first briefly review the current state of knowledge on these topics, then I will briefly review seven major DLC theories, and finally I will present my own DLC theory, called the Integrated Cognitive-Antisocial Potential (ICAP) theory.

DLC theories aim to explain offending by individuals (as opposed to crime rates of areas, for example). 'Offending' refers to the most common crimes of theft, burglary, robbery, violence, vandalism, minor fraud, and drug use, and to behaviour that in principle might lead to a conviction in Western industrialized societies such as the United States and the United Kingdom. These theories aim to explain results on offending obtained with both official records and self-reports. Generally, DLC findings and theories particularly apply to offending by lower class urban males in developed countries in the last 80 years or so. To what extent they apply to other types of persons (e.g., middle class rural females) or offences (e.g., white collar crimes or sex offences against children) are important empirical questions that I will not attempt to address here.

In conducting research on development, risk and protective factors, life events and DLC theories, it is essential to carry out prospective longitudinal surveys. I have directed the Cambridge Study in Delinquent Development, which is a prospective longitudinal survey of over 400 London males from age 8 to age 48 (Farrington [p. 250 ↓] *et al.*, 2006, 2009c). The main reason why developmental and life course criminology became important during the 1990s was because of the enormous volume and significance of

longitudinal research on offending that was published during this decade. Particularly influential were the three 'Causes and Correlates' studies originally mounted by the U.S. Office of Juvenile Justice and Delinquency Prevention in Denver, Pittsburgh and Rochester (Huizinga *et al.*, 2003; Loeber *et al.*, 2003; Thornberry *et al.*, 2003). Other important longitudinal projects that came to prominence in the 1990s were the Seattle Social Development Project (Hawkins *et al.*, 2003), the Dunedin study in New Zealand (Moffitt *et al.*, 2001) the Montreal Longitudinal-Experimental study (Tremblay *et al.*, 2003), and the further analyses by Laub and Sampson (2003) of the classic Gluecks' study.

What Do We Know?

I begin with 10 widely accepted conclusions about the development of offending that any DLC theory must be able to explain. First, the prevalence of offending peaks in the late teenage years between ages 15 and 19 (Farrington, 1986). Second, the peak age of onset of offending is between 8 and 14, and the peak age of desistance from offending is between 20 and 29 (Farrington, 1992). Third, an early age of onset predicts a relatively long criminal career duration and the commission of relatively many offences (Farrington *et al.*, 1998).

Fourth, there is marked continuity in offending and antisocial behaviour from childhood to the teenage years and to adulthood (Farrington, 1989, 1992). What this means is that there is relative stability of the ordering of people on some measure of antisocial behaviour over time, and that people who commit relatively many offences during one age range have a high probability of also committing relatively many offences during another age range. However, neither of these statements is incompatible with the assertion that the prevalence of offending varies with age or that many antisocial children become conforming adults. Between-individual stability in antisocial ordering is perfectly compatible with within-individual change in behaviour over time (Farrington, 1990). For example, people may graduate from cruelty to animals at age 6 to shoplifting at age 10, burglary at age 15, robbery at age 20, and eventually spouse assault and child abuse later in life. Generally, continuity in offending reflects persistent heterogeneity (the persistence of between-individual differences) rather than state dependence (a facilitating effect of earlier offending on later offending), although both

processes can occur (Nagin and Farrington, 1992). There is also continuity in offending from one generation to the next (Farrington *et al.*, 2009a).

Fifth, a small fraction of the population (the 'chronic' offenders) commit a large fraction of all crimes (Farrington and West, 1993). In general, these chronic offenders have an early onset, a high individual offending frequency, and a long criminal career. Sixth, offending is versatile rather than specialized. For example, violent offenders are indistinguishable from frequent offenders in childhood, adolescent, and adult risk factors (Farrington, 1991b). Seventh, the types of acts defined as offences are elements of a larger syndrome of antisocial behaviour, including heavy [p. 251 ↓] drinking, reckless driving, sexual promiscuity, bullying, and truancy. Offenders tend to be versatile not only in committing several types of crimes but also in committing several types of antisocial behaviour (Farrington, 1991a).

Eighth, most offences up to the late teenage years are committed with others, whereas most offences from age 20 onwards are committed alone (Reiss and Farrington, 1991). This aggregate change is not caused by dropping out processes, or group offenders desisting earlier than lone offenders. Instead, there is change within individuals; people change from group offending to lone offending as they get older. Ninth, the reasons given for offending up to the late teenage years are quite variable, including utilitarian ones (e.g., to obtain material goods or for revenge), for excitement or enjoyment (or to relieve boredom), or because people get angry (in the case of violent crimes). In contrast, from age 20 onwards, utilitarian motives become increasingly dominant (Farrington, 1993). Tenth, different types of offences tend to be first committed at distinctively different ages. For example, shoplifting is typically committed before burglary, which in turn is typically committed before robbery (LeBlanc and Frechette, 1989). In general, there is increasing diversification of offending up to age 20; as each new type of crime is added, previously committed crimes continue to be committed. Conversely, after age 20, diversification decreases and specialization increases (Piquero *et al.*, 1999).

The main risk factors for the early onset of offending before age 20 are well known (Farrington, 2009): individual factors (low intelligence, low school achievement, hyperactivity-impulsiveness and risk-taking, antisocial child behaviour including aggression and bullying), family factors (poor parental supervision, harsh discipline

and child physical abuse, inconsistent discipline, a cold parental attitude and child neglect, low involvement of parents with children, parental conflict, broken families, criminal parents, delinquent siblings), socio-economic factors (low family income, large family size), peer factors (delinquent peers, peer rejection and low popularity), school factors (a high delinquency rate school) and neighbourhood factors (a high crime neighbourhood). Less is known about promotive and protective factors (see Loeber *et al.*, 2008).

The main life events that encourage desistance after age 20 are getting married, getting a satisfying job, moving to a better area and joining the military (Farrington and West, 1995; Horney *et al.*, 1995; Laub and Sampson, 2001). The distinction between risk factors and life events is not clear-cut, since some life events may be continuing experiences whose duration is important (e.g., a marriage or a job), while some risk factors may occur at a particular time (e.g., loss of a parent). Other life events (e.g., converting to religion) may be important but have been studied less.

While the focus in DLC is on the development of offenders, it is important not to lose sight of factors that influence the commission of offences. It is plausible to assume that offences arise out of an interaction between the person (with a certain degree of criminal potential) and the environment (including opportunities and victims). Existing evidence suggests that people faced with criminal opportunities take account of the subjectively perceived benefits and costs of offending (compared with other possible activities) in deciding whether or not to offend (Clarke and Cornish, 1985). DLC theories should explain the commission of offences as well as the development of offenders.

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Life Events and Changes within Individuals

Developmental and life-course criminology aims to investigate the effects of life events on the course of development of antisocial behaviour. In the Cambridge Study, going to a high delinquency-rate school at age 11 did not seem to amplify the risk of offending, since badly behaved boys tended to go to high delinquency-rate schools (Farrington, 1972). However, getting convicted did lead to an increase in offending, according to the

boys' self-reports, and a plausible intervening mechanism was increased hostility to the police (Farrington, 1977). Unemployment also caused an increase in offending, but only for crimes leading to financial gain, such as theft, burglary, robbery and fraud. There was no effect of unemployment on other offences such as violence, vandalism or drug use, suggesting that the link between unemployment and offending was mediated by lack of money rather than boredom (Farrington *et al.*, 1986).

It is often believed that marriage to a good woman is one of the most effective treatments for male offending, and indeed Farrington and West (1995) found that getting married led to a decrease in offending compared with staying single. Also, later separation from a wife led to an increase in offending compared with staying married, and the separated men were particularly likely to be violent. Another protective life event was moving out of London, which led to a decrease in self-reported violence (Osborn, 1980). This was probably because of the effect of the move in breaking up delinquent groups.

Studies of the effects of life events on the course of development usually involve within-individual analyses. A major problem with most research in criminology is that knowledge about risk factors is based on between-individual differences. For example, it is demonstrated that children who receive poor parental supervision are more likely to offend than other children who receive good parental supervision, after controlling for other between-individual factors that influence both parental supervision and offending. However, within-individual variations are more relevant to the concept of cause, as well as to prevention or intervention research (which requires within-individual change). For example, if it was demonstrated that children were more likely to offend during time periods when they were receiving poor parental supervision than during time periods when they were receiving good parental supervision, this would be more compelling evidence that poor parental supervision caused offending. Since the same individuals are followed up over time, many extraneous influences on offending are controlled (Farrington, 1988).

Research is also needed that systematically compares results obtained in within-individual analyses and between-individual analyses. In the Pittsburgh Youth Study, which is a prospective longitudinal survey of over 1,500 Pittsburgh boys, Farrington *et al.* (2002) found that poor parental supervision predicted a boy's delinquency both

between and within individuals, but peer delinquency predicted a boy's delinquency between individuals but not within individuals. In other words, changes in peer delinquency within individuals (from one assessment to the next) did not predict changes in a boy's delinquency over time. This suggested that peer delinquency might not be a cause of a boy's delinquency but might instead be measuring the same underlying construct (perhaps reflecting co-offending). The message is that risk factors that predict offending between individuals may not predict offending within [p. 253 ↓] individuals, so that implications drawn from between-individual comparisons about causes and interventions may not be valid.

Developmental and Life-Course Theories

I now summarize some of the key features of seven leading DLC theories, ordered roughly from the more psychological to the more sociological. More details about all of these theories can be found in Farrington (2005a). Whereas traditional criminological theories aimed to explain between-individual differences in offending, such as why lower-class boys commit more offences than upper-class boys, DLC theories aim to explain within-individual changes in offending over time.

Lahey and Waldman

Lahey and Waldman (2005) aimed to explain the development of conduct disorder and juvenile delinquency, focussing particularly on childhood and adolescence. Their developmental propensity theory is influenced by data collected in the Developmental Trends Study (Loeber *et al.*, 2000). They do not address adult life events or attempt to explain desistance in the adult years, for example. They assume that it is desirable to distinguish different types of people, but they propose a continuum of developmental trajectories rather than only two categories of adolescence-limited and life-course-persistent offenders, for example.

Their key construct is antisocial propensity, which tends to persist over time and has a wide variety of behavioural manifestations, reflecting the versatility and comorbidity of antisocial behaviour. The most important factors that contribute to antisocial propensity

are low cognitive ability (especially verbal ability), and three dispositional dimensions: prosociality (including sympathy and empathy, as opposed to callous-unemotional traits), daring (uninhibited or poorly controlled), and negative emotionality (e.g., easily frustrated, bored, or annoyed). These four factors are said to have a genetic basis, and Lahey and Waldman discuss geneenvironment interactions.

In an important empirical test of this theory, Lahey *et al.* (2006) analysed data collected in the Pittsburgh Youth Study and found that prosociality (negatively), daring and negative emotionality at age 7 independently predicted self-reported delinquency between ages 11 and 17. Furthermore, these predictions held up after controlling for major demographic predictors of delinquency such as family income, the mother's education and ethnicity. In the latest test, Lahey *et al.* (2008) developed the Child and Adolescent Dispositions Scale (CADS) to measure the three dimensions and showed that these predicted conduct disorder in three samples in Georgia, Chicago and Pittsburgh.

Moffitt

Moffitt (1993) proposed that there are two qualitatively different categories of antisocial people (differing in kind rather than in degree), namely life-course-persistent [p. 254 ↓] (LCP) and adolescence-limited (AL) offenders. As indicated by these terms, the LCPs start offending at an early age and persist beyond their twenties, while the ALs have a short criminal career largely limited to their teenage years. The LCPs commit a wide range of offences including violence, whereas the ALs commit predominantly 'rebellious' non-violent offences such as vandalism. This theory aims to explain findings in the Dunedin longitudinal study (Moffitt *et al.*, 2001).

The main factors that encourage offending by the LCPs are cognitive deficits, an undercontrolled temperament, hyperactivity, poor parenting, disrupted families, teenage parents, poverty, and low SES. Genetic and biological factors, such as a low heart rate, are important. There is not much discussion of neighbourhood factors, but it is proposed that the neuropsychological risk of the LCPs interacts multiplicatively with a disadvantaged environment. The theory does not propose that neuropsychological deficits and a disadvantaged environment influence an underlying construct such as

antisocial propensity; rather, it suggests that neuropsychological and environmental factors are the key constructs underlying antisocial behaviour.

The main factors that encourage offending by the ALs are the 'maturity gap' (their inability to achieve adult rewards such as material goods during their teenage years) and peer influence (especially from the LCPs). Consequently, the ALs stop offending when they enter legitimate adult roles and can achieve their desires legally. The ALs can easily stop because they have few neuropsychological deficits.

The theory assumes that there can be labelling effects of 'snares' such as a criminal record, incarceration, drug or alcohol addiction, and (for girls) unwanted pregnancy, especially for the ALs. However, the observed continuity in offending over time is largely driven by the LCPs. The theory focusses mainly on the development of offenders and does not attempt to explain why offences are committed. However, it suggests that the presence of delinquent peers is an important situational influence on ALs, and that LCPs seek out opportunities and victims.

Decision-making in criminal opportunities is supposed to be rational for the ALs (who weigh likely costs against likely benefits) but not for the LCPs (who largely follow well-learned 'automatic' behavioural repertoires without thinking). However, the LCPs are mainly influenced by utilitarian motives, whereas the ALs are influenced by teenage boredom. Adult life events such as getting a job or getting married are hypothesized to be of little importance, because the LCPs are too committed to an antisocial life-style and the ALs desist naturally as they age into adult roles.

Possibly because it is arguably the earliest and most famous DLC theory, there has been more empirical research on this theory than on any others. Moffitt (2006) published a very impressive review of 10 years of research on her theory. While many of the predictions were confirmed, she discussed the need for additional categories of individuals: abstainers (who were overcontrolled, fearful, sexually timid, and unpopular), low-level chronics (who were undercontrolled like the LCPs, with family adversity, parental psychopathology, and low intelligence) and adult-onset offenders (whose existence was doubtful according to Moffitt). She argued that the abstainers in adolescence did not become adult-onset offenders, but Zara and Farrington (2009) found that adult-onset offenders in the Cambridge Study tended to be nervous and to

have few friends at age 810, as well as still being sexual virgins at age 18. In one of the latest papers on the Moffitt theory, Odgers *et al.* (2008) [p. 255 ↓] reported similar trajectories (and associated childhood origins and adult consequences) for males and females in the Dunedin study: LCP, adolescent-onset, childhood-limited, and low-level problems.

Catalano and Hawkins

According to Catalano *et al.* (2005), the Social Development Model (SDM) integrates social control/bonding, social learning and differential association theories, but does not include strain theory postulates. Their key construct is bonding to society (or socializing agents), consisting of attachment and commitment. The key construct underlying offending is the balance between antisocial and prosocial bonding. Continuity in antisocial behaviour over time depends on continuity in this balance. The main motivation that leads to offending and antisocial behaviour is the hedonistic desire to seek satisfaction and follow self-interest. This is opposed by the bond to society. Offending is essentially a rational decision in which people weigh the benefits against the costs. There is no assumption about different types of offenders. This theory aims to explain findings in the Seattle Social Development Project (Hawkins *et al.*, 2003).

There are two causal pathways, leading to antisocial or prosocial bonding. On the prosocial pathway, opportunities for prosocial interaction lead to involvement in prosocial behaviour; involvement and skills for prosocial behaviour lead to rewards for prosocial behaviour, which lead to prosocial bonding and beliefs. On the antisocial pathway, opportunities for antisocial interaction lead to involvement in antisocial behaviour; involvement and skills for antisocial behaviour lead to rewards for antisocial behaviour, which lead to antisocial bonding and beliefs. Hence, the antisocial pathway specifies factors encouraging offending and the prosocial pathway specifies factors inhibiting offending. Opportunities, involvement, skills and rewards are part of a socialization process. People learn prosocial and antisocial behaviour according to socialization by families, peers, schools and communities.

The SDM specifies that demographic factors (such as age, race, gender, and social class) and biological factors (such as difficult temperament, cognitive ability, low

arousal and hyperactivity) influence opportunities and skills in the socialization process. There are somewhat different models for different developmental periods (preschool, elementary school, middle school, high school, young adulthood). For example, in the first two periods interaction with prosocial or antisocial family members is the most important, while in the other two periods interaction with prosocial or antisocial peers is the most important.

The development of offending and the commission of offences are not explicitly distinguished in the SDM. However, the theory includes prosocial and antisocial opportunities as situational factors and suggests that the perceived rewards and costs of antisocial behaviour influence the decision to offend. Motives for offending (e.g., utilitarian or excitement) are included under the heading of perceived rewards and costs. Neighbourhood factors, official labelling, and life events are important only insofar as they influence the key constructs of opportunities, involvement, skills, rewards, and bonding. For example, official labelling may increase involvement with antisocial people and marriage may increase prosocial opportunities and involvement.

[p. 256 ↓] In an empirical test of the SDM, Brown *et al.* (2005) found that not all relationships were fully mediated by SDM constructs. In particular, cognitive and socio-emotional skills influenced antisocial behaviour directly rather than through bonding and beliefs. The SDM has inspired an intervention programme called *Communities That Care* or CTC (Hawkins and Catalano, 1992). The effectiveness of this programme in reducing antisocial behaviour is being tested in an ambitious experiment (the Community Youth Development Study or CYDS) in which 24 communities have been randomly assigned to experimental or control conditions. Early results suggest that the CYDS is effective in reducing risk factors and delinquency (Hawkins *et al.*, 2008). CTC was evaluated in three UK sites by Crow *et al.* (2004) but implementation problems make it difficult to draw firm conclusions about its effectiveness from this evaluation.

LeBlanc

LeBlanc (1997, 2005) proposed an integrative multilayered control theory that explains the development of offending, the occurrence of criminal events, and community crime rates. This is undoubtedly the most complex of the DLC theories. The key construct

underlying offending is general deviance, and LeBlanc discusses its structure and how it changes over time. According to his theory, the development of offending depends on four mechanisms of control: bonding to society (including family, school, peers, marriage and work), psychological development over time (especially away from egocentrism and towards 'allocentrism'), modelling (prosocial or antisocial), and constraints (external, including socialization, and internal, including beliefs).

LeBlanc assumes that environmental factors (e.g., social class and neighbourhood) influence bonding while biological capacity (including difficult temperament) influences psychological development. Bonding and psychological development influence modelling and constraints, which are proximate influences on general deviance and hence on offending. There is continuity in offending because the relative ordering of people on control mechanisms stays fairly consistent over time. This theory aims to explain findings in LeBlanc's Montreal longitudinal surveys of adolescents and delinquents (e.g., LeBlanc and Frechette, 1989).

LeBlanc proposes that there are three types of offenders: persistent, transitory, and common. Persistent offenders are most extreme on weak bonding, egocentrism, antisocial modelling, and low constraints. Common offenders are largely influenced by opportunities, while transitory offenders are in the middle (in having moderate control and being moderately influenced by opportunities). His theory includes biological and neighbourhood factors, but they are assumed to have indirect effects on offending through their effects on the constructs of bonding and psychological development. Similarly, he assumes that life events have effects via the constructs and that labelling influences external constraints. The theory includes learning processes and socialization but does not include strain theory assumptions.

LeBlanc's (1997) theory of criminal events suggests that they depend on community control (e.g., social disorganization), personal control (rational choice ideas of decision-making), self-control (impulsiveness, vulnerability to temptations), opportunities, routine activities and guardianship (e.g., physical protection).

[p. 257 ↓] People are viewed as hedonistic, and motives (e.g. excitement or utilitarian) are considered.

LeBlanc (2009) has provided the latest statement of this theory, which increasingly focusses on the 'chaos-order' paradigm. According to this, the complexity of deviant behaviour increases over time, from two types in early childhood to nine types at the end of adolescence. At all points, there are reciprocal relationships between types of deviance, with one type leading to another. Analyses of the Montreal surveys were presented to show how types of delinquency and substance use were inter-related within and between different ages.

Thornberry and Krohn

The interactional theory of Thornberry and Krohn (2005) particularly focusses on factors encouraging antisocial behaviour at different ages. It is influenced by findings in the Rochester Youth Development Study (Thornberry *et al.*, 2003). They do not propose types of offenders but suggest that the causes of antisocial behaviour vary for children who start at different ages. At the earliest ages (birth to 6), the three most important factors are neuropsychological deficit and difficult temperament (e.g., impulsiveness, negative emotionality, fearlessness, poor emotion regulation), parenting deficits (e.g., poor monitoring, low affective ties, inconsistent discipline, physical punishment), and structural adversity (e.g., poverty, unemployment, welfare dependency, a disorganized neighbourhood). They also suggest that structural adversity might cause poor parenting.

Neuropsychological deficits are less important for children who start antisocial behaviour at older ages. At ages 6-12, neighbourhood and family factors are particularly salient, while at ages 12-18 school and peer factors dominate. Thornberry and Krohn also suggest that deviant opportunities, gangs, and deviant social networks are important for onset at ages 12-18. They propose that late starters (ages 18-25) have cognitive deficits such as low IQ and poor school performance but that they were protected from antisocial behaviour at earlier ages by a supportive family and school environment. At ages 18-25, they find it hard to make a successful transition to adult roles such as employment and marriage.

The most distinctive feature of this interactional theory is its emphasis on reciprocal causation. For example, it is proposed that the child's antisocial behaviour elicits coercive responses from parents and rejection by peers and makes antisocial behaviour

more likely in the future. The theory does not postulate a single key construct underlying offending but suggests that children who start early tend to continue because of the persistence of neuropsychological and parenting deficits and structural adversity. Interestingly, Thornberry and Krohn predict that late starters (ages 18-25) will show more continuity over time than earlier starters (ages 12-18) because the late starters have more cognitive deficits. In an earlier exposition of the theory (Thornberry and Krohn, 2001), they proposed that desistance was caused by changing social influences (e.g., stronger family bonding), protective factors (e.g., high IQ and school success), and intervention programmes. Hence, they do think that criminal justice processing has an effect on future offending.

Recently, Thornberry (2005) has extended this theory to explain the intergenerational transmission of antisocial behaviour. He suggested that the parent's prosocial [p. 258 ↓] or antisocial bonding, structural adversity, stressors and ineffective parenting mediated the link between the parent's antisocial behaviour and the child's antisocial behaviour. Thornberry *et al.* (2009) tested these ideas in the Rochester Intergenerational Study and concluded that parental stress and ineffective parenting were the most important mediating factors.

Wikström

Wikström (2005) proposed a developmental ecological action theory that aims to explain moral rule breaking. The key construct underlying offending is individual criminal propensity, which depends on moral judgement and self-control. In turn, moral values influence moral judgement, and executive functions influence self-control. Wikström does not propose types of offenders. The motivation to offend arises from the interaction between the individual and the setting. For example, if individual propensity is low, features of the setting (persons, objects, and events) become more important. Continuity or change in offending over time depends on continuity or change in moral values, executive functions, and settings.

Situational factors are important in Wikström's theory, which aims to explain the commission of offences as well as the development of offenders. Opportunities cause temptation, friction produces provocation, and monitoring or the risk of sanctions has

a deterrent effect. The theory emphasizes perception, choice, and human agency in deciding to offend. Learning processes are included in the theory, since it is suggested that moral values are taught by instruction and observation in a socialization process and that nurturing (the promotion of cognitive skills) influences executive functions. Life events also matter, since it is proposed that starting school, getting married (etc.) can trigger changes in constructs such as moral teaching and monitoring and hence influence moral rule breaking.

In the most recent statement of his 'Situational Action Theory', Wikström (2010) emphasizes that criminal acts (moral rule-breaking) arise from the interaction between individual (propensity) and environmental (moral context) factors. The main motivating factors are temptation and provocation. Whether criminal acts are committed depends partly on well-entrenched habits and partly on rational deliberation. The choice process, which Wikström terms a 'situational mechanism' depends on free will and on the action alternatives as perceived by a person. Wikström intends to test this theory in his Peterborough Adolescent and Young Adult Development Study (PADS).

Sampson and Laub

The key construct in Sampson and Laub's (2005) theory is age-graded informal social control, which means the strength of bonding to family, peers, schools, and later adult social institutions such as marriages and jobs. Sampson and Laub primarily aimed to explain why people do not commit offences, on the assumption that why people want to offend is unproblematic (presumably caused by hedonistic desires) and that offending is inhibited by the strength of bonding to society. Their theory is influenced by their analyses of the Glueck follow-up study of male [p. 259 ↓] delinquents and non-delinquents (Laub and Sampson, 2003; Sampson and Laub, 1993).

The strength of bonding depends on attachments to parents, schools, delinquent friends, and delinquent siblings, and also on parental socialization processes such as discipline and supervision. Structural background variables (e.g., social class, ethnicity, large family size, criminal parents, disrupted families) and individual difference factors (e.g., low intelligence, difficult temperament, early conduct disorder) have indirect

effects on offending through their effects on informal social control (attachment and socialization processes).

Sampson and Laub are concerned with the whole life course. They emphasize change over time rather than consistency, and the poor ability of early childhood risk factors to predict later life outcomes. They focus on the importance of later life events (adult turning points) such as joining the military, getting a stable job, and getting married in fostering desistance and 'knifing off' the past from the present. They also suggest that neighbourhood changes can cause changes in offending. Because of their emphasis on change and unpredictability, they deny the importance of types of offenders such as 'life-course-persisters'. They suggest that offending decreases with age for all types of offenders (Sampson and Laub, 2003).

Sampson and Laub do not explicitly include immediate situational influences on criminal events in their theory, and believe that opportunities are not important because they are ubiquitous (Sampson and Laub, 1995). However, they do suggest that having few structured routine activities is conducive to offending. They focus on why people do not offend rather than on why people offend, and emphasize the importance of individual free will and purposeful choice ('human agency') in the decision to desist. They do not include strain theory ideas, but they propose that official labelling influences offending through its effects on job instability and unemployment. They argue that early delinquency can cause weak adult social bonds, which in turn fail to inhibit adult offending.

In their latest exposition of their theory, Sampson and Laub (2009) again argue against offender typologies and in favour of 'noisy, unpredictable development'. They contend that long-term patterns of offending cannot be explained by individual differences or childhood or adolescent characteristics, and that childhood variables are 'modest prognostic devices'. They further argue against the concept of 'developmental criminology' which they take to mean a 'predetermined unfolding' and in favour of the idea of 'life-course criminology' which (they say) refers to the constant interaction between the individual and the environment.

Happily, Sampson and Laub's predictions can be tested empirically. My own view is that childhood risk factors are better than 'modest' predictors of later offending. For example,

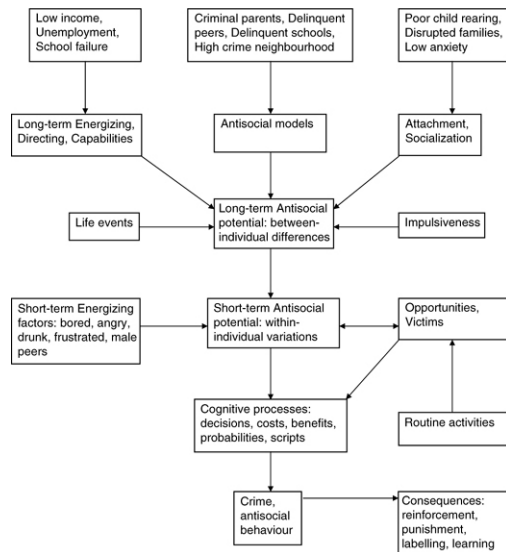
in the Cambridge Study, the percentage of boys who were convicted increased from 20 per cent of those with no childhood risk factors to 85 per cent of those with five or six childhood risk factors (Farrington *et al.*, 2009c). Similarly, in predicting adult offending, Sampson and Laub might expect that childhood variables would not predict independently of adult variables, but Farrington *et al.* (2009b) found several age 810 variables that predicted either onset or persistence in offending after age 21. More research is clearly needed, especially contrasting the polar opposite predictions of Moffitt (1993) and Sampson and Laub (2009).

[p. 260 ↓]

The Icap Theory

This theory was primarily designed to explain offending by lower class males, and it was influenced by results obtained in the Cambridge Study. I have called it the 'Integrated Cognitive Antisocial Potential' (ICAP) theory (see Farrington, 2005b). It integrates ideas from many other theories, including strain, control, learning, labelling and rational choice approaches; its key construct is antisocial potential (AP); and it assumes that the translation from antisocial potential to antisocial behaviour depends on cognitive (thinking and decision-making) processes that take account of opportunities and victims. [Figure 13.1](#) is deliberately simplified in order to show the key elements of the ICAP theory on one page; for example, it does not show how the processes operate differently for onset compared with desistance or at different ages.

Figure 13.1 The Integrated Cognitive-Antisocial Potential (ICAP) theory.



[p. 261 ↓] The key construct underlying offending is antisocial potential (AP), which refers to the potential to commit antisocial acts. I prefer the term ‘potential’ rather than ‘propensity’, because propensity has more biological connotations. ‘Offending’ refers to the most common crimes of theft, burglary, robbery, violence, vandalism, minor fraud and drug use, and to behaviour that in principle might lead to a conviction in Western industrialized societies such as the United States and the United Kingdom. Long-term persisting between-individual differences in AP are distinguished from short-term within-individual variations in AP. Long-term AP depends on impulsiveness, on strain, modelling and socialization processes, and on life events, while short-term variations in AP depend on motivating and situational factors.

Regarding long-term AP, people can be ordered on a continuum from low to high. The distribution of AP in the population at any age is highly skewed; relatively few people have relatively high levels of AP. People with high AP are more likely to commit many different types of antisocial acts including different types of offences. Therefore, offending and antisocial behaviour are versatile not specialized. The relative ordering of people on AP (long-term between-individual variation) tends to be consistent over time, but absolute levels of AP vary with age, peaking in the teenage years, because of changes within individuals in the factors that influence long-term AP (e.g.,

from childhood to adolescence, the increasing importance of peers and decreasing importance of parents).

A key issue is whether the model should be the same for all types of crimes or whether different models are needed for different types of crimes. Because of their focus on the development of offenders, DLC researchers have concluded that, because offenders are versatile rather than specialized, it is not necessary to have different models for different types of crimes. For example, it is believed that the risk factors for violence are essentially the same as for property crime or substance abuse. However, researchers who have focussed on situational influences (e.g., Clarke and Cornish, 1985) have argued that different models are needed for different types of crimes. It is suggested that situational influences on burglary may be very different from situational influences on violence.

One possible way to resolve these differing viewpoints would be to assume that long-term potential was very general (e.g., a long-term potential for antisocial behaviour), whereas short-term potential was more specific (e.g., a short-term potential for violence). The top half of the model in [Figure 13.1](#) could be the same for all types of crimes, whereas the bottom half could be different (with different situational influences) for different types of crimes.

In the interests of simplification, [Figure 13.1](#) makes the DLC theory appear static rather than dynamic. For example, it does not explain changes in offending at different ages. Since it might be expected that different factors would be important at different ages or life stages, it seems likely that different models would be needed at different ages. Perhaps parents are more important in influencing children, peers are more important in influencing adolescents, and spouses and partners are more important in influencing adults.

Long-Term Risk Factors

A great deal is known about risk factors that predict long-term persisting between-individual differences in antisocial potential. For example, in the Cambridge Study, [\[p. 262 ↓ \]](#) the most important childhood risk factors for later offending were

hyperactivity/impulsivity/attention deficit, low intelligence or low school attainment, family criminality, family poverty, large family size, poor child-rearing, and disrupted families (Farrington, 2003). [Figure 13.1](#) shows how risk factors are hypothesized to influence long-term AP. This figure could be expanded to specify promotive and protective factors and study different influences on onset, persistence, escalation, de-escalation and desistance.

I have not included measures of antisocial behaviour (e.g., aggressiveness or dishonesty) as risk factors because of my concern with explanation, prevention and treatment. These measures do not cause offending; they predict offending because of the underlying continuity over time in AP. Measures of antisocial behaviour are useful in identifying risk groups but less useful in identifying causal factors to be targeted by interventions. Similarly, I have not included variables that cannot be changed, such as gender or ethnicity. I assume that their relationships with offending are mediated by changeable risk factors.

A major problem is to decide which risk factors are causes and which are merely markers or correlated with causes (see Murray *et al.*, 2009). Ideally, interventions should be targeted on risk factors that are causes. Interventions targeted on risk factors that are merely markers will not necessarily lead to any decrease in offending. Unfortunately, when risk factors are highly intercorrelated (as is usual), it is very difficult to establish which are causes in between-individual research. For example, the particular factors that appear to be independently important as predictors in any analysis may be greatly affected by measurement error and by essentially random variations between samples.

It is also important to establish how risk factors or causes have sequential or interactive effects on offending. Following strain theory, the main energizing factors that potentially lead to high long-term AP are desires for material goods, status among intimates, excitement, and sexual satisfaction. However, these motivations only lead to high AP if antisocial methods of satisfying them are habitually chosen. Antisocial methods tend to be chosen by people who find it difficult to satisfy their needs legitimately, such as people with low income, unemployed people, and those who fail at school. However, the methods chosen also depend on physical capabilities and behavioural skills; for

example, a 5-year-old would have difficulty in stealing a car. For simplicity, energizing and directing processes and capabilities are shown in one box in [Figure 13.1](#).

Long-term AP also depends on attachment and socialization processes. AP will be low if parents consistently and contingently reward good behaviour and punish bad behaviour. (Withdrawal of love may be a more effective method of socialization than hitting children.) Children with low anxiety will be less well socialized, because they care less about parental punishment. AP will be high if children are not attached to (prosocial) parents, for example if parents are cold and rejecting. Disrupted families (broken homes) may impair both attachment and socialization processes.

Long-term AP will also be high if people are exposed to and influenced by antisocial models, such as criminal parents, delinquent siblings, and delinquent peers, for example in high crime schools and neighbourhoods. Long-term AP will also be high for impulsive people, because they tend to act without thinking about the consequences. Also, life events affect AP; it decreases (at least for males) after [\[p. 263 ↓\]](#) people get married or move out of high crime areas, and it increases after separation from a partner.

There may also be interaction effects between the influences on long-term AP. For example, people who experience strain or poor socialization may be disproportionately antisocial if they are also exposed to antisocial models. In the interests of simplicity, [Figure 13.1](#) does not attempt to show such interactions.

[Figure 13.1](#) shows some of the processes by which risk factors have effects on AP. It does not show biological factors but these could be incorporated in the theory at various points. For example, the children of criminal parents could have high AP partly because of genetic transmission, excitement-seeking could be driven by low cortical arousal, school failure could depend partly on low intelligence, and high impulsiveness and low anxiety could both reflect biological processes.

Many researchers have measured only one risk factor (e.g., impulsivity) and have shown that it predicts or correlates with offending after controlling for a few other 'confounding factors', often including social class. The message of [Figure 13.1](#) is: Don't forget the big picture. The particular causal linkages shown in [Figure 13.1](#) may not be

correct, but it is important to measure and analyse all important risk (and promotive and protective) factors in trying to draw conclusions about the causes of offending or the development of offenders.

Explaining the Commission of Crimes

According to the ICAP theory, the commission of offences and other types of antisocial acts depends on the interaction between the individual (with his immediate level of AP) and the social environment (especially criminal opportunities and victims). Short-term AP varies within individuals according to short-term energizing factors such as being bored, angry, drunk, or frustrated, or being encouraged by male peers. Criminal opportunities and the availability of victims depend on routine activities. Encountering a tempting opportunity or victim may cause a short-term increase in AP, just as a short-term increase in AP may motivate a person to seek out criminal opportunities and victims.

Whether a person with a certain level of AP commits a crime in a given situation depends on cognitive processes, including considering the subjective benefits, costs and probabilities of the different outcomes and stored behavioural repertoires or scripts (Huesmann, 1997). The subjective benefits and costs include immediate situational factors such as the material goods that can be stolen and the likelihood and consequences of being caught by the police. They also include social factors such as likely disapproval by parents or female partners, and encouragement or reinforcement from peers. In general, people tend to make decisions that seem rational to them, but those with low levels of AP will not commit offences even when (on the basis of subjective expected utilities) it appears rational to do so. Equally, high short-term levels of AP (e.g., caused by anger or drunkenness) may induce people to commit offences when it is not rational for them to do so.

The consequences of offending may, as a result of a learning process, lead to changes in long-term AP and in future cognitive decision-making processes. This is especially likely if the consequences are reinforcing (e.g., gaining material goods or peer approval) or punishing (e.g., receiving legal sanctions or parental disapproval).

[p. 264 ↓] Also, if the consequences involve labelling or stigmatizing the offender, this may make it more difficult for him to achieve his aims legally, and hence may lead to an increase in AP. (It is difficult to show these feedback effects in [Figure 13.1](#) without making it very complex.)

A further issue that needs to be addressed is to what extent types of offenders might be distinguished. Perhaps some people commit crimes primarily because of their high long-term AP (e.g., the life-course-persistent offenders of Moffitt, 1993) and others primarily because of situational influences and high short-term AP. Perhaps some people commit offences primarily because of situational influences (e.g., getting drunk frequently) while others offend primarily because of the way they think and make decisions when faced with criminal opportunities. From the viewpoint of both explanation and prevention, research is needed to classify types of people according to their most influential risk factors and most important reasons for committing crimes.

Conclusions

More efforts should be made to compare and contrast the different DLC theories point-by-point in regard to their predictions and their agreement with empirical results (see Farrington, 2006). For example, Farrington *et al.* (2009b) studied the development of adolescence-limited, late-onset, and persistent offenders from age 8 to age 48 in the Cambridge Study. They found that, contrary to Moffitt's theory, adolescence-limited offenders had several of the same risk factors as persistent offenders. Contrary to Sampson and Laub's theory, early risk factors were important in predicting which offenders would persist or desist after age 21. Many other results were relevant to DLC theories, but there is not space here to review the empirical adequacy of these theories in more detail.

In order to advance knowledge about DLC theories and test them, new prospective longitudinal studies are needed with repeated self-report and official record measures of offending. Future longitudinal studies should follow people up to later ages and focus on desistance processes. Past studies have generally focussed on onset and on ages up to 30 (Farrington and Pulkkinen, 2009). Future studies should compare risk factors for early onset, continuation after onset (compared with early desistance), frequency,

seriousness, later onset, and later persistence versus desistance. DLC theories should make explicit predictions about all these topics. Also, future studies should make more effort to investigate promotive and protective factors, and biological, peer, school, and neighbourhood risk factors, since most is known about individual and family factors. And future research should compare development, risk factors, and life events for males versus females and for different ethnic and racial groups in different countries.

Because most previous analyses of risk factors for offending involve between-individual comparisons, more within-individual analyses of offending are needed in longitudinal studies. These should investigate to what extent within-individual changes in risk and promotive factors are followed by within-individual changes in offending and other life outcomes. These analyses should provide compelling evidence about causal mechanisms. More information is needed about developmental [p. 265 ↓] sequences and about the predictability of future criminal careers, in order to know when and how it is best to intervene.

DLC findings and theories have many policy implications for the reduction of crime. First, it is clear that children at risk can be identified with reasonable accuracy at an early age. The worst offenders tend to start early and have long criminal careers. Often, offending is preceded by earlier types of antisocial behaviour in a developmental sequence, including cruelty to animals, bullying, truancy, and disruptive school behaviour. It is desirable to intervene early to reduce the later escalation into chronic or life-course-persistent offending. For example, programmes to prevent bullying in schools are generally effective (Ttofi and Farrington, 2009). It is desirable to develop riskneeds assessment devices to identify children at risk of becoming chronic offenders, who are usually children with specific needs. These devices could be implemented soon after school entry, at ages 6-8.

It would be desirable to derive implications for intervention from DLC theories, and to test these in randomized experiments. In principle, conclusions about causes can be drawn more convincingly in experimental research than in non-experimental longitudinal studies. The results summarized here have clear implications for intervention (Farrington, 2007). The main idea of risk-focussed prevention is to identify key risk factors for antisocial behaviour and implement prevention methods designed to

counteract them. In addition, attempts should be made to enhance key promotive and protective factors.

As a further example of policy implications from DLC theories, Moffitt's (1993) theory suggests that different programmes are needed for adolescence-limited and life-course-persistent offenders. For adolescence-limited offenders, it is especially important to limit contact with delinquent peers. This is one of the main aims of Treatment Foster Care programmes (Chamberlain and Reid, 1998). Research on co-offending (Reiss and Farrington, 1991) suggests that it is important to identify and target 'recruiters', who are offenders who repeatedly commit crimes with younger, less experienced offenders, and who seem to be dragging more and more young people into the net of offending. Programmes that put antisocial peers together may have harmful effects (Dodge *et al.*, 2006). Moffitt also suggests that, in order to target the maturity gap of adolescence-limited offenders, it is important to provide opportunities for them to achieve status and material goods by legitimate means.

The main implication of Sampson and Laub's (2005) theory is that bonding to the family, the school and the community should be increased, for example by providing job training and structured routine activities in adulthood. They also suggest that desistance can be encouraged by fostering bonding to adult institutions such as employment and marriage. Another suggestion is that informal social control in communities could be improved by increasing community cohesiveness or 'collective efficacy' (Sampson *et al.*, 1997). They also argue that it is important to minimize labelling or stigmatization of offenders by minimizing the use of incarceration.

Because of their emphasis on development through life, DLC theories suggest that it is 'never too early, never too late' (Loeber and Farrington, 1998) to intervene successfully to reduce offending. In other words, it is highly desirable to focus not only on early intervention to prevent the adolescent onset of offending, but also on later programmes to prevent adult onset and to prevent continuation and encourage early desistance.

[p. 266 ↓] The fact that offenders tend to be antisocial in many aspects of their lives means that any measure that succeeds in reducing offending will probably have wideranging benefits in reducing, for example, accommodation problems, relationship problems, employment problems, alcohol and drug problems, and aggressive

behaviour. Consequently, it is very likely that the financial benefits of successful programmes will greatly outweigh their financial costs. The time is ripe to mount a new programme of research to compare, contrast, and test predictions from different DLC theories, in the interests of developing more accurate theories and more effective policies.

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