Chapter 1  
General Introduction

Prologue

I met Jamie at his home in a pastoral town in the southern part of the Netherlands. Jamie (35) was treated at a residential Dutch juvenile justice institution in the early nineties. Almost twenty years after his institutionalization, we sat down at the kitchen table and talked about his life.

Jamie’s problematic behavior had started young. He was involved in thefts, frequently smoked marihuana, and at age 14 he was suspended from school - a special school for juveniles with behavioral problems. His mother was unable to control his aggressive and anti-authoritarian behavior, and it became impossible for Jamie to live in the parental home. Given his background, the prospect of Jamie becoming a norm-abiding adult was less than obvious.

Jamie was raised in unstable circumstances. He lived with his grandparents until he was 7, but when his grandmother died, the guardianship order was void. He moved in with his mother who had remarried, but lived with yet another man, and his two daughters. It was a strongly disadvantaged home environment, characterized by domestic violence, alcohol abuse, and harsh punishments from time to time.

Now a young man in his thirties, Jamie lived with his wife and two children in this rural village. Here he had found his way into the small community where life seemed under relatively tight social control. He owned a house, was employed as a construction worker, and described himself as a proud father. Life for Jamie seemed on track, but according to him, it took a conscious daily effort to keep it that way.

Jamie’s developmental changes in his social and criminal life can be considered as ‘against the odds’: in mid-adolescence he was a ‘high-risk juvenile’ at risk of becoming a delinquent adult - twenty years later he had left his criminal behavior behind. What had prevented him from a life of crime? Why did some juveniles from the same institution grow up to be criminal adults? Jamie said: “We were all different. We all had our problems. Soon after my release I got a job at the fair. That was my luck. It was hard work every day, but I still consider these people as my family.”

1  Introduction

Continuity in antisocial and criminal behavior over the life-course is a common finding in research. The best predictor of future crime is past crime, and an early onset in antisocial behavior is associated with persistent offending in adulthood. However, this continuity does not necessarily reflect within-individual stability - most offenders follow criminal careers that are far from stable. Rather, it relates to stable differences between individuals - the relative ordering of individuals on antisocial and criminal behavior is expected to remain constant.

This emphasis on continuity implicates that childhood risk factors (that correlate with these stable rank order differences) can predict adult outcomes - a view that has lead to an extant literature on risk and prevention. Several risk factors have been found to be associated with criminal recidivism and persistence (for an overview, see Loeber & Farrington, 1998). However, as prediction remains difficult, some researchers propose a mixed explanation. They suggest that between-individual variations in childhood risk factors reflect different etiologies, that consequently cumulate into divergent developmental patterns. Some offenders, protected by underlying factors, desist from offending as they come face to face with
conventional opportunities as they reach adulthood. Other offenders, put at risk by underlying factors, persist in offending and remain unable to adapt to prosocial contexts.

The ability to predict criminal outcomes based on static risk factors alone is limited. Besides between-individual differences, endogenous circumstances may influence the individual's criminal development as well. Several life-course transitions (such as marriage, parenthood, or employment) can act as turning points, and foster desistance. Transitions can lead to an increased embeddedness in conventional society, stimulate maturity, responsibility, or a change in identity. For young men, employment seems especially important. Getting a job not only provides a steady income (creating legitimate means to pursue economic goals), but is also associated with numerous factors that promote desistance. Yet, to complicate matters, the extent to which individuals benefit from the effect of transitions on offending may also depend on risk factors. A focus on transitions alone may exaggerate the possibility of change.

Moreover, transitions need not always be positive. Instead of fostering desistance, transitions can also amplify crime, and crime itself can again influence transitions. For instance, more so than a conviction, incarceration disrupts multiple life-course domains, and can reduce opportunities to reconnect to these domains in the future. Yet, the long-term effects of such a downward spiral may also depend on protective factors - some more resilient individuals may be able to veer up again.

While life-course criminology has gained the strong interest of researchers during recent years, surprisingly little is known about the risk factors and long-term developmental pathways of high-risk juveniles, especially in a contemporary, non-Anglo-Saxon context. This thesis is an effort to better understand the long-term criminal development of such high-risk boys. It aims to contribute to the extant knowledge in a number of ways. First, the thesis describes criminal development of high-risk youths through adulthood. Second, it assesses risk factors associated with this development. Third, it tests for the influence of employment on crime, over and above the effect of risk factors. Finally, it tests for the influence of crime and subsequent criminal justice intervention on employment, over and above the effect of risk factors.

To do so, this study uses data on the criminal and employment careers of a sample of high-risk boys with troubled backgrounds, who all had been treated in a juvenile justice institution in the early 1990s. The follow-up period was long; in most cases up till the age of 32. Rich and validated information on a broad array of personal and background risk factors could be derived from the treatment files. Detailed longitudinal data on offending, incapacitation, as well as employment and welfare, was retrieved from official registers in the Netherlands.

2 Theory

2.1 THEORIES STRESSING CONTINUITY

2.1.1 Risk factors associated with recidivism

The risk factor approach emphasizes that early risk factors are associated with adult delinquency. In their impressive overview, Farrington and Loeber (1998) distinguished personal, family and social risk factors. The main risk factors for juveniles are: impulsiveness, hyperactivity, aggression, low school achievement, substance use, antisocial peers, antisocial parents, dysfunctional parenting, and lack of social ties. Although this fairly consistent list of factors has been identified, prediction of adult recidivism remains poor: many juvenile offenders at risk of becoming a delinquent adult desist from offending before adulthood; yet other adult offenders would not have qualified as high risk during adolescence (see also McCord, 1980).
To improve prediction, a more complex interplay of factors is needed. First, studies on risk factors should also refer to protective factors. Such protective factors are suggested to have a beneficiary effect under conditions of risk (Deković, 1999). For example, living in a good neighbourhood - with high social control and few criminal opportunities - protects against the influence of criminal peers. Second, Sameroff (1998) recommended the term ‘promotive’ for factors that increase the likelihood of a positive outcome under all conditions. For example, a good parent-child relation is considered to have an independent positive effect (Stouthamer-Loeber et al., 2002). Third, although researchers reported considerable overlap between risk factors for different types of crime (Huizinga & Jacob-Chien, 1998), some risk factors are assumed to increase the risk of particular kinds of delinquency. For example, serious drug use is associated with violent delinquency. Fourth, specific risk factors may apply to specific subgroups of offenders. Moffit’s developmental theory (1993) takes this a step further, suggesting that adolescent risk factors impact differently depending on the underlying set of childhood risk factors.

2.1.2 Low self-control
Gottfredson and Hirschi’s (1990) self-control theory, often referred to as ‘static’ (Piquero & Mazerolle, 2000), suggests that the individual development of offending follows a uniform pattern. Between-individual differences in delinquency - at any age - can be explained by stable between-individual differences in the level of self-control. Gottfredson and Hirschi suggest that individuals do not accidentally end up being married or stably employed: those individuals who avoid or miss out on conventional adult roles are the ones already at risk of persistent offending. Their level of self-control underlies choices and opportunities in different life domains. This reasoning denies that social changes in adolescence and adulthood have an impact on delinquency.

Self-control is assumed to develop during early childhood, and to remain stable onwards. Low self-control results from problem behavior interacting with dysfunctional parenting skills, such as inconsistent discipline, harsh punishment, and a lack of supervision. The lack of parental socialization is expected to have long-term negative consequences for various life-course outcomes.

2.1.3 Moffitt's persistent offenders
Moffitt’s (1993) dual taxonomy partitions juvenile offenders into two groups. A large group of so-called adolescence-limited offenders is composed of essentially ‘average’ youth from non-problematic backgrounds. The other group of so-called life-course persistent offenders, , continues to offend well beyond adolescence. Their impaired neuropsychological functioning - possibly caused by birth complications, or child maltreatment - is suggested to generate early antisocial and criminal behavior, as well as to interact with their criminogenic environment cumulating in long-term negative consequences, such as pathological personality development and impaired social functioning.

Moffitt (1994) relates minor neuropsychological deficits to impulsivity, attention-deficit disorder (ADD), hyperactivity (ADHD), and learning problems. Growing up in families unable to deal with such difficult temperaments, antisocial behavior grows from bad to worse (Lahey & Waldman, 2003, 2005) and is likely to result in persistent, serious and versatile delinquent behavior.

Moffitt’s (1993) explanation of changing social environments within the life course persistent subgroup is similar to Gottfredson and Hirschi’s ontogenetic explanation of crime. First, - given the downward spiral of reciprocal interactions that increasingly block prosocial opportunities - life course persistent offenders are more likely to select into unemployment (or unstable employment), as well as into offending. Second, would a job be available its impact
may still be marginal for life course persistent offenders, because they lack the responsiveness to changing social contexts, and thus the capacity to adapt.

2.2 THEORIES STRESSING CHANGE

2.2.1 The effects of life-circumstances

In Sampson and Laub's (1993) life-course theory, the influence of adult social roles on offending is central. Their research showed limited evidence that early risk factors (such as dysfunctional parenting) determined - or significantly decreased the probability of - positive changes later in life. Instead they assert that life events (such as [stable] employment, a good marriage, or being a responsible parent) can trigger turning points that provide individuals with an increasing stake in conformity and an incentive to stay away from crime. As they summarize it: ""good" things can happen to "bad" actors, and when they do desistance has a chance" (Laub, Nagin, & Sampson, 1998, p.237). In other words, life events can be 'triggering events' that mark a turning point of within-individual change (Farrington, 2003).

Sampson and Laub's (1993) age-graded theory of informal social control is often opposed against Gottfredson and Hirschi's self-control theory (1990). Although both theories assert that weak social bonds result in antisocial and delinquent behavior, their views on development are markedly different. Gottfredson and Hirschi (1990) assume that stable levels of self-control, established through social bonding early in life, select into later life events as well as desistance. Sampson and Laub (1993), on the other hand, suggest that ongoing changes in social bonding have an ongoing and independent effect on offending. Thus, instead of Gottfredson and Hirschi's (1990) 'kinds of people' perspective, Sampson and Laub (1993) emphasize 'kinds of contexts'. Furthermore, Sampson and Laub (1990) stress that the quality of a life event, rather than its occurrence or timing, increases social control and decreases offending. Research has supported what they called, “the good marriage effect” (Bersani, Laub, & Nieuwbeerta, 2009). Similarly, a ‘good’ job provides stability, commitment, and responsibility (Laub & Sampson, 2003). Rather than the fear of losing a source of income, it is the growing commitment to prosocial others and accumulation of social capital that increasingly provides a reason to desist from offending.

2.2.2 The effects of life-circumstances: employment

Individual-level studies have consistently shown a negative relationship between employment and crime (Farrington, Gallagher, Morley, Ledger, & West, 1986). Employment contributes to desistance: a good job brings legitimate financial gains while stimulating maturity (Goodman, 1956), responsibililtiy (Laub & Sampson, 2003), and changes in identity (Maruna, 2001).

Life-course theory similarly posits that a stable job provides the individual with an increased stake in conformity. Consequently, the consequences of crime become more costly, and crime itself becomes less attractive. Other theories emphasize a more instantaneous effect of employment on offending. Routine activities theory (Cohen & Felson, 1979) stresses that employment has an impact on everyday activities. A job is generally assumed to reduce criminal opportunities (although a job may also provide new opportunities), both because most workplaces are shared with colleagues who operate as capable guardians, and because during work less time is spent on unstructured social activities that increase the likelihood of delinquency.

Strain theory (Merton, 1938; Agnew, 1985) on the other hand emphasizes the ‘relative’ benefits of employment. If a legitimate job satisfies the individual’s economic ambitions, it reduces offending. However, if legitimate opportunities are limited - or perceived as unequal compared to the opportunities of others -, nonlegitimate means might be pursued to fulfill the individual’s goals. Thus, conditional on - what is perceived as - a good job, employment is
assumed to instantaneously reduce offending. Strain theory thus reasons that not only unemployed individuals, but also workers with less opportunities to get ‘good employment’, have an increased likelihood of offending.

2.2.3 The effects of crime on employment
Employment can reduce offending, but offending can also have an effect on employment. The negative consequences of delinquency can affect a person’s opportunities for future employment. This interdependency illustrates the complex, reciprocal relationship between employment and offending. In explaining continuity in offending, life-course theory suggests that the negative consequences of delinquency - in particular imprisonment - weaken social bonds, and impact negatively on a person’s employment prospects (Sampson & Laub, 1993). For example, those who lost their jobs due to incarceration often cannot return to the same employers, after which they lack the references or informal networks to easily reconnect to new job opportunities.

Both labeling theory and human capital theory emphasize again different causal mechanisms through which these effects may occur. Labeling theory predicts that a criminal conviction and incarceration produce a social stigma (Becker, 1963; Lemert, 1967). A criminal record (as revealed in a background check) or a history of incarceration, is perceived by others as signaling negative personal characteristics. As a result, the individual is less likely to (re)connect to conventional institutions and get a stable job. Human capital theory emphasizes the direct negative impact of incarceration on a person’s curriculum. Cut off from new job experiences and education, incarceration deteriorates a person’s job skills, and decreases the likelihood of finding or re-entering into a stable job (Nagin & Waldfogel, 1995).

In sum, these proposed causal mechanisms all suggest a chain of events in which delinquency, its negative consequences, and unemployment are interlinked. This negative spiral cumulates towards continuity in crime. For example, an ex-detainee who lacks the opportunities to find a decent job, will increasingly be drawn to illegitimate means, which again will further deteriorate his job skills and opportunities, and so forth.

3 Prior studies and limitations
3.1 Prior studies
Blumstein et al. (1986) paved the way for modern criminal career research, presenting dimensions for describing delinquent development over time - rather than treating recidivism as permanent failure. They distinguished onset, frequency, seriousness and duration of offending. During the last two decades, advanced statistical methods have been developed to approximate the unknown underlying continuous distribution in offending. Using such methods, developmental and life-course notions about the variation in offending can be tested.

In the early nineties the appearance of a number of influential papers and books more or less demarcated the field of developmental and life course criminology (e.g. Nagin & Land, 1990; Moffitt, 1993; Sampson & Laub, 1993; Nagin, Farrington & Moffitt, 1995). Since then, many longitudinal life-course studies have been conducted in the US (see for an overview: Piquero, Farrington, & Blumstein, 2003), as well as in the Netherlands - the country where this study takes place (see for an overview: Blokland & Nieuwbeerta, 2006).

One of the pioneering longitudinal criminological studies was conducted by Glueck and Glueck (1950; 1968). Compared to their dataset, the dataset used in this dissertation is rather similar, except for their study being conducted in the 1940s in a U.S. setting. Glueck and Glueck followed a reform school sample of 1,000 boys aged 10 to 17. Between 1939 and 1948 detailed information about their personal and background characteristics was collected.
from interviews, offending information was based on self-reports and official data. Two follow-ups were completed, following 500 delinquent boys up to age 25 and age 32. Glueck and Glueck (1950; 1968) found that juveniles who restrained from reoffending were better circumspected in terms of personality and background characteristics, compared to juveniles who continued to reoffend.

In the 1980s Sampson and Laub (1993) rediscovered the ‘Glueck and Glueck dataset’. They reconstructed and updated the data, and undertook 70 interviews providing in-depth information on several life domains. In their extensive study covering a long period over the life-course, their key interest was to explain the causes of desistance from crime. Emphasizing that childhood risk factors alone could not predict the development of offending, Sampson and Laub (1993) stressed the important role of life-events: people may show behavioral change as they rise to the occasion and bond to age-graded social institutions such as family, school, employment and marriage.

3.2 LIMITATIONS
Despite the value of these landmark studies, the extant empirical literature shows a number of limitations. First, many researchers use a crude "yes-or-no" definition of recidivism, treating a "yes" as permanent failure. Second, most follow-up studies on contemporary samples investigate a relatively short time-span. Third, data on risk factors is often limited. Fourth, only a small number of studies use quantitative individual level data that examines the effect of employment on offending (for an overview, see Uggen & Wakefield, 2008). The exceptions are studies that primarily focus on adolescents in community samples. Fifth, the few studies that use a broader time-frame report difficulties in reconstructing the individual employment histories by year over the entire life-course through self-reports. Studies that use register data on employment often have a macroeconomic focus (Raphael & Winter-Ebmer, 2001). Sixth, life-course theories emphasize the collateral effects of delinquency and incarceration on employment (among others), however employment as one of the possible outcome measures is largely understudied. This is strange, as the reciprocal effects on future life-events - damaging future employment opportunities - are expected to cause indirect and hidden costs of crime. Finally, most studies use relatively old data, and are based on samples in Anglo-Saxon countries, which limits generalization of results (Savolainen, 2009).

3.3 THE CURRENT STUDY
The current study is unique in the Netherlands, and adds to the literature in a number of ways. First, this study provides detailed - and often validated - information on a large number of psychological, behavioral, and contextual risk factors. This study uses data obtained with psychological and psychiatric tests, advisory notes on extensions, and treatment evaluations compiled by trained staff. Second, the sample consisted of high-risk boys, who all had been treated in a juvenile justice institution for serious behavioral problems. Boys were characterized by low school attainment, poor educational prospects at the end of the treatment, and often delinquency. Their offending levels are expected to be of sufficient levels to detect possible heterogeneity in delinquent development. Third, because of the long follow-up (up till age 32), this study can paint a more nuanced picture of post-release recidivism outcomes. Fourth, the observation period includes the so-called emerging adulthood (Arnett, 2000), a life-course period during which transitions into adult roles are most likely to occur. Fifth, using detailed longitudinal data on both employment and delinquency (and incarceration), this study is able to investigate the interrelationship between societal integration and deviance. Finally, analyzing criminal careers in a contemporary, Western-European cohort allows to test basic theoretical notions in a recent sample, and their validity and applicability in a different, non-U.S. cultural context.
4 Juveniles in a juvenile justice institution in the Netherlands

4.1 High-risk juveniles
In the general population of juveniles aged 12 to 17 in the Netherlands, 47 percent of boys self-reported ever having committed a delinquent act (Van der Laan, Essers, Huijbregts, & Spaans, 1998). In 1996, of 42,500 male juveniles that had a police contact (based on a cross-sectional sample of 12 to 17-year-olds; Van der Laan, Essers, Huijbregts, & Spaans, 1998), equalling less than 10 percent of all boys in this age category. Again a subset of these boys was prosecuted, and an even smaller subset was actually convicted. In 1997, 13,500 male juveniles aged 12 to 17 were convicted (Wartna, Tollenaar & Blom, 2005), representing less than 3 percent of all boys. Although a small, high-risk minority of these convicted juveniles may be committed to treatment in a juvenile justice institution, not all juveniles in a juvenile justice institution were convicted of an offense.

Until recently, the population of juveniles in juvenile justice institutions in the Netherlands constituted of two groups. The smallest group comprised a high-risk minority of convicted juveniles who were committed to treatment through a criminal law measure. The largest group was committed to treatment through a civil law measure. For those juveniles, their behavioral problems (often also including delinquency) and problematic home situation made it impossible to remain at home. Although juveniles placed in the institution under a civil law measure had not always been convicted of a serious offense, the majority had been involved in delinquency (Boendermaker & Beijerse, 2008). From 1 January 2010, juveniles with a civil law 'title' are no longer placed in a judicial institution. The distinction between youths under civil and criminal law orders, at least before 2010, nevertheless had little bearing with regard to the impact of the seriousness of the behavioral problems on future behavior (Wijkman, Van der Geest, & Bijleveld, 2006).

Thus, compared to the general population, prior delinquency rates for juveniles placed in an institution are relatively high. In describing pre-treatment delinquency in a subset of juveniles who all had been treated in a juvenile justice institution in the Netherlands, Van der Heide-Attema and Wartna (2000) found that 64 percent had been convicted for any offense, of which 72 percent was for theft, and 10 percent was for violent offending. However, studies were either limited in the sense that follow-up was relatively short follow-up, or limited in-depth information on individuals was available.

4.2 Risk factors
In screening Dutch adolescents aged 13 to 18 in the general population, Verhulst et al. (1997) found that 36 percent (combining parent and child reports; CBCLs and YSRs) met the criteria for one or more DSM-III-R diagnoses as having a disorder. Using information from one source only (CBCL or YSR) they found a prevalence of 21 percent for any disorder. Boys more often received diagnoses of conduct disorder, any disruptive disorder, and substance use disorder than girls. Attention-deficit hyperactivity disorder (ADHD) was prevalent in two percent of the sample. Furthermore, ADHD and substance use disorder were often diagnosed in combination with other disorders.

Boendermaker and Uit Beijerse's (2008) overview of adolescents in juvenile justice institutions, indicates a higher prevalence of disorders and behavioral problems. Based on treatment files, the majority of juveniles (between 56 and 89 percent) show symptoms of a conduct disorder. Prevalence rates of ADHD vary widely across studies (7 to 39 percent), but are consistently lower for boys (7 to 8 percent for boys, compared to 21 to 23 percent for

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1 In December 2007 the Upper Chamber of the Netherlands approved changes in the Youth Care Act. On 1 January 2008 these changes went into effect, requiring a division of treatment of juveniles with a criminal law measure, and juveniles with a civil law measure. This separation process was completed on 1 January 2010.
More than half (55 percent) has a substance use disorder. Juveniles with a conduct disorder often also have internalizing problems, such as depression or neuroticism. The prevalence of attempted suicides varies between 15 and 25 percent. Boendermaker (1998), who also compared juveniles from different treatment institutions in the mid 1990s, found that juveniles with serious developmental problems were overrepresented in the juvenile justice institution of the sample for the current study.

In sum, compared to the general population, the prevalence of psychological and behavioral problems, as well as disorders, among juveniles in a judicial institution are high, showing that they represent clinically phrased deep-end cases. In general, their behavioral characteristics, as well as family backgrounds are problematic or dysfunctional.

5 Sample

5.1 Sample
The sample for this study consisted of all 274 males who were discharged from one judicial treatment institution for juveniles in the Netherlands, between January 1989 and June 1996. Within the entire population of juveniles in the Netherlands, individuals placed in a judicial treatment institution represent a small, but high-risk group characterized by troubled backgrounds, problematic behavior, and more often than not delinquency. All respondents had received treatment during their stay. Inclusion criteria for the sample were a minimum length of stay in the institution of 2 months, and a complete treatment dossier. Exclusion criteria were treatment for sexual offending. For four boys the treatment dossier could not be retrieved, so the final sample constituted of 270 males. The average age at admission was 15 years, 7 months ($SD = 1.7$ years), and the average age at release was 17 years, 4 months ($SD = 1.3$ years), making the average length of stay 1 year and 9 months ($SD = 1.0$ year), with a maximum stay of 5.3 years.

5.2 Data
This study's sample combines a relatively long follow-up (up to age 32) with rich in-depth information. Convictions registered in the Judicial Documentation (JD) abstracts of the Dutch Ministry of Justice were collected from age 12 to 32. Employment registrations were extracted from Suwinet, a database held by the Ministry of Social Affairs and Employment, from age 18 to 32. Incarceration data registered in penitentiary files stored at the Central Penitentiary Archive of the Dutch Ministry of Justice was collected for ages 18 to 32. Data from the Municipal Basic Administration (GBA) was used to control for death (N=14) or emigration (N=3), to avoid so-called 'false desistance'.

5.3 Risk factors
Personal and background characteristics were retrieved from reports in the treatment files of the institutional archive. A scoring instrument was constructed to include as many theoretically relevant factors as possible. Personality variables had been assessed by the institution's therapists using validated instruments (such as the Amsterdam Biographical Questionnaire for Children, the Adolescent Temperament List, and the Netherlands Personality Questionnaire-Youth), and prevailing guidelines were used to categorize the scores into norm values. Intelligence scores (mostly obtained through the Wechsler Intelligence Scale for Children-Revised for the Netherlands or the Raven Progressive Matrices) were also categorized according to prevailing norm values.

Data extraction from the treatment files was done "blind", meaning that all files were scored before information about any post release offending or employment became known. In
general, interrater reliability, with files scored independently by two raters, was good, with almost all interrater correlations above 0.8. For two items (thrill seeking and relations with peers), reliability was below 0.8, though above 0.6 (0.65 and 0.64, respectively).

5.4 TREATMENT
The treatment files held within the institutional archive contained psychological and psychiatric tests, and treatment evaluations. Detailed information about the treatment method was not available. However the files do show that one in eight boys had received individual psychotherapy (13.0%).

It should be noted that only since 2005 behavioral intervention programs for juveniles are evaluated by a special commission in the Netherlands based on the principles of What Works. Now, programs are evaluated in terms of, among others, their effectiveness in reducing recidivism. A possible implication of this evaluation is that treatment programs nowadays are more likely to be better documented, compared to the early 1990s.

5.5 CONVICTION AND INCARCERATION DATA
Offending information was based on convictions registered in the Judicial Documentation (JD) abstracts of the Dutch Ministry of Justice (comparable with “rap sheets”). These abstracts contain information on every case that is registered at the public prosecutor’s office and the ensuing verdict. They also contain information on the date of commission and the type of offense.

Using the standard classification for offenses in the Netherlands (Van der Heide & Eggen, 2001), following Loeber, Farrington, and Waschbusch (1993) offenses were classified as serious or non-serious. Given that most non-serious offenses are relatively common in the Netherlands (Van der Geest et al. 2006), we chose to focus on serious offenses. Serious offenses included violent and non-violent offenses. Violent offenses were robbery, assault, (attempted) homicide, and sexual offenses. Non-violent offenses were property offenses, drug offenses, and various other offenses, including illegal gun ownership and arson. Offenses that were labeled as non-serious, and thus were excluded from the analyses, are: vandalism, traffic offenses, and all remaining offenses under special sections of the criminal code, such as environmental offenses.

Incarceration data was based on the Judicial Penitentiary files of the Netherlands Ministry of Justice. These files contain a person’s complete incarceration history, including dates of admittance, and dates of release. In the case of missing penitentiary files we used the sentence date registered in the Judicial Documentation (JD) abstracts (that contain data on all unconditional prison sentences imposed), and calculated the date of release based on the prison sentence, taking into account early release (described in the Dutch criminal code) to which all detainees are entitled unless they misbehave excessively and which is only very rarely denied.

5.6 EMPLOYMENT DATA
Employment data was collected from the national database (Suwinet) held by the Ministry of Social Affairs and Employment (SZW) in Rotterdam. This database contains individual level information about (official labor market) employment and benefits to the unemployed, from 1992 onwards. As the database became fully electronic from 1998 onwards, employment participation rates before that time may underestimate actual employment levels. Additionally to Suwinet, the trade register (‘KvK Bedrijvenregister’) managed by the Netherlands Chamber of Commerce was accessed. This KvK register contains historical information about business ownership.
The Suwinet and KvK data were used to collect date values of the day a person started a job, and the day the contract ended. This level of detail is unique. Reconstruction of the employment histories at such a detailed individual level would otherwise not have been possible. However, whether a position referred to full-time or part-time employment remained unknown, because the registers only contained information on the period a job contract spanned.

6 Hypotheses and organization of dissertation

6.1 Hypotheses

Following a group of juveniles with highly problematic backgrounds, this study aims to describe and explain their developmental patterns of delinquency and socialization over the life course. There are three major research questions that guide this study: (1) How did risk factors relate to delinquent outcomes? (2) Why did some active offenders continue offending, while others desisted? and (3) What is the impact of incarceration? Various explanations have been offered in the field of developmental and life course criminology (Farrington, 2003). Theories differ in their focus on between-individual differences, within-individual change, and their over- or underestimation of continuity.

The risk factor approach posits that juvenile risk factors predict adult recidivism (Loeber & Farrington, 1998). Typological theories (Moffitt, 1993) propose that different risk factors and different etiologies underlie different developmental patterns of offending - this is a mixed explanation. On the other hand, life-course theory (Sampson & Laub, 2003) suggests that bonds to conventional society (through school, employment, or marriage) have an impact on delinquent development over and above the effect of early risk factors. Socialization is triggered through life events, and can lead to desistance. Negative life events, on the other hand, can cumulate into a persistent offending pattern.

The sample of this study consists of juveniles who all had been removed from the parental home to intervene in their lives. Their troubled backgrounds and problematic behavior put them at increased risk of developing future antisocial and serious delinquent behavior. Given their structural and social disadvantage, many juveniles were expected to experience difficulties in different life-course outcomes. Longitudinal data on both employment and offending allows to study the interrelationship between societal integration and deviance.

Chapter one and two primarily focus on the differences between offenders and offender groups. The work crime nexus is central to chapters three and four.

Focusing on this at risk group of boys, followed up well past emerging adulthood, specific theoretical expectations can be tested. Four hypotheses are central in this dissertation. The first hypothesis is that risk factors, measured on admission, are related to post-treatment offending outcomes. The second hypothesis is that different risk profiles are related to different developmental trajectories in offending. More specifically, persistent offenders are assumed to be homogeneous in terms of their risk profile - they are predicted to combine neuropsychological problems with a criminogenic upbringing. The third hypothesis is that the effect of employment on crime is different for men following different offending trajectories, and simultaneously depends on underlying risk factors. For persistent offenders, their risk profile is expected to damage their social development. Consequently, they are assumed to be unable to grasp prosocial opportunities, and benefit from being employed. To complicate matters, this effect of employment on offending is also expected to be different, depending on the quality of employment. The fourth hypothesis is that negative consequences of crime affect the probability of being employed. For men following similar employment trajectories, convictions and incarceration are expected to have a negative impact on employment.
participation in the subsequent year, over and above the effect of underlying between-individual differences, such as low school attainment and limited prior work experience.

6.2 ORGANIZATION OF DISSERTATION
This dissertation analyzes the delinquent development of 270 high-risk men from adolescence to their early 30s. All men had serious behavioral problems, and were expected to show high levels of delinquency. Prospectively following their post-release delinquent development from mid-adolescence to adulthood - a life-course period characterized by transitions in a variety of areas -, different theoretical and methodological approaches are employed. The chapters are structured as follows.

Chapter 2 describes post-treatment offending in relation to personal, background and treatment characteristics. The analyses search for risk factors for serious, as well as violent offending. First, the impact of covariates on recidivism, and the time it takes to recidivate (so-called survival times), is analyzed. Second, serious delinquency is predicted, distinguishing two levels of chronicity: frequent offending and persistent offending.

Chapter 3 focuses on these men’s criminal career development from age 12 to 32. Using group-based trajectory analysis, combined with nonlinear canonical correlation analysis, offending groups are identified and described in terms of personal, behavioral, and background characteristics. In addition, the nature of offending in the respective trajectories is examined, describing the crime mix and the development of the crime mix over age classes in each of the trajectories.

Chapters 4 and 5 explore the relationship between employment and crime using the Suwinet register data that we collected. Analyzing their development in terms of offending as well as employment from age 18 to 32, the analyses focus on dynamic explanations of these two life-course outcomes. Chapter 4 describes the effect of employment on offending within different offending trajectory groups, taking into account static personality and background risk factors. Central in the analysis is whether the effect of employment on crime is conditional on job quality or job stability. Chapter 5 describes employment participation and frequency by age. Disaggregating the overall development of employment participation into distinct employment trajectories, this chapter analyzes the effect of incarceration, over and above the effect of being convicted, on employment chances in the subsequent year. Controlling for developmental heterogeneity, as well as underlying risk factors (such as educational level), selection differences into both incarceration and low employment participation are - to a large extent - held constant.

Chapter 6 summarizes and discusses the major findings presented in the empirical chapters, addressing implications for both theory and practice. It elaborates on how findings relate to current conceptions in criminological theory, and how they contribute to general theoretical notions. The discussion also reflects on methodological restrictions, and broader implications for future research.
References


