

Court convictions of a Canadian birth cohort

by

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Author's Declaration

I hereby declare that I am the sole author of this thesis. This is a true copy of the thesis, including any required final revisions, as accepted by my examiners.

I understand that my thesis may be made electronically available to the public.

Abstract

Although youth crime and young offenders have attracted a significant amount of ongoing research attention and have given rise to a voluminous amount of literature devoted to describing and explaining their existence and providing suggestions for what may be done, much less attention has been paid to the youth court itself and, more specifically, the convictions of young persons over time.

Using the *Youth Court Survey* as a source of longitudinal data, the present study describes the youth court convictions of a birth cohort of Canadian offenders from the time they officially enter the system at age 12 up to their 18th birthdays. The *criminal career* paradigm is used in the present study to guide the detailed and structured analysis of the key features of these conviction histories by partitioning convictions into four central parameters: prevalence of convictions, individual frequencies, age at first conviction, and patterns of transition (i.e. specialization and versatility).

Findings revealed that approximately 23,000 males and 6,000 females—12 percent and 3 percent of the 1979/80 birth cohort, respectively—were convicted of at least one offence in youth court. While the patterns of convictions were found to be similar for both males and females, the prevalence among females rose relatively faster at younger ages and peaked earlier. Findings also indicated that the vast majority of young people who were convicted in a Canadian youth court had a conviction history consisting of only one conviction. However, findings also highlighted the extent to which the phenomenon of a concentration of offending, which has been noted in numerous countries, is present in Canada with a small group of chronic offenders being responsible for a disproportionate

amount of court activity. The study also found that the younger an individual was at the time of their first conviction, the more likely they were to accumulate future convictions, and also to receive a conviction for a violent offence. Lastly, findings revealed that the youth court career is characterized by neither complete specialization nor complete versatility, but rather that these two tendencies in offending exist side by side.

Overall, the current study provides a more complete picture of the conviction history of this cohort of young offenders than one-time snapshots from individual surveys could allow.

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Finally, but not least, I wish to thank my family and friends for their continued support and encouragement.

*Dedicated to my wife, Lorrie, for an enduring and unwavering support and
patience—throughout this journey—which cannot be described but only
experienced*

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Chapter 1

Introduction

Media reports of violent upsurges in deadly shootings on the streets of major Canadian cities, running gun battles between teenage members of rival gangs during Boxing Day shopping sprees, or the teenage swarming of innocent citizens as they stroll along their neighbourhood streets are tragic events which attract a great deal of media attention and ultimately help to shape public perceptions and misconceptions of the nature and extent of youth crime in Canada. As horrifying as these crimes by young people are, they are so rare that they fall completely outside the range of normal adolescent criminal behaviour. Most of the offences committed by teenagers can be considered part of growing up—acting out, testing limits, trying to win the approval of peers. In fact, the rambunctious behaviour of teenagers has chafed at adults in almost every generation.

One of the most basic questions about youth crime is actually the most difficult to answer. What percentage of young people commits crimes? Only by knowing the extent of the problem can judicial practitioners and policy-makers develop effective solutions that protect society without throwing away the future of an immature offender.

Through self-report surveys, which rely on respondents to admit to any criminal acts, it appears that adolescent involvement in minor ‘illegal’ behaviour is fairly widespread, but that few are brought to the attention of the police or referred to court for formal processing. For the majority of these young people, this behaviour is temporary and very few go on to become persistent and serious offenders.

Official data, on the other hand, suggest that a small segment of the youth population has formal contact with criminal justice authorities and that an even smaller proportion is responsible for the majority of criminal activity. Unlike self-report delinquency, official crime data measures illegal behaviour which has first been detected, then reported to authorities, and subsequently dealt with—formally or informally—by the police or courts. As such, these data may be best seen as providing valuable and necessary information on the response of the criminal justice system to illegal activities, as opposed to actual levels of crime in society.

In the early 1900s research began to be carried out in the United States to gain insight into the development of criminal behaviour over the course of an individual's lifetime and in particular during their formative years when they undergo or experience extensive physiological, psychological, emotional and personality changes. Since that time, hundreds of investigations have been carried out which examine the longitudinal patterning of individual offending—from its initiation to its desistance—and this study of the 'criminal career' has become a staple of criminal justice research and policy. The value of the criminal career paradigm as an appropriate method for describing this complex phenomenon of criminality—by dividing it into smaller descriptive parts—has an extensive and distinguished pedigree in American, as well as international, criminology and serves as the primary inspiration for the current study. While much research on crime and delinquency concerns itself with aggregate patterns of offending behaviour, the criminal career paradigm approaches the problem of understanding the nature of crime by focusing on the activities of individuals who commit crime and, more importantly, the sequencing of these delinquencies.

Using the *Youth Court Survey* as a source of longitudinal data, the purpose of the present study is to describe the youth court convictions of a birth cohort of Canadian offenders from the time they officially enter the system at age 12 up to their 18th birthdays.¹ Serving as the “conceptual pillar” upon which the present study is built, the criminal career paradigm partitions crime into various parameters (e.g. the prevalence, frequency, onset, and patterns of transition in the court histories) which affords the opportunity to report more detailed and structured knowledge of the key features of the conviction histories of Canadian offenders than would otherwise be available.

To date, this type of criminal career research has been quite limited in Canada—with a few notable exceptions. In a precursor to the present study, Carrington, Matarazzo and deSouza (2005) presented the first quasi-national study of the criminal careers of a Canadian birth cohort. It used linked data from the *Youth Court Survey* and *Adult Criminal Court Survey* to describe the court careers up to the 22nd birthday of Canadians born in 1979/80. The study included six provinces—Newfoundland and Labrador, Prince Edward Island, Quebec, Ontario, Saskatchewan, and Alberta—which accounted for approximately 78 percent of the population of Canada. In their “Montreal study”, Le Blanc and Fréchette (1989) used official and self-report data to follow a small sample of boys in Montreal from childhood through young adulthood during the 1970’s and 1980’s. In her study, Lee (1999; 2000) used data from the *Youth Court Survey* to analyze the “youth court careers” (the sequences of youth court cases) in British Columbia of a cohort born during 1972 to 1975. Whereas the aforementioned research followed ‘careers’ from a chosen point in time into the future, several Canadian studies have analyzed repeat offending using a retrospective design,

¹ Youth in Canada are not “convicted” of offences but rather a young person is either found guilty or not guilty of the offence for which they have been charged. In order to remain consistent with the international literature, the term *conviction* is used throughout this work to refer to cases where there was a finding of guilt.

in which the previous offending history of a sample of offenders is analyzed (Carrington and Moyer, 1995; Doherty and deSouza, 1995; Matarazzo, Carrington, and Hiscott, 2001; Moyer, 1992; Thomas, Hurley, and Grimes, 2002).

So why is the understanding of these youth court histories important? Besides having intrinsic value as basic information about the criminal behaviour of Canadian youth and the various judicial reactions to this behaviour, these patterns have profound implications for judicial decision-makers. The dispositional or sentencing phase is one of the key decision-making stages facing Canadian youth in conflict with the law. It is a stage which involves numerous factors and complex interactions and therefore, must be subjected to the scrutiny of on-going, sound research. As Snyder suggests, "...the direct examination of the court careers of juvenile offenders has the great potential to improve the court's ability to react in an effective and efficient manner" (Snyder, 1988: 4).

In sum, the proposed research represents a step toward a more comprehensive understanding of what Petersilia (1980) referred to as "landmark" events in a young person's life. It does so by presenting findings in a synthesized and complementary manner so as to produce conclusions that are not only relevant but also practical and able to contribute to a better understanding of this important dimension of adolescent development. This study provides a clear and concise analytical and empirical strategy which arms future research with an organized set of propositions derived from decades of prior criminal career research which may, in turn, lend itself to a number of corollary research questions associated with the initiation, continuation and desistence of a young person's offending.

Looking forward, the current study is presented in seven distinct chapters. Chapter 2 provides a definition of the criminal career paradigm, reviews key research contributions to

the foundation and elaboration of this approach to the study of criminal activity, and concludes with a close examination of the various criticisms and controversies surrounding the criminal career paradigm including central conceptual and methodological debates. Chapter 3 provides an outline of the methodological strategy utilized in the current study. This accomplished by a comprehensive discussion of the data source, population under study, unit of analysis, operational definition of the study variables and data analysis plan. Each of the remaining substantive chapters begin with a brief introduction and literature review of the extant research surrounding each of the various criminal career parameters examined. Chapters 4 and 5 identify the “size of the problem” by discussing findings related to the prevalence and frequency of court convictions for the cohort under study. Chapter 6 moves beyond the magnitude of offending by examining the nature and extent of the relationship between age at first conviction and the frequency and seriousness of subsequent convictions in the court careers of the 1979/80 birth cohort. Chapter 7 focuses squarely on the ‘recurrence’ component of the criminal career and, more specifically, the patterns of specialization and versatility in the offences which led to the court convictions of the cohort members. Finally, Chapter 8 concludes the current study by recapping the major findings and discussing their implications for policy and research on youth crime and youth court processing. As well, based on some of the limitations faced in present study, future work is proposed.

Chapter 2

Review of the Literature

2.0 Introduction

This chapter reviews the conceptual groundwork and empirical findings regarding the criminal career paradigm and its central role in present study of the convictions histories of a Canadian birth cohort. A substantial amount of research is examined to discern the following: (a) a definition of the criminal career paradigm, (b) research contributions to the foundation and elaboration of this approach to the study of criminal activity, and (c) criticisms and controversies—including conceptual and methodological debates.

2.1 The Criminal Career Paradigm Defined

A ‘criminal career’ is defined as “the longitudinal sequence of offences committed by an individual offender” (Farrington, 1997: 361). More than being a criminological theory, however, the criminal career approach is considered to be a framework or paradigm within which theories of criminality may be posited and investigated (Blumstein, Cohen, Roth, and Visher, 1986; Farrington, 1997; Farrington and Wikström, 1994). That is, the criminal career concept can be seen as “...a way of structuring and organizing knowledge about certain key features of offending for observation and measurement” (Blumstein, Cohen, and Farrington,

1988a: 4). Similarly, others have suggested that this paradigm emphasizes description over explanation of crime and criminality, and therefore, can be seen as *atheoretical* (Tonry, Ohlin, and Farrington, 1991). As such, the value of this paradigm is accorded to the fact that, “it identifies a number of research issues that can be framed as empirical expectations” (Tonry et al., 1991: 139).

While much research on crime and delinquency concerns itself with aggregate patterns of offending behaviour, the criminal career paradigm approaches the problem of understanding the nature of crime by focusing on the activities of individuals who commit crime. While focusing on individual offending, however, career research views crime as a social process which develops over time. That is, it “...frames criminal behaviour as something that develops during offenders’ lives, not as an isolated incident in a person’s life at one point in time” (Correctional Service Canada, 1993: 1). David P. Farrington, a leading figure in criminal career research, highlighted the ‘processual’ nature of the criminal career:

The criminal career approach is essentially concerned with human development over time. However, criminal behaviour does not generally appear without warning; it is commonly preceded by childhood antisocial behaviour (such as bullying, lying, truanting, and cruelty to animals) and followed by adult anti-social behaviour (such as spouse assault, child abuse and neglect, excessive drinking, and sexual promiscuity). The word ‘antisocial’ of course involves a value judgement, but it seems likely that there would be general agreement among most members of Western democracies that these kinds of acts interfered with the smooth running of Western society (Farrington, 1997: 361).

Decades of criminal career research have been quite varied in their particular research inquires, study designs and methodological approaches. Despite the significant differences

in past studies, a standard set of concepts may be delineated from the literature and the essence of this conceptual framework was succinctly summarized by Farrington (1997: 361):

A criminal career has a beginning (onset), an end (desistance), and a career length in between (duration). Only a certain proportion of the population (prevalence) has a criminal career and commits offences. During their careers, offenders commit offences at a certain rate (frequency) while they are at risk of offending in the community...For offenders who commit several offences, it is possible to investigate how far they specialize in certain types of offences and how far the seriousness of their offending escalates over time.

The partitioning of crime into the various parameters outlined above affords researchers the opportunity to develop much more detailed descriptions of criminal activity and criminal histories than that which would otherwise be available. Furthermore, Blumstein and his colleagues suggested this partitioning or isolation of the specific dimensions of criminal careers, “provides a finer resolution in the search for factors associated with crime than do other common approaches” (Blumstein et al., 1986: 13). Utilizing a framework with a focus on these specific parameters allows researchers to address such essential questions as: *what fraction of the population commits crime; at what rate do active offenders commit crime; when do individuals begin committing crime and when do they desist; and during that crime-prone time do they commit similar types of offences or do their crimes vary in both type and severity.* Barnett, Blumstein and Farrington (1987: 84) argued that it is necessary to separate these different facets of criminal behaviour and to ask these specific questions, “... in order to test various approaches to the prevention or reduction of crime and to investigate different ways in which possible ‘causes of crime’ affect these different aspects of criminal careers.”

The use of the term “career” within criminological research circumvents any implication that crime is being used as a means of earning a living but rather, focuses specifically on the sequencing of offending over a specified period of time in an individual’s life. Blumstein, Cohen and Hsieh (1982: 5) provided the following clarification regarding the use of the term “career” within criminological research:

This characterization of an individual’s criminal activity as a “career” is not meant to imply that offenders derive their livelihood exclusively or even predominantly from crime. The concept of a “criminal career” is intended only as a means of structuring the longitudinal sequence of criminal events associated with an individual in a systematic way. This notion of a criminal career can be applied to all crimes committed by an offender, or it can be restricted to sub-sequences of crimes which focus on selected crime types.

While contemporary research is replete with investigations of the career criminal as a criminological concept, it may be seen as the most recent offspring of the more traditional concepts of the *habitual offender* or *born criminal* found in earlier criminological theory (Simon and Feeley, 1995). Departing from its conceptual predecessors, however, the career criminal,

...presents a shift away from a eugenic-based explanation of crime, or any other type of sociological explanation that seeks to identify the causes of crime. Instead, it is agnostic about the causes of crime; it is preoccupied not with an explanation of crime as a prelude of diagnosis and response, but with the identification of high-risk offenders in order to incapacitate and manage (Simon and Feeley, 1995: 164-165).

The criminal career paradigm provides a clear picture of criminal behaviour as being rooted in a small portion or subgroup within society. As such, there is an implication, “...that measures aimed at such offenders will lower crime with better management, and without the

need for massive new programs or funds or even significant changes in crime-fighting strategies” (Simon and Feeley, 1995: 164). That is, both fiscal and crime-control strategies may be achieved by identifying this small, high-rate and repeat subgroup of offenders who account for a significant portion of all officially reported crime and an equally significant portion of the limited resources afforded to youth and criminal courts.

2.2 Foundations of the Criminal Career Paradigm

The criminal career paradigm, as defined above, may be best understood by highlighting a number of classical and contemporary studies which have been instrumental to its establishment and evolution. American studies will first be presented which have laid the foundation upon which much of the contemporary research is built. Research within the criminal career tradition has largely, but not exclusively, focused on the American justice system and its offenders. As such, significant research contributions from the United Kingdom, Sweden, Denmark and Canada will also be presented—further highlighting and extending the key parameters found in the criminal career paradigm. In the review of literature which follows, an emphasis is placed on *cohort-based* research which provides the most appropriate context for the present study.

2.2.1 American Contributions: Paving the Way

The study of crime and delinquency within the analytical framework of the criminal career is undoubtedly a ‘staple’ within contemporary criminological research and social

policy. The use of this approach, however, is not a recent phenomenon but rather dates back over 70 years to the pioneering work of Sheldon and Eleanor Glueck which began in the 1930's.

While the use of the term "career" within criminological theory can be traced to the interpretive tradition of the Chicago School, the early work of the Gluecks' is often considered one of the first systematic attempts at defining the criminal career concept and, more specifically, articulating its various dimensions (Blumstein et al., 1988a; Gottfredson and Hirschi, 1988; Petersilia, 1980; Tracy and Kempf-Leonard, 1996; Tracy, Wolfgang, and Figlio, 1990).² The decades of research presented by the Gluecks contributed to the study of crime both methodologically, as well as, conceptually (Petersilia, 1980; Sampson and Laub, 1993). According to Sampson and Laub (1993: 257), "the Gluecks thought that the study of the formation, development, and termination of criminal careers was research priority, and that the causes of the initiation of crime were distinct from the causes of continuing crime and process of desistance". The partitioning of crime into these various components clearly allowed for specific questions to be derived for different stages in what they perceived as a 'process of criminality'.

One of the most identifiable contributions of the early work by the Gluecks was their emphasis on the use of longitudinal data, and more specifically, follow-up studies to address their specific research inquiries. The majority of findings by the Gluecks are based on a longitudinal database which recorded the arrests and convictions of over 1000 offenders and the 15 years following their release. The Gluecks were convinced that,

² See Tracy and Kempf-Leonard (1996: 3-8) and Kyvsgaard (2003: 1-3) comprehensive reviews of the historical use of the term "career" in sociology and criminology developing out of the Chicago School.

...the greater the arc of the lifecycle that could be reconstructed the more would be known of both the original etiology of delinquency and of recidivistic criminalism later; of the weaknesses in society's official and nonofficial apparatus for coping with young social deviates and adult offenders; and of the possible aid of predictive devices in making the administration of justice more effective and therapeutic, as well as originally preventive (Glueck and Glueck, 1974: 12).

Beyond their focus on the use of longitudinal data, the work of the Gluecks was instrumental in uncovering and illuminating an empirical relationship between age and crime. Throughout their research the Gluecks found that as their population of offenders aged, their crime rate declined. They supported these findings through interpreting the age-crime curve in terms of a "delayed maturation" (Sampson and Laub, 1993: 35). In evaluating the persistence of the criminal potential of the offenders under study, the Gluecks found that an earlier age of onset was strongly associated with a much lengthier and more persistent criminal career (Glueck and Glueck, 1930; 1974). Furthermore, of those offenders who did persist in their life of crime, they found evidence that the seriousness of the crimes committed declined. Much of the findings uncovered by the Gluecks supported the notion of a *stability of criminal propensity*. That is, supporting the, now taken-for-granted, adage that the best predictor of future behaviour was past behaviour (Piquero, Farrington, and Blumstein, 2003).

Subsequent to the pioneering work of the Gluecks, it was not until the early 1970's that significant contributions to longitudinal research on delinquency and the criminal career were made (Tracy et al., 1990). The seminal Philadelphia birth cohort study by Wolfgang, Figlio and Sellin (1972) marked a turning point in criminological research. Among the most "tantalizing" and enduring findings of this work was that a small group of offenders were responsible for a disproportionate amount of crime. More specifically, Wolfgang et al.

(1972) found that 6 percent of the cohort (approximately 18 percent of their delinquent subgroup) under study was responsible for 52 percent of all the delinquency reported in the cohort. The importance of this finding was highlighted by Tracy and Kempf-Leonard (1996: 6):

Although criminologists had long suspected that rates of offending were skewed—that a small group of habitual offenders were committing crimes at a high rate—the Philadelphia birth cohort study showed just how small the chronic offender group actually was, and just how skewed their rates of offending actually were.

These findings, which demonstrated that a group of individuals with a skewed rate of illegal behaviour existed, popularized the idea of a “chronic offender”. Decades of research since the Philadelphia study have all confirmed the disproportionate volume of crime attributable to this “chronic” offender group. The relevance of these findings to crime-control policy was significant. If the chronic offender could be accurately identified and effective correctional strategies could be applied, then a significant amount of crime could be controlled.

Beyond their conceptual contribution, the pioneering work of Wolfgang et al. (1972) had also provided the field of criminology, and longitudinal research specifically, with an important methodological advance—the *birth cohort design*. Wolfgang and his associates tracked, through the use of official records (i.e., police, court and school), 9,945 boys born in 1945 who resided in Philadelphia from the time they were 10 years of age until their 18th birthday. Utilizing this design, the researchers were able to measure various dimensions of the criminal activity of the young persons along their life-course. As such, Wolfgang and his colleagues, “were the first to report population-based data concerning the onset, offense patterns, offense specialization, age variations, and the severity and duration of juvenile careers” (Tracy and Kempf-Leonard, 1996: 6). Prior to this 1945 birth cohort study, many

delinquency career measures such as desistance and recidivism probabilities, offence switching, offence severity, offence specialization and court sentencing probabilities “...were investigated with less than optimum data and/or limited study populations” (Tracy et al., 1990: 1). Bursik recognized the contribution and enduring findings by Wolfgang and his colleagues and suggested that with the data they collected they,

...were able to use sophisticated stochastic models to examine some long-standing but untested assumptions concerning the dynamics of specialization in illegal behavior and developmental trends in the seriousness of that behaviour (Bursik, 1989: 390).

The Philadelphia birth cohort study certainly provided the criminological community with essential direction—conceptually and methodologically—in the study of criminal offending and elicited a significant amount of interest in related criminal career inquiries.

In a second phase of this original birth cohort study, Wolfgang, Thornberry and Figlio (1987) drew a random sample of individuals who were followed and interviewed up to age twenty-six. Findings from this research provided further evidence of the uneven distribution of offending within the cohort of offenders. It was reported that approximately 15 percent of the 974 boys were classified as chronic offenders and were responsible for 74 percent of the official recorded crime (Wolfgang et al., 1987). When examining offences against the person (those causing personal injury) this figure rose to approximately 84 percent.

In this second phase, the researchers identified and classified the offenders into three distinct groups: *juvenile offenders only*, *adult offenders only* and *persistent offenders*. Overall, when the time period was controlled, it was found that persistent offenders were

twice as likely to become chronic offenders, and committed more serious offences than their *juvenile only* counterparts. Similar findings were reported when examining the *persistent offender* and the *adult only* groups. Lastly, unlike findings from the original study which found increased offence seriousness when it came to person (injury) offences only, findings from the follow-up study demonstrated a much more uniform increase in the seriousness of offences (Wolfgang et al., 1987: 30). Thus, providing evidence to support claims that as criminal careers develop, severity in offending increases—not only for individual crime types.

A second birth cohort study by Tracy et al. (1990) offered a full replication or comparative analysis of the original Philadelphia study using a 1958 birth cohort within the same jurisdiction. Beyond attempting to affirm previously observed scientific findings by comparing males in the two birth cohorts, the authors extended the scope of their prior research by including violent juvenile offenders, females and various comparisons between specific delinquent subgroups (Tracy et al., 1990: 2).³ Utilizing the same data collection procedures and sources, research design, and methodology as the 1945 birth cohort, the replication study reports significant findings in various areas of interest in the study of criminal careers. These include prevalence, incidence, delinquent subgroups, age, recidivism and sentencing probabilities (Tracy et al., 1990: 275). Earlier findings that race and socio-economic status (*SES*) were significantly related to the frequency and seriousness of offending were confirmed in the replication study, although the authors noted that the relationship was much less pronounced in the 1958 cohort (Tracy et al., 1990: 275-279). Furthermore, the replication study presents significant findings which fail to support the idea

³ The researchers inclusion and analyses concerning female offenders deserves special mention as most criminal career research to date has focused primarily on male offenders (especially in the area of violent offending) while the study of female criminal career patterns has been very limited and virtually non-existent.

that youth commit more and more serious crime over time. That is, there was little empirical support for the notion of escalation in the seriousness of violence in the cohort.

Tracy and his colleagues extended their research inquiry in the second study by reporting findings concerning the handling of the delinquents by youth court officials and more specifically, the association between the type and frequency of dispositions with subsequent offending. Disposition contingency analyses suggested that severe dispositions (classified as court penalties involving at least probation) did not appear to substantially reduce the likelihood of re-offending and in fact, had the opposite effect (Tracy et al., 1990: 290-291). Furthermore, the replication study provided extensive analyses and interesting findings when comparing dispositions following subsequent offending. As the authors reported that,

These data point out the interesting results that the likelihood of a third offense, whether it be index or not, is more sensitive to the disposition at the first offense than how the offender was handled at his second offense. Thus, given a remedial at the first offense, offenders who move on to a third do so in about the same proportions regardless of whether they were remediated or given a court penalty for their second offenses. The same is true for the delinquents exposed to court processing and sanctioned at their first index offense (Tracy et al., 1990: 260).

The above findings clearly highlight the importance and enduring effects of initial court intervention in the early stage of a young persons offending career.

A significant turning point for the advancement of research based on the criminal career paradigm occurred in 1986 with the publication of a two volume collection of work by Blumstein, Cohen, Roth and Visher. The report of the *Panel on Research on Criminal Career* directed the focus of the popularized notion of the “chronic offender” to a much

broader concern with specific topics such as “criminal careers” and “career criminals” and thus, laid the groundwork for contemporary research in this area (Benson, 2001; Tracy and Kempf-Leonard, 1996; Tracy et al., 1990). In brief, the two volume collection of research was instrumental in updating and specifying the various dimensions and measures of the criminal career—a construct which Blumstein and his associates continue to view as central to criminology. According to the authors, the criminal career approach partitions aggregate crime rates into two primary components: “the percentage of the population that commits crime and the nature and extent of activity of those people who are actively engaging in crime (i.e., active offenders)” (Blumstein et al., 1986: 1). The report identified four key dimensions which are derived from this partitioning of crime rates and which characterize criminal careers: *participation*, *frequency*, *seriousness* and *career length*. The significance of these components to a clearer understanding of criminal activity and the criminal career was highlighted by the authors:

This partitioning is important because the two components can be influenced by very different factors and call for quite different policy responses: the first—participation—is associated with efforts to prevent individuals from ever becoming involved in crime; the second—frequency, seriousness, and career length—is central to the decisions of the criminal justice system (Blumstein et al., 1986: 21).

In providing conceptual clarification and parameterization of basic structural concepts within the criminal career paradigm, Blumstein and his colleagues advanced a specific model of the criminal career. According to the authors, identifying a clear model of an individual criminal career,

...permits specification of relationships among the dimensions and computation of statistics that describe offending in an observed sample, such as a cohort of individuals followed over time, a cross-section of active offenders arrested during some time interval, or matched control/experimental groups being studied to assess the impact of some intervention (Blumstein et al., 1986: 21).

Sophisticated statistical modeling has been the methodological hallmark of the various criminal career contributions of Blumstein and his associates. Most notably is the specification of advanced stochastic models—which are probabilistic models “characterizing an individual by a parameter representing his or her propensity to violate the law” (Greenberg, 1996: xiv). This specific parameter is represented in the criminological literature by the Greek letter λ (lambda) and has proven to be useful in career research by identifying specific features of offending, and more importantly, sub-groups of offenders (including the chronic or habitual offenders). Furthermore, it has stimulated a significant amount of methodological discussion and corresponding research evaluating and assessing its parameterization.

Beyond the seminal works presented above, re-analysis of archived Glueck data by Sampson and Laub (1993) has also been instrumental in further elaborating and providing conceptual clarification of many of the underlying concepts and parameters contained in the criminal career paradigm. Some consider this work by Sampson and Laub (1993), “...without a doubt the most comprehensive and sociologically sophisticated analysis of criminal careers to date” (Warr, 1998: 184) and “ground-breaking” (Arnold and Kay, 1999). As with much criminal career research before them, Sampson and Laub established a research agenda which attempted to explain variation in criminal behaviour by formulating

specific questions regarding the onset, continuation and desistance from crime over an offender's lifetime.

The thrust of the work by Sampson and Laub is based upon their argument that criminologists had narrowly focused on adolescents and as a consequence, have “neglected the theoretical significance of childhood characteristics and the link between early childhood behaviours and later adult outcomes” (Sampson and Laub, 1993: 6). Therefore, the authors attempted to confront many neglected issues by “bringing both childhood and adulthood back into the criminological picture of age and crime” (Sampson and Laub, 1993: 7). They viewed individuals as active recipients of their environment and presented an individually-centered explanation of crime and criminality. Among the many significant findings of the re-analysis they found that job stability and marriage were key factors which contributed to the desistance of crime in the careers of their sample under study. This was interpreted by the researchers as changes in behaviour resulting from what they termed “social capital” and which highlighted the effect of individual decision-making on behaviour. While clearly having identified the discontinuity in some offending careers based on such factors, the authors also recognized the existence of stability for others.

Furthermore, Sampson and Laub (1993) provided specification to key dimensions of the well established career paradigm and “produced a more complex explanation of onset and persistence of offending behaviour, based on a more dynamic understanding of the way in which individuals may respond to changing life circumstances and influences at different stages from infancy, through adolescence to adulthood” (Haines, 1999: 268). While having recognized the value of the criminal career paradigm, much of the work by Sampson and Laub attempted to move beyond the specificity offered by this paradigm and toward a more

general theoretical understanding of criminal career findings. As such, the authors presented an age-graded general theory of crime which emphasized the link between social structure and the mediating processes of social control (Sampson and Laub, 1992; 1993; 2003).

Research presented thus far has utilized official data to examine various parameters of criminal careers from a law enforcement perspective—which focuses primarily on the sequencing of offences in the delinquent career of offenders. One key study which has utilized youth court data to systematically examine various criminal career parameters from a youth court perspective is presented by Howard N. Snyder.

Snyder (1988) analysed the court careers of approximately 69,000 youth born between 1962 and 1965 who had been referred and processed by youth courts in two U.S jurisdictions—Maricopa County (Arizona) and Utah. Snyder, having recognized the primary focus of criminal career research on police contacts, suggested that,

...if research is to provide the juvenile courts with comparative information on the nature and characteristics of the law-violating careers of the youth that come before them, a portrait of juvenile court careers needs to be developed and differences in the nature of the careers when viewed by the various components of the juvenile justice system should be delineated (Snyder, 1988: 3).

In an attempt to provide this portrait, the study retrospectively constructed the careers of these offenders, via court records, from their initial contact at age 7 until their 18th birthdays; findings from which illuminated the content and structure of their official court careers (Snyder, 1988).

Analyses using estimated population figures for both jurisdictions indicated that approximately 34 percent of all the youth born between 1962 and 1965 were referred to the

youth court before their 18th birthdays (Snyder, 1988: 10). Addressing the question of when the youth court careers began for the cohorts, findings indicated that, “the number of delinquency court careers increased with age, peaking with the 16-year-old age group and decreasing for the 17-year-old group” (Snyder, 1988: 17). This pattern was apparent for both male and female offenders. Further findings surrounding the issue of age-at-onset indicated that youth who began their careers at earlier ages accumulated lengthier and more serious (in terms of offences committed) court histories. However, after controlling for the length of time at risk it was found that early “onsetters” were not necessarily more criminally active, but rather had more time to accumulate lengthier court referrals.

Interesting results addressing recidivism probabilities were also presented in the study. Analyses and subsequent findings affirm those reported by other longitudinal studies (e.g. Wolfgang et al., 1972; 1987) that a small percentage of youth were responsible for a majority of officially handled cases. Within the jurisdictions evaluated, “one-sixth of all youth referred (those with 4 or more court referrals) were involved in over half of all juvenile court cases” (Snyder, 1988: 37). Examining the overall content and structure of the youth court careers (specifically in terms of age-at-onset, recidivism probabilities and the chronic offender), Snyder presented important implications for judicial decision-makers. He stated,

...courts should not wait until a youth has returned a fourth or fifth time before taking strong action. Most of these youth will cycle through the dispositional alternatives, consuming more and more court resources. Great expenditures earlier in a career should have more impact on these younger youth, should reduce future court workloads, and should provide greater protection to the community (Snyder, 1988: 66).

Many findings by Snyder clearly highlighted the need for early intervention in the lives of youth who found themselves in conflict with the law.

Overall, research by Snyder confirmed many essential findings from various large-scale studies conducted throughout the United States up to that time. Beyond this, however, this study was able to fill an essential gap in criminal career research by enhancing the understanding of the sequencing of events in a young person's life from a unique and understudied perspective—the youth court. Working from the basic premise that the extent and character of offending careers looks much different from a law enforcement perspective than a court perspective (for example, less serious cases are often not referred to youth courts and would be seen much more by law enforcement), Snyder advocated for a greater research focus on court data which was “largely untapped” and provided an essential example of the research potential from such a perspective.

2.2.2 Beyond American Jurisdictions: Extending the Road

By far, the most important British study in the area of criminal careers is the *Cambridge Study of Delinquent Development*, initiated by Donald J. West and currently under the direction of David P. Farrington. The Cambridge study is a major prospective longitudinal research project which aims to study the determinants, as well as, predictability of criminal offending over the life course (Farrington and West, 1990). The study has tracked 411 inner-city London males who were born between September 1952 and August

1954 from age 8 to 50.⁴ Data for the study is often noted for its comprehensiveness or “richness” as it has been collected from multiple sources, including the subjects, their parents, teachers, peers, and official sources (Farrington, 1979: 291; Farrington and West, 1990: 117). As West and Farrington (1977: 2) reported, “...the phenomena of the delinquent way of life is most faithfully represented by a combination of qualitative and quantitative data such as our own.” Information has been collected on a number of psychological and sociological theoretical dimensions such as intelligence, personality, parent-child relationships, delinquency of peers, school performance, marital stability and employment histories (Farrington, 1992; 1997). Most notably, research utilizing the Cambridge Study data has provided valuable evidence of career continuity from childhood/adolescence to adulthood and more specifically, that early onset of delinquent behaviour is predictive of more persistent future offending (Farrington and West, 1990).

Many key findings from the Cambridge study surround the issue of age and crime. Consistent with other longitudinal studies in the field, the Cambridge study found the peak age of conviction for most types of offences was 17 years of age (Farrington, 1992). More specifically, “the peak age of increase in the prevalence of offending was 14, while the peak age of decrease was 23” (Farrington, 1997: 368). In evaluating the issue of *chronicity* or the chronic offender, the Cambridge Study produced very interesting results. A central focus in evaluating the issue of chronic offenders in the Cambridge Study was how far this delinquent subgroup could be predicted in advance. Constructing and utilizing predictive scales based on a number of psychological and sociological factors researchers concluded that, “...many

⁴ The Cambridge Study in Delinquent Development is certainly one of the longest and most extensive longitudinal studies on juvenile delinquency and adult offending to date. As such, it is beyond the scope of the present review of literature to provide comprehensive coverage of the numerous results and findings from the research. Analyses of data collected during this study have resulted in numerous books and over 100 articles. See Farrington et al. (2006) for a summary of findings and list of Cambridge study publications.

of the chronic offenders could have been predicted on the basis of background factors by age 10” (Farrington, 1986b: 2). Again, these findings highlighted the importance of early identification and intervention in dealing with youth who were at risk of becoming frequent and serious offenders. Taken collectively, central findings from the Cambridge Study seem to indicate that delinquency is a complex social problem which is only one piece of the much larger puzzle of antisocial behaviour that persists over time. As Farrington (1997: 362) clearly stated, “... the anti-social child tends to become the anti-social teenager and then the anti-social adult, just as the anti-social adult then tends to produce another anti-social child.”

Two major longitudinal studies in Sweden which present findings on various parameters of offending are *Project Metropolitan* (Farrington and Wikström, 1994; Wikström, 1987; 1990) and *The Project on Individual Development and Environment* (Magnusson, 1988; Stattin and Magnusson, 1991; Stattin, Magnusson, and Reichel, 1989). Wikström (1990) reported findings from a retrospective birth cohort analysis of all those born in the Stockholm metropolitan area in 1953 and still residing in the area in 1963. Using official police registration records for 15,177 males and females, the study presented basic data on crime and more detailed information about the age-crime relationship. It was reported that from ages 13 to age 25, approximately 31 percent of the males and 6 percent of females in the cohort under study were official registered for a crime (Farrington and Wikström, 1994; Wikström, 1990). Consistent with American studies, findings from Project Metropolitan also indicated that a small proportion of offenders committed a large proportion of all official registered crime. More specifically, approximately 50 percent of the recorded crimes were committed by 1 percent of cohort members (approximately 6 percent of the known offenders) (Wikström, 1990). With particular focus on the relationship between age

and crime, findings from the Stockholm study indicated, "...a marked peak in the number of offences, and in the individual offending frequency, but that the number of offenders did not vary greatly with age" (Farrington and Wikström, 1994: 73). A central rationale guiding the research from Project Metropolitan was to create population-based crime data from Sweden which could be used in future research to compare with findings from Britain and the United States. As Wikström (1990: 81-82) suggests,

The results from the present study point to the value of conducting genuine cross-national comparative studies concerning age, crime and criminal careers. Such studies would enable the researchers directly address questions whether, or to what degree, cross-national differences in findings are due to differences in the ways in which the criminal justice system operates or in the data and methodology used, etc., or if the differences are substantial.

The *Project on Individual Development and Environment* was initiated by David Magnusson in 1965, and is a prospective longitudinal study of individuals born in 1955 and who resided in Orebro, Sweden area in 1965 and entered the 3rd grade of the public elementary school at age 10 (Magnusson, 1988; Stattin and Magnusson, 1991). Including children of the same age who moved into the region from 1965 to 1971, the study provides detailed information on the offending careers of 1,393 males and females from age 10 to 30 (Magnusson, 1988; Stattin et al., 1989). The data for the study were collected over a very broad range of factors (including criminal, physiological, behavioural, structural and social) in an attempt to investigate pathways to criminal behaviour (Magnusson, 1988). Stattin et al. (1989) utilized the Orebro data to address several questions related to the criminal activity of the birth cohort at different ages. Findings suggested that there was a significant difference in the age at which males and females began to engage in criminal behaviour. For males in

the cohort, the age at first offence was between 14 and 16 years of age—with a mean age of first adjudication being 16 years and 7 months. For females, the age at first offence was much later and peaked between 21 and 23 years of age—with a median age at first adjudication at 21 years and 2 months (Stattin et al., 1989: 381). Similarly, the researchers also found marked gender differences with respect to overall criminal activity. As the authors reported, “whereas more than one in three males in the total sample were registered for some crime by 30, only 9 percent of the females were found in official delinquency records” (Stattin et al., 1989: 382). Gender differences were also found when exploring various dimensions of rates of offending and more specifically, when comparing “multiple offenders” (those registered for more than ten crime incidents). In a study of stability and change in the criminal behaviour of the Orebro subjects, Stattin and Magnusson (1991) reported various findings of criminal continuity up to age 30. The authors assessed changes in criminal activity over three specific time periods: *childhood* (up to age 14), *adolescence* (age 15 to age 20) and early adulthood (from ages 21 to 30) (Stattin and Magnusson, 1991). Using only male subjects in the study, the authors found monotonic, positive relationships which indicated that, “the more crime occasions recorded for a subject in one time period, the higher the risk both that he would also be registered in a later period and that he would be registered for several crime occasions” (Stattin and Magnusson, 1991: 331-332). Almost 70 percent of subjects registered for a crime during childhood were also registered on a subsequent occasion during adolescence. In their examination of offence specialization from adolescence to adulthood, the researchers found little evidence to suggest any specialization. In fact, the researchers suggested that, “The most outstanding feature of this analysis was that

a diversified pattern of criminal activity in adolescence tended to be related to varied criminal activity in early adulthood” (Stattin and Magnusson, 1991: 335).

Utilizing data from the Orebro project enabled the researchers to situate their findings within the context of other international studies of criminal career dimensions. As the authors indicated, “the exclusion of young persons from official statistics on crime in Sweden has made it difficult to form international comparisons and it may be considered a primary cause of low crime prevalence rates in Scandinavia compared to the rest of Europe” (Stattin et al., 1989: 383). Collecting data for the under-age group of offenders (those under the age of 15 which is the age of criminal responsibility) has allowed for more accurate comparisons than that which were available.

The Danish longitudinal study by Kyvsgaard (2003) was a recent contribution to the growing body of international research focusing on the study of criminal careers. Using official data from the crime statistics registry, as well as demographic information from the workforce registry, information was presented on 44,698 male and female offenders who had been registered for various penal code violations (Kyvsgaard, 2003). This was an extensive study which covers all dimensions of the criminal career including: *prevalence, frequency, onset, recidivism, duration, desistance, escalation and specialization*.

Analyses by Kyvsgaard indicated that 45 percent of males and 9 percent of females born in 1964 and 1965 had been officially registered for an offence by the age of 26 (Kyvsgaard, 2003: 75). Based on the observed trends, Kyvsgaard suggested that more than half (and as high as 60 percent) of all men and over one-tenth of all women born in 1964-5 will be listed in the Danish criminal registry for an offence over their lifetime. One possible explanation for such high prevalence is that the data included a number of less serious

offences (i.e. traffic violations) which are traditionally excluded from studies of prevalence. Consistent with much research-to-date, findings from the Danish study confirmed the skewed distributions in individual offending. More specifically, approximately 2 percent of the most active offenders were responsible for one-third of all the offences included in the study (Kyvsgaard, 2003: 106).

Findings from the study also shed light on issues surrounding the length of time surrounding individual crime frequencies. It is often suggested that uneven crime frequencies can simply be an artefact of lengthier periods of observation—the longer the observation period the higher the individual crime frequency of some offenders. Kyvsgaard, however, suggested that this may be less significant than anticipated or assumed. As Kyvsgaard (2003: 95) reported,

In half the cases where an offender commits a new crime, it happens within a month of the previous offense. In an additional 32% of the cases recidivism occurs within 12 months of the previous offense. It is only in barely 3% of the cases that more than 5 years go by between offenses.

A unique contribution of the recent work by Kyvsgaard (2003: 89) was questioning “...to what extent and in which way any imprisonments should be considered” in measuring individual crime frequencies. That is, others have noted (see Blumstein et al., 1986; Piquero et al., 2003) the importance of controlling for “time at risk” of offending because annual rates of individual frequencies would be artificially lowered in time periods where an offender is incarcerated. As such, Kyvsgaard presented findings of individual crime frequencies using calculations based on both calendar year and time-at-risk. Findings suggested that only minor changes to crime frequencies were observed when using “time at risk” and the median values remained unchanged (Kyvsgaard, 2003). After examining

results utilizing the various approaches the author reconciled the issue in her own work by having concluded that, "...individual crime frequency per calendar year represents age-related changes more accurately than crime calculations based on time at risk" (Kyvsgaard, 2003: 100).

The *Dunedin Multidisciplinary Health and Human Development Study* is a large-scale prospective longitudinal study of all individuals born between April 1st, 1972 and March 31st, 1973 in Dunedin, New Zealand (Moffit, Caspi, Rutter, and Silva, 2001). The value of this research is the richness of the data collected over the life course of the individuals. Study members had been assessed beginning at age 3, then every two years up to the age of 15, and at ages 18, 21, 26 and currently at age 32. Although not initially designed to investigate criminal activity, utilizing official court records of convictions from both the *Children's and Young Persons' Court* from age 13 to age 16 and convictions in adult *Criminal Court* from age 17 to 22 for 1,037 offenders, various studies utilizing this data have advanced knowledge of criminal offending (Piquero et al., 2003). Surrounding the issue of criminal prevalence, findings indicate that 20 percent of the males and 8 percent of the females in the study were convicted of at least one offence from ages 13 to 22 (Moffit et al., 2001). In a study assessing the relationship between personality-types and crime, the Dunedin data revealed that by age 18 approximately 19 percent of the males and 10 percent of the females were known to the police as juvenile delinquents (Caspi, Moffit, Silva, Stouthamer-Loeber, Krueger, and Schmutte, 1994: 172). The number of contacts with the police for the study sample ranged from 0 to 18 contacts for males and from 0 to 12 for females (Caspi et al., 1994). Furthermore, of the 932 subjects who were assessed at age 18, the authors report that approximately 6 percent of the sample were classified as repeat

offenders (those with two or more criminal convictions) which ranged from 0 to 68 for males and 0 to 10 for females (Caspi et al., 1994). It should be noted that, the sample had been assessed with a battery of sociological, psychological and medical measures which has led to over 600 publications since 1975 (Piquero et al., 2003: 375).

To date, the use of longitudinal data in the study of crime and criminality in Canada has been very limited and almost non-existent. As such, researchers in the field of criminal careers suggested that, “there is a great need for Canadian longitudinal research to trace the development of delinquency and crime in Canadian populations and to see if the kinds of factors that predict offending in England and the United States are valid in Canada” (Farrington, 1989: 462). Current data sources available in Canada (e.g. Youth Court Survey) which capture some elements of crime and criminality have been collected for administrative purposes by government agencies with bureaucratic agendas in mind. As such, many concepts and issues of interest to social researchers are not readily available in the data. Unfortunately, in order to fully “exploit” the data for social research agendas, the datasets require a significant amount of resources and are very costly to construct. While no longitudinal research history exists within the Canadian context, the “Montreal Study” by Le Blanc and Fréchette (1989) certainly represents a comprehensive starting point for Canadian criminal career research.

Two representative samples of Montreal adolescent males were tracked by the researchers for approximately 15 years beginning in 1970 until the mid 1980’s. The samples included 1684 “adolescents” who had no officially recorded delinquency (serving as a comparison group) and 470 “delinquents” who had official convictions or were already classified as wards of the court. Utilizing data from self-reports and official records, the

researchers parameterized offending using three different perspectives: *descriptive*, *boundary*, and *process*. According to Le Blanc and Fréchette (1989: 15), the triple analysis “...is essential because it helps to describe offending and facilitates understanding of not only the mechanisms that govern its development, but also the limits of its evolution”.

One of the key findings stemming from this work was the finding that a large number of youth are involved in some behaviour during their childhood or adolescence that could be deemed ‘illegal’. Presenting findings of self-reported participation in criminal activity, the researchers found that 97 percent of the “adolescents”—the representative population sample of Montreal males—reported at least one criminal infraction by age 15, while only 4 percent of this same group had been convicted by a court before the age of 18 (Le Blanc and Fréchette, 1989). Unlike some previous research which may have suggested that a small number of youth are charged with criminal activity because only a small number are engaged in illegal activity, the self-report findings from this study affirmed that illegal behaviour is fairly widespread among the adolescent population and few incidents come to the attention of authorities, let alone are brought to the attention of the courts (Le Blanc and Fréchette, 1989: 61). Many interesting findings resulting from the Montreal study also surround the relationship between age and crime. In their analyses examining age-at-onset, the researchers found that it varied with different types of offences. For example, Le Blanc and Fréchette reported (1989: 97) that,

Minor crimes begin early, before the age of 12, and extend over a relatively long period of 3 years or more, stopping by mid-adolescence at the latest. The most serious crimes begin later, in the second half of adolescence or at the beginning of adulthood, and extend over a shorter period, often less than 2 years.

Subsequent analyses confirmed that age at which the first offence occurred was an accurate measure of precocity and thus allowed the researchers to conclude that, “the period of life during which criminal activity is most likely to begin is between ages 10 and 14, with a sort of peak between the 10th and 12th years, at which time a child has to establish his independence, his own frame of reference, and his own values vis-à-vis the adult world” (Le Blanc and Fréchette, 1989: 81). The authors further found that at the age of 13, certain types of offending seem to have resurfaced (e.g. burglary) and lasted for approximately 2 to 3 years at which time it subsided again until early adulthood. These findings confirmed for the authors, the “discontinuous nature” of criminal activity. Extensive analyses of various criminal career parameters such as age-at-onset, duration, age-of-offset, and transfer led the researchers to the ultimate conclusion that, “the development of criminal activity is not a matter of chance, that progress through stages of illicit activity occurs with a strong degree of predictability and according to a hierarchical model” (Le Blanc and Fréchette, 1989: 165). Within this model, the researchers suggested that while many young persons commit crime, many will not go on to become serious offenders and therefore, advocated a research agenda which differentiated between patterns of delinquency which were temporary or situational and those which were indicative of serious and chronic future behaviour (Le Blanc and Fréchette, 1989).

The research report on recidivism in youth court histories in British Columbia by Lee (2000) also addressed various parameters found within the criminal career paradigm. Utilizing court data from the *Youth Court Survey*, Lee reconstructs the official court careers for individuals born from 1972 to 1975—providing a youth court perspective of the official contacts of four generations of Canadian youthful offenders. The primary focus of this

retrospective birth cohort comparison was to illuminate specific issues surrounding the likelihood and rates of re-offending (Lee, 2000: 1). Recidivists, for purposes of the study, were classified as any offender who had a conviction after the date of his or her first disposition. A breakdown and classification of offenders revealed that approximately 37 percent of the male offenders and 29 percent of the female offenders were recidivists. Analyses examining the relationship between age and recidivism also yielded interesting findings. Utilizing only the 12-to-15-year age bracket—to ensure reasonable follow-up periods—Lee ((2000: 16) reported that, “the largest proportion of recidivists at a specific age at first disposition was 50 percent of 169 girls at 13 years, compared to 68 percent of 164 boys at 12”. Such findings highlighted the tendency for young persons to re-offend soon after their first official disposition from the youth court. Thus, as the author suggests, “to have a significant effect, measures that might prevent reoffending should be taken relatively soon after sentencing” (Lee, 2000: 17). Utilizing various regression models, Lee was able to further specify this relationship between age and recidivism. With the inclusion of disposition number into the models, Lee (2000: 26) reported, “that the two variables...accounted for 80 percent of the variance in recidivism rates”. Further analyses suggested that the age of the offender had much less effect on rates of recidivism for older than younger offenders. The implications of such findings extended Lee’s earlier conclusions, suggesting that “...prompt action may be much more important for younger than older offenders in the prevention of reoffending” (Lee, 2000: 28). Sentiments which echoed the suggestions from other key research in Canada—see Le Blanc and Fréchette (1989) for example.

A more recent study by Carrington, Matarazzo and deSouza (2005) represents the first multi-jurisdictional Canadian study of the criminal careers of a birth cohort. This research presented a descriptive profile of the criminal careers from the 12th to the 22nd birthday, as revealed by charges filed in court, of Canadians born in 1979/80. Six provinces—Newfoundland and Labrador, Prince Edward Island, Quebec, Ontario, Saskatchewan, and Alberta—accounting for approximately 78% of the population of Canada were included in the study. Using linked data from the *Youth Court Survey* and *Adult Criminal Court Survey* collected by the Canadian Centre for Justice Statistics (CCJS), the researchers addressed key questions surrounding the following criminal career parameters: *prevalence; frequency; onset and termination; duration; rate of offending; specialization and versatility; and types of careers.*

The authors found that of the approximate 323,300 people born in 1979/80 in the jurisdictions under study, approximately 59,000 were referred to youth court or adult criminal court in relation to at least one federal statute offence committed before their 22nd birthday. This was the equivalent of about 18 individuals for every 100 born during 1979/80. Just over one-half (55%) of the alleged offenders had a court career consisting of only one incident. About 63% of females were one-time offenders, compared with 53% of males. "Repeat offenders" those referred to court in relation to two to four criminal incidents, accounted for about 28% of all alleged offenders. "Chronic offenders," defined as persons referred to court in relation to five or more criminal incidents, made up the remaining 16%. Although chronic offenders made up the smallest group, they were responsible for 58% of all court referrals involving the 59,000 young people. Overall, offenders had an average of 3.1 referrals to court with males averaging 3.3 referrals, and females 2.4 (Carrington et al., 2005).

Using administrative court databases provided the researchers with key personal and case-related information for all events occurring over a 11-year period—from fiscal 1991/92 to 2001/02. Having information on the exact timing of these events allowed the researchers to explore the relationship between age and overall frequency of referrals to court. The study found that the younger an individual was at the time of first their first offence, the higher the propensity to re-offend. Offenders who began their court career with an incident that occurred when they were 12 had an average of 7.9 court referrals. Those who were 21 at the time of their first offence had an average of only 1.2 referrals. When controlling for time-at-risk, the researchers still found, “...that the propensity to re-offend is greater for those with earlier ages of onset (Carrington et al., 2005: 20).

Overall, the study also found that the patterns of court referral for males and females were similar. However, the prevalence among females rose relatively faster at younger ages, and peaked earlier. The largest group of females was referred to court at the age of 16, while the peak age of referral for their male counterparts was 18 (Carrington et al., 2005: 13).

While making a significant contribution to the growing body of Canadian literature on criminal careers, the authors note that the court files used in their study could support more detailed analyses of various issues not addressed by their work. The authors recommended that future research track the court histories of individuals to their 22nd birthday and conclude that, “this will result in a more complete picture of the court careers of chronic, persistent offenders, as well as a more thorough investigation of the court careers of ‘adult-onset’ offenders, who had no contact with the court system during adolescence” (Carrington et al., 2005: 41).

2.3 Career Research: Criticisms and Controversies

Criminal career research has advanced our current knowledge about various aspects of individual offending. More specifically, it has explored and provided concise information regarding the prevalence, frequency, onset, persistence and desistance of individual criminal behaviour and has laid a solid foundation upon which future research inquires into the sequencing of criminal events and the corresponding judicial responses can be built. However, like any other research paradigm, the criminal career approach is not without limitations and has been the subject of ongoing debates. Just as the foundations of the criminal career paradigm may be traced to the pioneering work of Sheldon and Eleanor Glueck, so can the controversies.

2.3.1 The Criminal Career Concept

As discussed above, central to the work of the Gluecks' was an examination of the relationship between age and criminality. More specifically, much of their research confirmed that as the population of offenders under study aged, their crime rate declined (Glueck and Glueck, 1930; 1974). Furthermore, of those who continued offending, the seriousness of the offences committed also appeared to decline (Laub and Sampson, 1991). These consistent findings led the Gluecks to interpret the familiar age-crime curve in terms of "maturational reform". Beyond these findings of declining rates of offending with age, the researchers argued that their data showed, "beyond a reasonable doubt that, in all of life's activities considered in the inquiry, the men who as boys comprised our sample of juvenile

delinquents have continued on a path markedly *divergent* from those who as juveniles had been included in the control group of nondelinquents” (Glueck and Glueck, 1968 cited in Laub and Sampson, 1991: 1410). This suggested to the Gluecks that the process of criminality was one characterized by stability over the life course. Much of the research by the Gluecks utilized a multiple-source approach of data collection (i.e., official records, psychiatric evaluations, etc...) as well as, a multiple-factor approach in the explanation of criminal behaviour. As such, some have argued that the Gluecks ignored or downplayed many social factors (i.e., stratification, peer groups, culture, etc..) critical to the understanding of crime, in favour of “bio-constitutional” and “psycho-social” correlates (Laub and Sampson, 1991).

Beginning in 1937 with his review of the Gluecks’ *Later Criminal Careers*, Edwin Sutherland established himself as the most vehement opponent of the Gluecks’ work and their conceptual and methodological approach to the study of crime. A primary objection pursued by Sutherland surrounded the issue of aging or maturation in the reduction of delinquency purported by the Gluecks. Sutherland argued that, “there is no justification for this conclusion, either in statistics or logic. Aging, as the mere passing of time, has no significance as a cause” (Sutherland, 1937 cited in Laub and Sampson, 1991: 1413).

Furthermore, in regards to the Gluecks’ findings on the relationship between age and crime, Sutherland again argued,

There is no statistical procedure by which a statistically significant association can be translated into a cause...Moreover, the passing of time no more explains reformation than it explains the genesis of a depression or the election of an old man to the Senate (Sutherland, 1937 cited in Laub and Sampson, 1991: 1414).

The main thrust behind much of Sutherland's objection to the work by the Gluecks, can be traced to his adoption of "analytical induction" as the scientific method to be used in the study of crime. As such, Sutherland developed a general theory of crime which rejected any search for multiple factors of crime causation as unscientific (Laub and Sampson, 1991). Not only did Sutherland believe that crime was a social phenomena requiring social factors as explanation, but perceived "the multi-factor approach, with its inclusion of such individual-level factors as age and mental capacity, as a threat to a substantive version of sociological positivism" (Laub and Sampson, 1991: 1420). Ultimately, as Nagin and Land (1993: 327) concluded, "Sutherland was the resounding victor in the sense that the Gluecks' work was largely forgotten within criminology and sociology until the contemporary round of criminal careers research."

In this contemporary round of criminal career research, Alfred Blumstein, David Farrington and their various associates have clearly established themselves as strong advocates of this approach to the study of crime and criminality. While these researchers, along with many others, have accepted the value of this approach as providing a clear understanding of crime and its various dimensions, there are those who have rejected this paradigm, the same dimensions and many of its basic assumptions.

Beginning with their work in 1983 on age and crime, Michael Gottfredson and Travis Hirschi have established themselves as the most ardent opponents of this approach and question its necessity and value to criminology. Ongoing debates surrounding the criminal career paradigm revolve around three central issues: (1) the relationship between age and crime; (2) the theoretical and practical value of the criminal career notion; and (3) the value of longitudinal research to criminological theory.

As discussed earlier, beginning with work in 1986, Blumstein and his colleagues characterized crime as being partitioned into four specific dimensions: participation, frequency, seriousness (of offences committed) and duration of criminal activity. Furthermore, the authors made basic assumptions about the composition of crime in society. As the authors noted,

The criminal career paradigm presumes that offending is not pervasive throughout a population, but is restricted to a subset of the population. This subset consists of active offenders—those who commit at least one crime during some observation period. It also presumes that the composition of active offenders varies over time as some criminal careers are initiated and others terminate (Blumstein et al., 1986: 17).

Throughout their work, it is argued by the researchers that while the frequency of individual offending by active offenders (*lambda*) may be seen as invariant across age groups, *participation, seriousness and career length* can be found to vary with age in much the same way as the well established age-crime relationship identified at the aggregate level (Blumstein et al., 1988a; 1988b; Blumstein et al., 1986). That is, some offenders commit a consistently high number of offences over an extended period of time and thus, are categorized and referred to as “career criminals” (Blumstein et al., 1986: 1).

At the heart of the rejection by Gottfredson and Hirschi is the basic understanding of the relationship between age and crime. They have consistently argued that the relationship between age and crime is a negative one (peaking in adolescence and declining thereafter) and therefore, put forth a thesis of invariance (Gottfredson and Hirschi, 1986; Hirschi and Gottfredson, 1983). Furthermore, the researchers went on to suggest that, “this distribution is characteristic of the age-crime relation regardless of sex, race, country, time or offense”

(Gottfredson and Hirschi, 1986: 219). That is, this relationship is *universal*—applicable to everyone, everywhere at every time. As such, the age effect cannot, and should not, be used to explain the crime phenomenon by criminologists. Most importantly, Gottfredson and Hirschi argued that this relationship is not only apparent at the aggregate level, but also at the individual level (all groups sharing a common age distribution) and therefore, deny “...the validity of the career concept as applied to crime” (Gottfredson and Hirschi, 1988: 40).

One of the more extensive attempts at testing the propositions posited by Gottfredson and Hirschi is presented by Tittle and Grasmick (1997). Using interview data gathered from a random sample of 394 adults aged 18 to 90 the researchers investigated three hypotheses implicit in the arguments put forth by Gottfredson and Hirsch regarding the relationship between age and crime. On the issue of invariance, the researchers found that while there was support for this thesis when examining crimes such as fraud, force and major or minor theft, there was a significant departure from invariance for other crimes, such as tax evasion (Tittle and Grasmick, 1997: 321-322). Analysis examining the issue of inexplicability—that the relationship between age and crime cannot be explained using social variables—derived mixed results. The researchers were able to reduce the significance of specific relationships with their predictors, but as the authors noted, “the predictors do not account for a very large percent of the age effect” (Tittle and Grasmick, 1997: 341). While use of better measures may have produced more successful results, the findings highlighted the difficulty in accounting for age-crime associations (Tittle and Grasmick, 1997). Finally, testing of Gottfredson and Hirschi’s non-interaction hypothesis also yielded ambiguous results. Analyses testing the association between various correlates of crime (i.e. community integration, interpersonal integration, religion, stress, dissatisfaction, self-esteem, sex, race,

opportunity and low self-control) and age produced few statistically significant results that could not have occurred by chance alone (Tittle and Grasmick, 1997: 338). Ultimately, based on their analyses, Tittle and Grasmick (1997: 342) concluded that,

...because some forms of crime seem to deviate from the typical pattern of relationship with age, because some success in explaining some observed age-crime relationships has been achieved, and because age seems to interact with some correlates and causes of crime, the Hirschi-Gottfredson perspective must be regarded as at least somewhat problematic.

An earlier rejoinder to this debate by Tittle may still serve as an appropriate conclusion—that until much clearer specification is made regarding the issue of age-crime invariance or variance, “the two are not inherently incompatible” (Tittle, 1988: 76).

Beyond the conceptual criticisms put forth by Gottfredson and Hirschi, further controversy and opposition was directed at the use of longitudinal research designs in the study of criminal behaviour, and more specifically, as a requisite approach in the study of the criminal career.

In defining the parameters of their criminal career model, Blumstein and his associates were very clear about the methodological agenda required to address central questions within the paradigm. As the researchers noted, “many issues about criminal careers cannot be adequately addressed in cross-sectional research” (Blumstein et al., 1986: 199). The rationale behind their position rested on the idea that, “research to identify patterns of variation or stability during criminal careers inherently requires longitudinal data—simply because a “career” is longitudinal by definition, and longitudinal information is necessary to address a longitudinal phenomenon” (Blumstein et al., 1988b: 66). According to Farrington (1986a: 454), “our ability to deal effectively with crime is greatly limited by

our lack of knowledge about the history and development of criminal careers.” The thrust of the methodological argument by the supporters of the longitudinal design rests upon the idea that when criminal behaviour is partitioned into onset, duration and desistance, the causes or correlates associated with each stage of offending may vary greatly and thus, require separate attention (Blumstein et al., 1986). The longitudinal design would allow researchers to apply repeated measures of the same individuals over time, allowing for detailed information regarding the “natural” history and emerging pattern or “course of development” of criminal behaviour (Blumstein et al., 1988a; Blumstein et al., 1986; Farrington, 1986a). Highlighting individual variations in criminality over the life course has certainly become the hallmark of the longitudinal design (Kyvsgaard, 2003).

A major criticism asserted by Gottfredson and Hirschi was that longitudinal research did not produce any new knowledge that could not be obtained through cross-sectional research designs. They believed, first of all, as Karger and Sutterer (1988: 92) suggested, “that a procedure which is explicitly guided by theory is necessary since the theoretical basis and the resultant research hypotheses are the prerequisite for determining the choice of the research design.” In fact, Gottfredson and Hirschi (1987: 610) stated that, “current advocates of longitudinal studies blur the distinction between theory and method to such an extent that they seem to be making important substantive and logical assertions when in fact they are merely repeating an extremely narrow conception of crime and its causation.”

Kyvsgaard (2003: 37) pointed out that Gottfredson and Hirschi based their opposition on the belief, “...that self-control is the unitary variable involved in variation of all parameters of the criminal career from participation itself to changes in frequency and seriousness, etc...”. Gottfredson and Hirschi (1990) presented a general theory of crime that

viewed the causes of crime as simply the existence of low self-control. This is a characteristic that developed early in life and continued throughout life without being altered. Self-control, however, was not the primary reason for committing criminal acts—the condition of low-self control interacted with opportunity to increase the likelihood of committing a criminal act (Grasmick, Tittle, Bursik, and Arneklev, 1993). As such, Gottfredson and Hirschi (1990: 87) argued that variations in criminal behaviour are not dependent on age, but rather on these fluctuations in opportunity or “...to the extent to which they are vulnerable to the temptations of the moment”. This negated any need for longitudinally-focused research, and utilizing the less expensive and time consuming cross-sectional design would be more than sufficient for delineating the causes and correlates of criminality.

Tracy and Kempf-Leonard (1996), reflecting on criminal career research up to 1990, suggested that the position taken by Gottfredson and Hirschi may have had some merit. As the authors noted, “Gottfredson and Hirschi were correct in their analyses, and they were quite justified in their commentaries which argued that longitudinal research had not produced a yield commensurate with its apparent dominance in the field” (Tracy and Kempf-Leonard, 1996: 14). Tittle (1988) goes even further to suggest that the debate of whether longitudinal research should be utilized over cross-sectional designs is not only futile, but also unnecessary. As he aptly argues, “...any overall choice between the two is likely to inhibit progress. Both are useful tools appropriate for specific jobs. Each has advantages and disadvantages, depending on the problem to be addressed” (Tittle, 1988: 76). In a similar vein, Nagin and Land (1993) viewed the varying analytical techniques used by each of the respective “camps” as the primary factor impeding any resolution of the particular issues.

That is, as discussed above, the hallmark of the work by Blumstein and his colleagues was framed within a context of advanced mathematical models which had "...the great virtue of mathematical rigour" (Nagin and Land, 1993: 331). But as such, key features of the models proposed were not grounded in well-developed theoretical propositions. By contrast, the work of Gottfredson and Hirschi, "is decidedly behavioral but is not presented in the form of a formal mathematical model" (Nagin and Land, 1993: 331).

In sum, Gottfredson and Hirschi argued that, "the heavy emphasis on the career criminal has paid little in the way of practical dividends and has limited thinking about crime to the repetition of pretentious slogans" (Gottfredson and Hirschi, 1986: 231). However, Karger and Sutterer (1988: 93) have appropriately suggested that, "...neither side furnished empirical proof in support of their contrary opinions which is exhaustive or convincing enough to permit a decision for or against one or the other view."

Despite the dominance of the criminal career paradigm in criminological research, this approach to the study of crime and criminality has faced trenchant criticism since its inception and will always have its share of critics. However, in reference to these ongoing polemics, Tracy et al. (1990: 18) suggested that, "Scientific disagreement is healthy, and criminology will surely benefit from the exchange of ideas stimulated by the career criminal controversy."

2.3.2 Criminal Careers: Official Data vs. Self-Reports

A study of criminal careers or criminal histories has three basic requirements of the data it utilizes: 1) it must be individual-based, 2) it must delineate a clear period of time and 3) it must be able to identify the timing of the criminal events under study (Kyvsgaard, 2003). As Farrington (1997: 367) has suggested, “It would be convenient for criminal career researchers if offenders would keep regular diaries listing all their offences...”. However, given the aforementioned data requirements, and the lack of large-scale, valid “diary” data, the longitudinal study of crime or criminal events often relies on surveys of self-reported crime or the use official statistics. Recent comparisons of criminal career findings based on these alternate data sources have found that different conclusions may be drawn based on the type of data used (Farrington, Jolliffe, Hawkins, Catalano, Hill, and Kosterman, 2003; Wiesner, Capaldi, and Kim, 2007). Farrington (1997: 366) has noted that, “...the advantages and disadvantages of official records and self-reports are to some extent complementary.”

Self-report surveys, which rely on voluntary admission of crime by its respondents, have a key advantage in that they identify undetected crime or “hidden” delinquency which may never come to the attention of authorities. Furthermore, self-report surveys often have the added advantage of including a wider range of offences committed by individuals—often considered within the normal range of delinquent behaviour. However, when data is collected via self-report surveys there are a number of issues related to the timing of events which may threaten the reliability and validity of the findings. This is most often the case due to reliance on the accuracy of recall by respondents’ of their specific events—especially as time passes. This can obviously occur because of both forgetfulness and/or the choice not

to be completely forthcoming about various *illegal* events which one has been involved in. In their review of the criminal career paradigm, Piquero, Farrington and Blumstein (2003: 405) suggest that, “self-report data can be distorted as a result of problems in the design of survey instruments, response errors, and analytical errors in inferring career dimensions from questionnaire responses.” Furthermore, the self-report method may also have significant economic disadvantages in the study of criminal careers. It can be very costly and time consuming to track individuals over a number of years in order to gather information regarding criminal behaviour in regular intervals—often making it unfeasible or impractical for most social researchers.

Unlike the information derived from self-reported data, official crime data are comprised of illegal behaviour which must first be detected, then reported to authorities, and subsequently dealt with—formally or informally—by the police or courts. Criminal career research can be considered most “fruitful” in its investigations when the exact timing of events is easily captured. This is readily available in official records (e.g. the date of the offence in police data or the date of conviction in court date) but not as easily ascertained in self-report studies. Unlike self-reported delinquency—which may under-represent more serious offending by youth--Wiesner et al. (2007: 837) suggest that, “Official records may include more of the worst offenses and are an objective measure with accurate recording of age at offense.”

The clear disadvantage of official data is that they can be seen as only presenting the “tip of the iceberg” when it comes to criminal activity (Le Blanc and Fréchette, 1989; Piquero et al., 2003; Sprott and Doob, 2008; Wiesner et al., 2007). That is, while criminal activity may be widespread among the adolescent population, it is a well-documented fact

that a certain amount never comes to the attention of police agencies or ever proceeds formally through the youth court system. Therefore, one must be cautious when presenting findings from research utilizing official data to ensure that conclusions are not drawn about the “true extent” of law-violating behaviour. As Sprott and Doob (2008: 634-635) assert—in discussing officially recorded police contacts in the Canadian context—, “...official measures of offending by youths in Canada are best seen as reflections of the behaviour of adults in responding to youths rather than of the behaviour of youths. These criminal justice figures tell the story of what adults do to youths, not of what youths do to adults or anyone else.” The authors’ conclusion can certainly extend beyond the Canadian context and also beyond police reported contacts or arrest data.

Official and self-reported delinquency data can both be seen to have specific advantages and disadvantages in the study of crime and criminality—particularly in the study of criminal careers—but, ultimately, as Sprott and Doob (2008: 626) suggest, “...which measure one uses—or which is more valid for certain purposes—likely depends entirely upon the question being asked.”

2.4 Summary

This chapter has presented a review of the key empirical criminal career studies which have established as well as, contributed to the evolution of this paradigm in the study of crime and criminality. Arguments on both sides of various conceptual and methodological debates surrounding the criminal career paradigm have also been presented in an attempt to recognize both the advantages and limitations of criminal career research in the study of

offending behaviour. National and international studies have been reviewed to provide conceptual definitions and clarification for each of the key dimensions commonly reported in criminal career research. The boundaries of these dimensions have been articulated to provide an appropriate context for the development of specific research questions which characterize the official court careers of a birth cohort of Canadian young offenders. While the review of empirical literature has provided some indication of the methodological and statistical properties of each of the key criminal career dimensions—*prevalence, frequency, onset, transitions and specialization and versatility*—the proceeding chapter will elaborate on the data source and unit of analysis in the present study as well as provide operational definitions of the key study variables and an overview of the analyses to be undertaken in the analytical chapters. Furthermore, each of the analytical chapters examines, in detail, one of the central criminal career parameters defined and discussed throughout this chapter—in particular prevalence, frequency, onset and patterns of transition. An elaboration of each of these concepts can be found in the analytical chapters and is discussed within the context of prior research findings. Specific questions addressed by each of the proceeding analytical chapters are as follows:

- *Prevalence*: what proportion of the population under study has ever been convicted in a Canadian youth court for offences committed prior to their 18th birthday? What proportion of young persons who have been convicted at each year of age while under youth court jurisdiction?
- *Frequency*: what is the overall or cumulative frequency of convictions in the court careers of the 1979/80 birth cohort? What are the age-specific or annual rates of convictions for individuals at each age under study (from their 12 up to 18th birthday)? Does the frequency of convictions—both cumulatively and annually—vary with respect to offences committed?

- *Age at first conviction (onset)*: what is the nature and extent of the relationship between age at first conviction and the frequency and seriousness of subsequent convictions in the court careers of the 1979/80 birth cohort?
- *Specialization and versatility*: what is the nature of the relationship between consecutive offences leading to convictions in court careers of the 1979/80 birth cohort? What is the relationship, if any, between gender and age at first conviction and offending specialization/versatility?

Chapter 3

Research Data and Methods

3.0 Introduction

The previous chapter presented findings from various longitudinal studies which have contributed to the establishment and elaboration of the criminal career paradigm in the study of criminal activity. A close examination of the conceptual definitions of various key criminal career parameters has allowed for a specific set of research questions to be derived as they apply to the study of the court careers of a cohort of young persons in Canada. The purpose of the present chapter is to provide an outline of the methodological strategy utilized in the current study. This will be accomplished by presenting a discussion of the following elements: 1) data source, 2) population under study, 3) unit of analysis, 4) operational definition of the study variables, and 5) data analysis plan.

3.1 Data Source

Data for the present study were obtained from automated files from the Youth Court Survey (YCS) which is a national database containing information on charges, cases and young persons who are accused of committing offences while under the jurisdiction of the *Young Offender's Act*—covering young persons from the age of 12 up to the day before their 18th birthday. This statistical information is collected from all Canadian youth courts and

organized on a fiscal year basis by the Canadian Centre for Justice Statistics (CCJS), a division of Statistics Canada.

Court clerks from all regions of Canada are responsible for completing information forms which detail various case characteristics including personal information and the specifics of the charges and dispositions pertaining to all young persons brought before the courts. Data are continually reported to the CCJS through the use of these forms and then introduced into an analytical process involving three specific stages. First, data are involved in a verification process which transfers all individual names to a coded format in order to ensure anonymity. The second stage involves an automated editing process which simply searches for inconsistent data in terms of the validity of specific codes and key relationships between fields. The third, and final stage, involves the transferring of data into storage on master charge files which are organized by fiscal year (April 1st to March 31st). Additional files created through the master charge file include a person file (linking records using identifier codes and an offender's date of birth and sex) and a case file (linking persons with identifier codes, court location code and a choice of dates including, for example, date of first appearance or date of sentencing) (deSouza, 1995).

3.2 Population under Study

Research which attempts to situate itself within the criminal career paradigm requires information on the specific timing of events occurring throughout the course of a person's *life history*. Using the YCS as a source of longitudinal data, the current research is able to

address specific lines of inquiry which highlight the nature and content of the official court careers or court histories of young offenders in Canada.

Data for the current study includes case information on all individuals born between April 1st, 1979 and March 31st, 1980 who were referred to or convicted in a Canadian youth court on at least one charge related to a federal statute offence committed before their 18th birthday. Youth court data from all provinces and territories are included in the present study with the exception of Nova Scotia due to problems related to the record linkage process used to construct an offender's court history.⁵ This, in essence, creates a *generation-based* or *single-birth cohort* dataset to be used throughout the dissertation and serves as the young offenders' *official court histories*.

Recently, Carrington, Matarazzo and deSouza (2005) utilized a similar methodology in constructing and analyzing the court histories of persons born between April 1st, 1979 and March 31st, 1980 who were referred to or convicted in a Canadian Youth Court or Adult Criminal Court for offences allegedly committed before their 22nd birthday. Lee (2000) also utilized a similar methodology in her study of recidivism in British Columbia. Due to limitations in the number of cases which could be drawn from a single province, Lee created a *year-of-birth* dataset which included all individuals born between 1972 and 1975. Consistent with Carrington, Matarazzo and deSouza (2005), the current study utilizes a *single-birth cohort* dataset which, in this case, covers the continuous court histories of a specific group of young persons in Canada from the time they first enter the system at age 12 up to their 18th birthday—when they no longer fall under youth court jurisdiction. It is felt

⁵ Youth court cases heard in Nova Scotia represented approximately 3% of the total volume of youth court cases reaching disposition in Canadian courts from 1991/92 to 1996/97.

that complications—both statistically and methodologically—in analyzing multiple cohorts would have substantially offset any gain in numbers.

3.3 Unit of Analysis

The unit of analysis in the present study is the individual offender’s court career or court history. All charge records contained in the YCS were extracted for all individuals fitting the *population criteria* outlined above and were aggregated to form an “offender-based record” which contained variables capturing the most salient information about the cases disposed of throughout each young person’s court history. While seemingly straightforward, two separate levels of aggregation—charges to cases and cases to persons—were required in order to arrive at the final dataset utilized in the present study.

3.3.1 From Charges to Cases

The charge-based structure of the YCS data allows for various approaches to defining court cases, a concept which has undergone various changes over the years. Prior to fiscal 2000/2001, a case was defined as all the charges against a young person having the same date of *first appearance*. In 2001, the YCS adopted the Adult Criminal Court Survey definition of a case in an effort to make the two surveys more consistent (Thomas, 2003). As such, case counts were now based on the day in which one or more charges against a young person were *disposed* of by the youth courts. More recently, however, the YCS case definition has undergone another change in order to more closely reflect court processing.

That is, the new case definition "...now defines a case by combining all charges against the same person which have overlapping court dates" (Thomas, 2008: 8). This new definition, adopted for the 2006/2007 reporting year, can be seen as providing more accurate counts for complex or multi-charge cases because not all charges are necessarily disposed of on the same day.

At the time that the data were extracted from the YCS master files for purposes of this study, the disposition or sentence-based case definition was being utilized by the CCJS and therefore, for consistency, was adopted for the current study. That is, a case was defined by all charges pertaining to the same young person that were disposed of or sentenced on the same day. In effect, this created a "package" of information which was before the court and, more specifically, before the judge during the court process.

In the YCS, youth court cases are characterized by a single charge and in cases where there are multiple charges it is necessary to decide which charge will represent the case. This determination begins with the "most serious decision" rule whereby the charge with the most serious decision is chosen. The ranking of the most serious to the least serious court decision is as follows: Decisions are ranked from the most to least serious as follows: transfer to adult court; guilty; other decision (e.g. not fit to stand trial); stay of proceedings; charge withdrawn; or transfer to other jurisdiction; and not guilty or charged dismissed (Robinson, 2004: 10).

In cases where two or more charges result in the same decision (e.g. a decision of guilt by way of court proceedings or entered as a plea), the "most serious offence" rule is then applied using a seriousness index developed by the CCJS (Robinson, 2004). This index is based on the average length of prison sentences imposed on convicted charges between

1994/95 and 2000/01 in criminal court. Its value is inversely related to the seriousness of the offence, and ranges from 1 for “First degree murder” to 112 for “Other federal statute offences”. If two charges have equal results based on this criterion, the magnitude of the sentence is considered in order to determine the representative charge for the case. The “sentencing seriousness” is determined by the effect which a sentence has on the young offender. According to the YCS, sentences are ordered from most to least serious as follows: secure custody, open custody, probation, fine, compensation, pay purchaser (a dollar amount paid back to the innocent purchaser of stolen goods), compensation in kind, community service order, restitution, prohibition/seizure/forfeiture, other sentences, conditional discharge and absolute discharge (Robinson, 2004: 10). Based on this aggregation process a final sentence-based case file was constructed which included a total of 88,860 cases where an individual in the 1979/80 birth cohort was referred to youth court. In 56,370 of these cases, the young person before the court was convicted (found guilty) on at least one charge related to a federal statute offence. Table 3.1 below provides a breakdown of the total number of cases referred and convicted in youth court by the province in which the case was processed.

Table 3.1: Number of youth court cases involving members of the 1979/80 birth cohort, by province

Province	Referred (with or without a finding of guilt)		Convicted (cases with a finding of guilt)	
	N	%	N	%
Newfoundland and Labrador	1,940	2.18	1,560	2.77
Prince Edward Island	338	0.38	270	0.48
New Brunswick	2,131	2.40	1,795	3.18
Quebec	10,322	11.62	7,711	13.68
Ontario	36,705	41.31	21,515	38.17
Manitoba	5,585	6.29	2,848	5.05
Saskatchewan	6,937	7.81	4,304	7.64
Alberta	14,687	16.53	9,734	17.27
British Columbia	9,299	10.46	6,078	10.78
Yukon Territory	385	0.43	187	0.33
North West Territories	531	0.60	368	0.65
Total	88,860	100.00	56,370	100.00

3.3.2 From Cases to Offenders

Longitudinal research using official records, and more specifically a birth cohort study, requires the ability to maintain a reliable link between the individual and their associated court case information collected over a determined period of time. The YCS data, however, does not contain a unique identifier to facilitate this reliable link between separate cases pertaining to an individual. As such, matching of records in the YCS is accomplished using four variables that together represent or identify a unique individual: an encrypted code based on the offender's name, date of birth, sex and the province in which the young person was convicted and sentenced.⁶ Prior to finalizing the matching process which grouped court

⁶ In order to protect the anonymity of offenders, individual names are converted or encrypted using a 4-digit algorithm known as a Russell Soundex prior to storage on the YCS electronic file. Data for the province of

cases to unique offenders, all cases where the accused youth were not found guilty of the charges presented before the youth court (N = 32,490) were removed from the analytical database. Based on this matching process, the remaining 56,370 guilty youth court cases were associated with a total of 29,325 unique offenders—23,317 males and 6,008 females. Table 3.2 below, provides a breakdown of the number of 1979/80 cohort members convicted in a youth court by sex and province contained in the offender-based court file used throughout the present study.

Table 3.2: Number of cohort members convicted in youth court, by sex and province

Province	Male		Female		Total	
	N	% of cohort	N	% of cohort	N	% of cohort
Newfoundland and Labrador	662	2.84	139	2.31	801	2.73
Prince Edward Island	109	0.47	37	0.62	146	0.50
New Brunswick	711	3.05	197	3.28	908	3.10
Quebec	4,108	17.62	437	7.27	4,545	15.50
Ontario	9,481	40.66	2,535	42.19	12,016	40.98
Manitoba	1,136	4.87	386	6.42	1,522	5.19
Saskatchewan	1,577	6.76	472	7.86	2,049	6.99
Alberta	2,966	12.72	994	16.54	3,960	13.50
British Columbia	2,372	10.17	750	12.48	3,122	10.65
Yukon Territory	62	0.27	18	0.30	80	0.27
North West Territories	133	0.57	43	0.72	176	0.60
Total	23,317	100.00	6,008	100.00	29,325	100.00

Quebec uses a different algorithm called an Henri code which is considered more applicable to the coding of French-Canadian names. See Armstrong (2000) for a more detailed discussion of the Soundex and Henri codes and other issues related to the record matching process.

3.4 Limitations of the YCS data

The two major considerations in choosing the YCS data for the present study were: the appropriateness of their content for the primary research interest and their comprehensiveness. As both Snyder (1988) and Lee (2000) point out, most research-to-date has utilized police contacts, and more specifically, arrest data, to evaluate the sequencing of events in the offending careers of repeat offenders from a law enforcement perspective. The YCS data, on the other hand, provide a unique opportunity to describe the official court careers of young persons within the context of the youth court and therefore provide information which is directly relevant to youth court functioning. The work by Lee (2000) and Carrington, Matarazzo and deSouza (2005) clearly highlight new and effective ways of using YCS data to address many issues central to the study of repeat offending and, more specifically, career research. The administrative court records provided to the YCS contain personal as well as detailed case characteristics all youth court activity for all provinces and territories in Canada. Such information allows for a wide-ranging scope of potential research and lends itself to the development of various analytical constructs critical to the longitudinal study of offending as well as the official reactions (i.e. sanctions) to those actions.

One noteworthy drawback related to the use of the YCS data is that it does not allow for the tracking of exactly the same group of individuals for the duration of their careers—since every year there will be a certain amount of immigration to, and emigration from, the specific birth cohort which will affect issues surrounding age-at-onset—particularly late onset. This inability to track the exact population *at risk* when using national-level data is seen by Farrington (1979; 1992) as an inherent bias plaguing retrospective data. As such,

much of the work of Farrington and other criminal career researchers advocate the use of prospective designs where a study population is predetermined and tracked throughout the duration of the study. This restriction not only ensures that each individual within the cohort is exposed to various social or environmental influences at the same time, but also assists in ensuring that individuals would face the same period at risk of delinquency. An examination of population data produced by Statistics Canada suggests, however, that both immigration and emigration to and from this specific birth cohort is very minimal and therefore, the period at risk should remain relatively consistent for most offenders.

Furthermore, as already highlighted above (see Chapter 2.3.2 - Criminal Careers: Official Data vs. Self-Reports), a significant amount of criminal activity within society never comes to the attention of police agencies or ever proceeds formally through the youth court system. Consequently, one must be cautious when presenting findings from research utilizing youth court data to ensure that conclusions are not drawn about the “true extent” of law-violating behaviour. Beyond issues related to “hidden delinquency”, research based solely on cases processed in youth courts can be seen as providing only a partial or incomplete “picture” of offending and re-offending. The youth court system is but only one critical part of the overall youth justice system in Canada only and will provide a very different picture than that which would stem from research utilizing police contacts and arrests. In their review of trends in youth crime and police response, Carrington and Moyer (1994: 2) aptly note that, “As the key gatekeepers of the youth justice system, it is primarily the police who determine the numbers of young persons entering the system, and the offences with which they are charged”. Consequently, findings based on administrative

court data will certainly present an underestimation of the full range or “mix” of crimes committed by young persons.

Use of the YCS data has specific advantages as well as various limitations. However, given that the primary focus of the present study is to describe the relationship or the nature and extent of the series of offences leading to conviction in a young person’s court history rather than attempting to measure the “true” level of youth crime by the cohort members, it is clear that the benefits of using YCS data certainly outweigh the limitations.

3.5 Study Variables

As indicated above, the YCS is a unique source of data which contains detailed information regarding many aspects of the charges, cases, and individuals convicted and sentenced in Canadian youth courts. The following section provides the operational definitions of the variables used in the current study to address the research questions derived in the proceeding analytical chapters.

3.5.1 Age of the Offender

As individuals age, the nature and content of their court careers may change in terms of the number of sentences, the type of sentences and the time between sentences (Lee, 2000). YCS data provides information on the exact timing of events in a young person’s court history which would facilitate the evaluation of such changes. Using the date of birth,

date of offence and date of sentencing fields contained in the offender-based court file, the age of the offender at each “event” was easily derived.

For most analyses involving breakdowns by age, the age variable is operationalized as the age of the offender (in years) on the day of conviction. Beyond using age at the time of conviction as a chronological construct, age at first conviction is also used to evaluate the relationship between official onset of the court career and the extent and type of subsequent court contact. Age at conviction is used in the proceeding chapters to examine the distribution of court convictions by age-specific categories; the age at first court conviction, and the effect of early age at first conviction with subsequent court contact. Consistent with the criminological literature on age of onset in offending, analyses examining age at first conviction considers those offenders who received their first court convictions between the ages of 12 and 14 as *early-onset offenders*, whereas those who experienced their first court conviction at age 15 or older are considered *late-onset offenders*.

Due to limitations in the use of official court data the ‘true’ age of criminal onset cannot be established. The earliest age of official court contact is solely determined by the lower age limit set by the Young Offenders Act—age 12. Similarly, the court career is also censored at age 18—at which time young adults are under the purview of the Adult Criminal Court system. Given these limitations, the age at first conviction in the present study is not used as a proxy for onset of actual offending behaviour. Furthermore, due to court processing time lags, there is significant variation on how individual offenders proceed from offence to sentence in Canadian youth courts. Findings presented on age-at-first conviction exclude individuals who received their first youth court conviction after turning 18 years of age—2,431 (or 10%) of the male offenders and 480 (or 8%) of the female offender. While

these individuals may have received further convictions for offences committed as young offenders, their subsequent criminal activity, for the most part, would have been processed within the adult criminal court system.

3.5.2 Gender of the Offender

Formally, sex refers to the biological distinction between males and females by virtue of their reproductive organs. While sex (male or female) of a person is biologically determined, gender (masculine or feminine) of a person is culturally and socially constructed. The YCS data record the sex, not the gender, of accused persons. The relationship between an offender's sex and court history, however, implicitly combines the notions of sex with that of gender. Criminal career research to date has been limited in exploring various aspects of the offending careers of female offenders. Gender, however, in the present study is of central import in order to provide a complete and comprehensive portrait of the official court careers of all Canadian youthful offenders.

3.5.3 Youth Court Sentences

For purposes of the present study, the number, type, and timing of youth court sentences is considered of central importance when accurately delineating various aspects of official court careers. In youth court cases resulting in a conviction, offenders may receive more than one sentence depending on the number of charges and the complexity of the case. For purposes of the present study, a court case containing multiple sentences is defined using

the *most serious sentence* approach. That is, sentences representing the court case are those which have the greatest impact or effect on the young person's life. For example, if a young person is charged and convicted for a property-related offence and is sentenced to a 3 month term of probation and also forced to pay restitution, the more serious sentence of probation would be used in any analyses involving an examination of sentence type. Consistent with the YCS classification, sentences are classified and ranked from the most serious to the least serious as follows:

- Secure custody
- Open custody
- Probation
- Fine
- Compensation (dollars)
- Pay purchaser
- Compensation in kind
- Community service order
- Restitution
- Prohibition/Seizure/Forfeiture
- Other sentence
- Conditional discharge
- Absolute discharge

3.5.4 Type of Offence

Information on the seriousness of the offences committed throughout a young person's court history will be used throughout the analyses as they relate not only to the severity of dispositions being meted out, but also to indicate the offending behaviour of young persons subsequent to youth court interventions.

As Carrington and Moyer (1995: 137) highlight, there are commonly two approaches to the classification of offence seriousness in the Canadian literature. The first utilizes a

hierarchy of types of harm which include offences against the person (“violent offence”), offences against property, then other offences, such as offences against the administration of justice, public order, drug and alcohol offences, all of which are generally “victimless,” or (b) the *Criminal Code* hierarchy of indictable, “hybrid,” and summary offences.

For most analyses involving breakdowns by the type of offence leading to conviction, offences are classified according to the nature of the most serious charge in the case as determined by the seriousness scale developed by the CCJS. The ranking of offences in the scale is based on the average length of prison sentence imposed on convicted charges between 1994/95 and 2000/01 in criminal court (Robinson, 2004: 10). Subsequently, offences are classified according a hierarchy of types of harm into the following four groups: *against the person, against property, against the administration of justice, and other*. While other classification schemes may be used to represent the most serious offences appearing in court, use of these broad categories allows for analyses which are meaningful and at the same time relatively straightforward. Table 3.3 below, presents a breakdown of the offence classification used.

Table 3.3: Classification of offences

<p>1. Offences against the person</p> <ul style="list-style-type: none"> Homicide Attempted murder Robbery Sexual assault Other sexual offences Major assault Common assault Uttering threats Criminal harassment Other offences against persons 	<p>3. Other offences</p> <ul style="list-style-type: none"> Weapons Prostitution Disturbing the peace Residual Criminal Code Impaired driving Other Criminal Code traffic Drug possession Drug trafficking Other federal statutes
<p>2. Offences against property</p> <ul style="list-style-type: none"> Theft over...¹ Theft under...¹ Break and enter Fraud Mischief (General)² Mischief over...³ Mischief under...³ Possess stolen property Other property offences 	<p>4. Administration of justice offences</p> <ul style="list-style-type: none"> Fail to appear Breach of probation Unlawfully at large Fail to comply with order Young Offenders Act Other admin. of justice

¹ “Theft over” and “theft under” refer to theft of goods valued at more than or less than a threshold value which was \$1,000 from 1986 to 1994 and \$5,000 thereafter.

² “Mischief (General)” includes mischief pertaining to data or to religious property and wilfully acting or omitting to act in a manner which is likely to constitute mischief

³ “Mischief over” and “mischief under” refer to property willfully damaged which is valued at more than or less than a threshold value which was \$1,000 from 1986 to 1994 and \$5,000 thereafter.

3.5.5 Offender Typology

The official court histories of the birth cohort under study may be classified in a number of ways in order to describe the nature and content of their court activity. While this classification may take on many forms depending on the specific issues to be evaluated, for

purposes of the current research an offender classification or “typology” was constructed based on the number of convictions contained in a young person’s court career. A *case count* variable was created during the aggregation from the sentence-based case file to the offender-based file in order to facilitate the creation of the offender typology. The original case count variable ranged from individuals with only 1 one case which reached the sentencing phase to individuals with 26 cases being disposed of or sentenced in youth court. The offender typology contains the following four categories: *one-time offenders*—individuals with only 1 case reaching sentencing; *repeat offenders*—individuals with 2 to 4 cases reaching sentencing; and *chronic offenders*—those with 5 or more cases in their youth court career.

Variations on this type of type of offender classification scheme—using convictions, sentences or police contacts—can be seen throughout the criminal career literature (Carrington et al., 2005; Lee, 2000; Snyder, 1988; Tracy et al., 1990; Wolfgang et al., 1972).

3.6 Data Analysis

The criminal career paradigm, as do other criminological and sociological paradigms, relies on a set of concepts which guides its investigations and orients the key theoretical issues to be explored and evaluated. The analytical chapters of the current study provide a descriptive profile of the court histories of the cohort of offenders born in 1979/80. In describing the nature and extent of the court convictions for this group of offenders, four key concepts are examined: prevalence, frequency, age at first conviction and specialization.

The analytical portion of this study begins with an analysis of prevalence in Chapter 4. Prevalence of, or participation in, offending is usually expressed in the criminal careers literature as the proportion of the cohort who committed an offence at a given age (age-specific prevalence), or ever committed an offence up to a given age (age-specific cumulative prevalence), or ever committed an offence during the period of observation (overall or lifetime prevalence). Calculation of such prevalence estimates requires both the number of persons who exhibited the behaviour, and the number of persons at risk of exhibiting it—the eligible population at risk.

Using the YCS, one cannot track exactly the same group of individuals for six years—from their 12th birthday up to their 18th birthday. Each year, some individuals will either immigrate to or emigrate from Canada or the parts of Canada included in the study, and/or will move between the provinces and territories under study. Consequently, determining the exact total eligible population at risk of a contact with the court system is not possible. However, population data provided by Statistics Canada for each age and sex in Canadian provinces and territories may be used to approximate the male and female population born between April 1st, 1979 and March 1st, 1980 for each year while under the jurisdiction of the Canadian youth justice system.

The total eligible population comprises all individuals born between April 1st, 1979 and March 31st, 1980 who: (1) lived in a province included in the study continuously from their 12th to their 18th birthday; (2) lived in an included province on their 12th birthday but moved out of it before their 18th birthday, and (3) moved into an included province after their 12th birthday and before their 18th birthday, or (4) made multiple moves between provinces after their 12th birthday and before their 18th birthday.

As a result of net migration, the total population of the birth cohort in 11 provinces and territories included in the study experienced a small but steady net growth between 1991 and 1996—the period during which the individuals within the cohort moved from 12 years of age to 18 years of age. The cohort increased from 364,969 twelve year olds in 1991 to 387,912 17 year olds in 1996. This represents an average annual increase of 1% or an overall increase of 6% in the size of the cohort.

Age-specific prevalence rates are calculated using yearly population data to determine the approximate population of males and females in each specific year for that corresponding age group. As such, changes in the population are not considered problematic because any gains or losses — through migration or death— are taken into account. However, when calculations of overall prevalence are concerned, the changing denominator (size of the total eligible population at risk) becomes problematic.

For purposes of estimating overall prevalence, the study utilizes the largest approximate population—the number of 17 year olds in 1996—in its calculations. This approach accounts not only for the stable component of the original cohort size, but also the net growth experienced over time. Lee (1999) used a similar approach and rationale in determining the total eligible population in presenting overall prevalence estimates in a study of youth crime trends in British Columbia for four separate cohorts. An alternative, and less desirable, method uses the number of live births in the cohort birth year as an approximation of cohort size throughout the time period under study.⁷ This method would result in overall prevalence estimates approximately 2 percent higher than those produced by the method adopted in the present study.

⁷ See Prime, White, Liriano, and Patel (2001) for an example of this use.

The analyses in Chapter 4 begin with an examination of overall cumulative or *ever prevalence* and then present more detailed examinations which disaggregate cumulative prevalence rates by gender, age at first conviction, type of offence and type of sentence. Next, annual prevalence rates are presented which allow for a further examination of the breadth of convictions for the 1979/80 birth cohort. Annual prevalence rates are examined in relation to gender, age at the time of conviction and by the category of offence leading to conviction.

Chapter 5 examines the frequency of convictions of those members of the cohort convicted at least once for an offence committed before their 18th birthdays. Similar to the prevalence estimates presented in Chapter 4, frequency of court convictions is examined in terms of cumulative and annual rates. Initially, individual court frequencies are examined by utilizing the offender typology (described above) to provide some indication of the overall impact that that particular subgroups of offenders have on overall court activity. The *intensity* of involvement of the cohort members within the Canadian youth courts is then examined for different offence types. Using the three categories of offenders in the *offender typology* give only a crude picture of the overall skewed distribution of court convictions—where a small group of offenders are responsible for a large number of the recorded court convictions. As such, the alpha coefficient (α)—a more precise indicator of inequality (skewness) which is based on the entire distribution of convictions—is used throughout the analyses to confirm the amount of observed inequality and the observable differences between male and female offenders.

Annual court frequencies are also analyzed and presented in Chapter 5. Measurements of frequency are based on those offenders who are considered criminally

active during a specific period of time. Consistent with a growing body of criminal career research, this intensity is denoted by the Greek letter λ (lambda). That is, for a population of young offenders of a specific age, the mean value of λ is represented by the overall number of convictions received by the young offenders at that specific age divided by number of offenders who received any convictions during that age. The analysis of intensity, or λ , is presented for both male and female offenders and properties of λ are also examined for different offence types.

The next criminal career parameter or concept to be examined is age at first conviction. Age can be seen as one of the most important factors to consider when describing the nature and extent of criminal activity and, more specifically, changes in this activity over time. Analyses in Chapter 6 examine age at first conviction and variation in youth court careers and, more specifically, the nature and extent of the relationship between early onset and late onset and the frequency and seriousness of subsequent convictions. Statistical differences in the observed differences between age at first conviction, gender and the types of offences leading to conviction are confirmed using Mann-Whitney U z scores. Furthermore, in order to more closely examine the relationship between age at first conviction and the overall number of convictions being recorded in the youths' court histories, an annual reconviction rate is calculated. Similar to Snyder (1988: 20) and Carrington et al. (2005: 20) the annual rate of reconviction m for each age-at-first-conviction group (e.g. 12, 13, 14, etc.) is:

$$m = (n - 1) / (18 - a)$$

where n is the mean number of convictions involving the group, and therefore $(n - 1)$ is the average number of convictions subsequent to the first one and a is the mean of the exact ages of the offenders at the time of their first conviction. The mean time at risk (in years) is calculated by subtracting the mean of the exact ages of the offenders at the time of their first court conviction from age 18—the end of the observation period. Both, the date of birth and the exact date of all convictions in the offenders' court careers are available in the analytical data file.

The final analytical chapter, Chapter 7, examines the patterns of specialization and versatility in the offences which led to the court convictions of the 1979/80 birth cohort members and, more specifically, the nature and extent of the relationship between gender, age at first conviction and these patterns of offending over the course of their court career. Several methods of analysis are used and, in keeping with previous research on specialization, all analyses exclude offences against the administration of justice (e.g., failure to appear, breach of probation, failure to comply with order, etc.).

Analyses begin with a classification of each offender's court history as versatile or specialized, and examines changes in the proportion of specialized careers as the number of convictions in the career increase. Specialized careers are those which contain convictions for only one category of offending. Conversely, a court history evidencing versatility is one which contains offences leading to conviction which fall within more than one offence category. To highlight the relationship between the offences leading to conviction and specialization, diagonal probabilities are used to assess individual transitions between pairs of adjacent convictions in the career.

In order to deal with some of the shortcomings or weakness of analyses based on raw transition probabilities, the next set of analyses assess the observed and expected probabilities in the transition matrices by way of a *forward specialization coefficient* (FSC)—see Chapter 7 for a full discussion of the computation of the FSC. Unlike the simple dichotomous classification of specialization or versatility, analyses using FSCs represent scores which indicate how specialized or versatile the birth cohort's careers are.

Final analyses in Chapter 7 examine the sub-group differences and the extent to which offences leading to conviction in individual court careers are marked by a tendency toward specialization or versatility. *Diversity Index* scores are calculated to examine the direct relationship between gender and age at first conviction, as well as the interaction between these factors, and specialization in the offences leading to conviction. Unlike the diagonal probabilities and the FSCs, the *diversity index* is a measure of individual-level versatility which allows for sub-group comparisons and is limited to adjacent convictions—see Chapter 7 for a full discussion and computational properties of the *Diversity Index*.

3.7 Summary

This chapter has presented various aspects of the methodological strategy utilized in the current study. Specific elements of the *Youth Court Survey* have been presented to identify its appropriateness and comprehensiveness in allowing for the study of official court careers of a Canadian birth cohort of young offenders. Despite some of its limitations as an administrative database, the ability to utilize the YCS as a source of longitudinal data to capture the specific timing of events experienced by repeat young offenders provides a

unique contribution to a “conspicuous” gap in research on re-offending in Canada. Various aspects surrounding issues of data construction, study variables and quantitative analysis have also been addressed to provide the rationale for choices made at different stages of this process.

Chapter 4

Prevalence of Convictions

4.0 Introduction

In the context of offending, prevalence simply refers to the proportion of the population who has committed a crime—the pervasiveness of offenders in the general population. Tracy, Wolfgang and Figlio (1990: 37) state that, “at a minimum, delinquency research must measure the prevalence of the phenomenon by classifying the at-risk population at least in terms of the delinquent versus nondelinquent dichotomy.” Prevalence rates should certainly be seen as a requisite first step in analyzing data on criminal offending. One can only begin to address issues surrounding crime and criminality once they are able to acquire some approximation of the “size of the problem” or the breadth of individual involvement. In addressing this issue, it is necessary to distinguish between two types of prevalence: *cumulative* and *annual*.

Firstly, cumulative prevalence refers to the fraction or proportion of the population who have contact with the judicial system in their lifetime or until a certain age—usually the end of the study period for most research.⁸ The second type, annual prevalence, refers to the proportion of the population under study that has been processed by the judicial system in any given year. Both types of prevalence directly examine the important relationship between age and crime. More specifically, the annual prevalence rate or ‘point prevalence’

⁸ Cumulative prevalence is also referred to in the literature as ever-prevalence, lifetime prevalence or cumulative participation.

(Farrington, 1997) is an important focus of criminal career research which allows for comparisons with the often reported aggregate age-crime curve. As Farrington (1997: 368) points out, “The age-crime curve obtained by following up a cohort of people over time (the same people at different ages) is often different from the cross-sectional curve seen in official statistics (which reflects different people at different ages).”

In keeping with the extant criminal career research, the following chapter investigates two specific prevalence-related questions. The first determines what proportion of the population under study has ever been convicted in a Canadian youth court for offences committed prior to their 18th birthday, and the second examines the proportion of young persons who have been convicted at each year of age while under youth court jurisdiction. Answers to these questions will reveal how widespread or limited convictions of young persons are.

4.1 Prevalence and Prior Research

While an extensive body of literature exists on the prevalence of offending, the comparison of studies, nationally or internationally, may be very difficult. As Kyvsgaard (2003: 65) has noted,

Prevalence rates are calculated by dividing the number of criminally active offenders by the total number of inhabitants. In this fraction, the value of the denominator—the population unit—causes few problems. However, the numerator—the criminally active part of the population is fraught with measurement error since study methods, boundaries, and definitions may vary considerably. This makes it almost impossible to compare results across studies, especially between countries.

Although inherent problems do exist in comparing studies which focus on various stages of the justice system in different parts of the world, an examination of prior research may serve, at minimum, to locate findings from the present study within the larger body of criminal career research.

In the Cambridge study, Farrington (1997) reported that 40 percent of inner-city London males under study were convicted for at least one offence up to age 40. Up to their 17th birthdays, 20 percent of these males were found guilty of having committed at least one serious (indictable and akin-to-indictable) offence (Farrington, 1997: 295). Furthermore, Farrington and his associates found that the peak age for prevalence of convictions for their sample of London males was 17 years of age—where approximately 11 percent of the sample had committed an offence for which they were convicted (Farrington, 1992; 1997).

Prime, White, Liriano and Patel (2001) reported similar findings in their examination of the criminal convictions of individuals born in six different cohorts—between 1953 and 1978—in England and Wales. Thirty-three percent of males and 9 percent of females born in 1953 had been convicted of at least one ‘standard list’ offence before the age of forty-six. Looking only at youthful offenders, by age eighteen, 15 percent of males and 3 percent of females in the cohort had been convicted of at least one offence (Prime et al., 2001). Age-specific prevalence of those born in 1953 increased rapidly to a peak at age 19 where approximately 11 percent of the males were found to be criminally active. For females, the proportion known to be criminally active was substantially lower and peaked between the ages of 20 and 26 at 1.1 percent of the cohort.

A recent American study examining the Providence cohort of the National Collaborative Perinatal Project, found that 19 percent of males and 5 percent of females were

referred to court for at least one “true” delinquent offence (i.e. non-status, non-dependency) before the age of 18 (Piquero and Buka, 2002). In another American study, Snyder (1988), reports much higher prevalence rates using youth court data for all youth born between 1962 and 1965 in two US jurisdictions—Maricopa County (Arizona) and Utah. In both jurisdictions, approximately one-third (34 percent) of the cohorts were referred to the juvenile court for a delinquent or status offence at least once before their 18th birthday (Snyder, 1988: 10).⁹ Age of onset patterns revealed that the number of males first referred to a juvenile court increased consistently through to age 17 and a female pattern which peaked at age 16 and then declined significantly at age 17 (Snyder, 1988: 17).

In Dunedin, New Zealand, Moffit, Caspi, Rutter and Silva (2001) reported that 20 percent of males and 8 percent of females born between 1972 and 1973 were convicted of at least one crime (violent or non-violent) between the ages of 13 to 21, inclusive. For both male and females in the Dunedin study, the peak age of onset occurred at 18 years of age. Stattin, Magnusson and Reichel (1989) reported findings of criminal activity at different ages in the Orebro Project in Sweden. Using official court records it was reported that approximately 38 percent of males and 9 percent of females were convicted of at least one offence between 10 and 30 years of age (Stattin et al., 1989). Almost one in four males (23 percent) and 2 percent of females were convicted for some offence before the age of 18 (Stattin et al., 1989: 374-379). Unlike other studies, findings suggested that the peak prevalence for conviction occurred earlier for males than for female cohort members. The highest proportion of males was found between the ages of 15 and 17, where approximately one in five (19 percent) were convicted for offences. The peak age for females, on the other

⁹ These figures appear to be higher than others reported because they are based on court referrals as opposed to court convictions and include a number of very minor, status offences (e.g. truancy, running away, incorrigibility, liquor offences, etc.)

hand, was between ages 21 and 23 where 4 percent of females were officially registered for a criminal offence (Stattin et al., 1989).

To date, longitudinal research in Canada has been very limited—almost non-existent. Montreal researchers, Le Blanc and Fréchette (1989) examined offending within two samples of Montreal adolescent males over a 15 year period using official and self-report data. The researchers found that approximately 14 percent of the ‘adolescent sample’ had been convicted for a criminal infraction up to their mid-20’s (Le Blanc and Fréchette, 1989).¹⁰ Interestingly enough, however, when examining self-report rates of delinquency, the researchers indicated that 97 percent of this adolescent group had reported committing at least one criminal infraction before the age of 18. Translating these figures into prevalence rates, only 4 percent of this group had been officially convicted by a youth court before reaching 18 years of age—with the remaining 11 percent of the adolescents having been convicted after this age (Le Blanc and Fréchette, 1989: 60). The authors note that it was difficult to interpret these low prevalence rates, compared to prior research, but suggest that it may, in part, “...reflect a real difference in the situations or it could be due to variations in the definitions used”(Le Blanc and Fréchette, 1989: 61). Such findings confirmed for the researchers that criminal activity appeared to be fairly widespread among the adolescent population and that very little was ever brought to the attention of the youth courts.

Lee (1999) presented youth crime trends in British Columbia using official court records collected by the Youth Court Survey of the Canadian Centre for Justice Statistics. Findings indicated that 16 percent of the males and 4 percent of the females under study were referred to youth court in relation to offences allegedly committed from age 12 to age 18

¹⁰ The ‘adolescent sample’ was a representative population sample of Montreal males who were used to establish whether or not findings extended to the wider population—primarily in areas concerning initiation of offending and the transition between conduct problems and offending.

(Lee, 1999). Furthermore, "...approximately 12% of the male and 3% of the female population born from 1972 to 1975 were convicted of at least once offence under the Young Offenders Act in British Columbia" (Lee, 1999: 3).

A recent study by Carrington, Matarazzo and deSouza (2005) followed the youth court and adult criminal court histories of a birth cohort of Canadian youth over a 10-year period—from ages 12 to 21, inclusive. Similar to the findings reported by Lee (1999), the authors found that almost one in five (18 percent) of Canadians born between April, 1979 and March, 1980 were referred to court in relation to offences they committed before their 22nd birthday. Males comprised the vast majority of the group of 59,000 offenders under study and were almost four times more likely to be referred to court, at 28 percent compared with only 8 percent of females over the 10-year period. The authors also found that the patterns of referral to court were similar for males and females, except that prevalence for females rose relatively faster at younger ages and peaked earlier at the age of 16, when 1.7 percent of the female cohort was referred to court. In contrast, the peak age of prevalence for males in the cohort (7.6 percent) was 18 years of age.

Overall, findings from prior criminal career research have consistently shown that males were significantly more likely than females to exhibit a higher prevalence of offending. Furthermore, findings from all studies have identified a distinct relationship between age and crime in individual offending. This relationship is most often described in terms of an age-crime curve or pattern where there is a sharp incline in offending during early adolescence, with a marked peak in the mid- to late-teen years, followed by a steady decline into adulthood.

4.2 Cumulative Prevalence

In the present study, youth court records reveal that approximately one in nine (11 percent) persons born between April 1st, 1979 and March 31st, 1980 were referred to court in relation to offences allegedly committed before their 18th birthday. Males comprised the vast majority of the group of 40,985 offenders and were approximately three times more likely to experience a youth court referral than their female counterparts. Fifteen percent of males, compared with only 5 percent of females, were referred to court while under the jurisdiction of the Young Offenders Act.

Of these individuals referred to court, 72 percent (29,325 offenders or 8 percent of the cohort) were found guilty of at least one offence for which they were charged (Table 4.1). This rate of conviction also varied considerably between the sexes with nearly three-quarters (74 percent) of males, compared with 63 percent of females, being found guilty of an offence in youth court—making males almost four times more likely to have experienced a youth court conviction, than females. Translating these figures into prevalence rates, approximately 12 percent of male cohort and 3 percent of female cohort were convicted of at least one offence while under youth court jurisdiction. This group of 29,325 offenders—23,317 males and 6,008 females—represent the final sample of offenders analyzed throughout the remainder of the dissertation. As indicated in Table 3.1 above, these 29,325 unique offenders were responsible for a total of 56,370 youth court cases disposed of in youth court where there was a finding of guilt.

Table 4.1: Proportion of the cohort referred to, and convicted in, youth court for offences committed before their 18th birthday

	Referred (with or without a finding of guilt)		Convicted (found guilty of at least one charge)		Estimated population of the cohort
	Number of offenders	% of the cohort	Number of offenders	% of the cohort	
Male	31,400	15.72	23,317	11.67	199,800
Female	9,585	5.10	6,008	3.19	188,112
Total	40,985	10.57	29,325	7.56	387,912

4.3 Age at First Conviction and Cumulative Prevalence

Variation in the prevalence of offending with age—the likelihood of being apprehended, referred or convicted increasing as one gets older—is one of the most well established and enduring findings in criminal career research. In the present study, the cumulative proportion of the 1979/80 birth cohort with a least once conviction was also found to vary with age. Table 4.2 presents the cumulative prevalence of conviction for male and female offenders by age of first conviction—where each subsequent year reflects the addition of ‘new’ offenders experiencing their first court conviction. There was a continuous increase with every year of age in the number of males who had been convicted for the first time in youth court. This onset peaked at 17 years of age, when approximately 23 percent of the male offenders (approximately 3 percent of the male cohort members) received their first youth court conviction.

For females, on the other hand, there was a much sharper increase in the number of first-time offenders at the younger ages and an earlier peak—which occurred at ages 15 and

16. Just less than 1 percent of the female cohort members were convicted of an offence for the first time at each of these ages. The female pattern of onset, unlike that of the males, began to decline by the end of the period of observation—at age 17.

Table 4.2: Cumulative prevalence of conviction, by gender and age at first conviction

Age at first conviction	Male					Female				
	N	Percentage of offenders		Percentage of cohort		N	Percentage of offenders		Percentage of cohort	
		Cumulative %	%	Cumulative %	%		Cumulative %	%	Cumulative %	%
12	695	2.98	2.98	0.35	0.35	149	2.48	2.48	0.08	0.08
13	1,735	7.44	10.42	0.87	1.22	606	10.09	12.57	0.32	0.40
14	3,225	13.83	24.25	1.61	2.83	1,075	17.89	30.46	0.57	0.97
15	4,470	19.17	33.00	2.24	5.07	1,315	21.89	52.35	0.70	1.67
16	5,292	22.70	66.12	2.65	7.72	1,328	22.10	74.45	0.71	2.38
17	5,469	23.45	89.57	2.74	10.45	1,055	17.56	92.01	0.56	2.94
>17	2,431	10.43	100.00	1.22	11.67	480	7.99	100.00	0.26	3.19
Total	23,317	100.00		11.67		6,008	100.00		3.19	

Comparing the age at first conviction prevalence differences between the genders, it was found that a greater proportion of the male than the female cohort recorded their first court conviction at each year of age. At age 12, male cohort members were approximately 4 times more likely than female cohort members to have registered their first youth court conviction. At age 15, the difference between males and females had narrowed slightly with nearly three times as many males (2.2 percent of the male cohort) receiving their first court conviction as opposed to just under 1 percent of the female cohort members. By age 17 the difference in prevalence of convictions had widened again with five times as many male offenders receiving their first court convictions compared to female cohort members—2.7 percent and 0.6 percent, respectively.

When examining the percentage of offenders, as opposed to proportions of the cohort, further differences between male and female onset patterns are also apparent. As Table 4.2 reveals, from ages 13 to 15, a greater percentage of female offenders as opposed to the percentage of male offenders, had been convicted for the first time. Fifty-two percent of the female offenders who were convicted in youth court had received their first conviction by age 15. Conversely, by age 15, only one in three convicted male offenders had received their first youth court conviction.

These age at first conviction findings replicate those from prior research which have consistently found that the number of youth beginning their court careers increases with age and peaks in the latter years of adolescence—most often between the ages of 15 and 17 (Farrington, 1997; Lee, 1999; Moffit et al., 2001; Prime et al., 2001; Snyder, 1988).

4.4 Type of Offence and Cumulative Prevalence

The next set of analyses disaggregated the cumulative or *ever prevalence* rates by the most serious offence leading to conviction—in any case in the cohort members' court history. As revealed in Table 4.3, the majority of individuals in the study were convicted in youth court on at least one occasion for offences against property—64 percent of males and 58 percent of females. For males, the most common offences in this category were theft of property (or vehicle) valued at less than \$5,000 and break and enter. Approximately one in four male offenders—3 percent of the male cohort—were found guilty of having committed one of these offences before turning 18 years of age.

For female offenders, “theft under” was also found to be the most common property-related offence in their youth court careers. Thirty-four percent of all convicted females (or 1.1 percent of the female cohort members) had been convicted of this offence at least once while under the jurisdiction of the youth court. Although less prevalent, approximately 1 in 10 female offenders, or 0.3 percent of the female cohort members, had also been convicted of possession of stolen property or for a break and enter. For all other crimes in the property-related offence category, the percentage of female cohort members with a conviction was less than one percent.

Table 4.3: Percentage of offenders and the cohort with at least one conviction for each type of offence, by gender

	Male			Female		
	N	% of offenders	% of the cohort	N	% of offenders	% of the cohort
Offences against the person	7,351	31.53	3.68	2,256	37.55	1.20
Homicide	10	0.04	0.01	1	0.02	0.00
Attempted murder	12	0.05	0.01	—	—	—
Robbery	1,202	5.16	0.60	190	3.16	0.10
Sexual assault	557	2.39	0.28	8	0.13	0.00
Other sexual offences	252	1.08	0.13	10	0.17	0.01
Major assault	1,792	7.69	0.90	435	7.24	0.23
Common assault	3,558	15.26	1.78	1,566	26.07	0.83
Uttering threats	761	3.26	0.38	189	3.15	0.10
Criminal harassment	5	0.02	0.00	1	0.02	0.00
Other offences against persons	148	0.63	0.07	36	0.60	0.02
Offences against property	14,853	63.70	7.43	3,496	58.19	1.86
Theft over... ¹	860	3.69	0.43	110	1.83	1.17
Theft under... ¹	5,790	24.83	2.90	2,093	34.84	1.11
Break and enter	6,022	25.83	3.01	571	9.50	0.30
Fraud	725	3.11	0.36	302	5.03	0.16
Mischief (General) ²	767	3.29	0.38	92	1.53	0.05
Mischief over... ³	284	1.22	0.14	39	0.65	0.02
Mischief under... ³	1,334	5.72	0.67	198	3.30	0.11
Possess stolen property	3,242	13.90	1.62	535	8.90	0.28
Other property offences	222	0.95	0.11	22	0.37	0.01

Table 4.3: concluded
Percentage of offenders and the cohort with at least one conviction for each type of offence, by gender

	Male			Female		
	N	% of offenders	% of the cohort	N	% of offenders	% of the cohort
Other offences	5,314	22.79	2.66	729	12.13	0.39
Weapons	891	3.82	0.45	78	1.30	0.04
Prostitution	10	0.04	0.01	57	0.95	0.03
Disturbing the peace	223	0.96	0.11	68	1.13	0.04
Residual Criminal Code	1,227	5.26	0.61	160	2.66	0.09
Impaired driving	599	2.57	0.30	92	1.53	0.05
Other Criminal Code traffic	335	1.44	0.17	36	0.60	0.02
Drug possession	1,392	5.97	0.70	154	2.56	0.08
Drug trafficking	828	3.55	0.41	94	1.56	0.05
Other federal statutes	131	0.56	0.07	14	0.23	0.01
Administration of justice offences	5,093	21.84	2.55	1,503	25.02	0.80
Fail to appear	319	1.37	0.16	152	2.53	0.08
Breach of probation	88	0.38	0.04	35	0.58	0.02
Unlawfully at large	911	3.91	0.46	201	3.35	0.11
Fail to comply with order	1,340	5.75	0.67	415	6.91	0.22
Young Offenders Act	3,254	13.96	1.63	964	16.05	0.51
Other admin. of justice	175	0.75	0.09	102	1.70	0.05

Note: Numbers in Table 4.3 do not add to the total number of offenders in the sample (23,317 males and 6,008 females) because individuals may be counted in more than one offence category. However, they are only counted once per category. For example, a male offender who has been convicted of 2 robberies and 1 uttering threats in his court career would be counted only once in the robbery category, once in the uttering threats category and only once for the row entitled “Offences against the person”.

¹ “Theft over” and “theft under” refer to theft of goods valued at more than or less than a threshold value which was \$1,000 from 1986 to 1994 and \$5,000 thereafter.

² “Mischief (General)” includes mischief pertaining to data or to religious property and wilfully acting or omitting to act in a manner which is likely to constitute mischief.

³ “Mischief over” and “mischief under” refer to property wilfully damaged which is valued at more than or less than a threshold value which was \$1,000 from 1986 to 1994 and \$5,000 thereafter.

While convictions for property-related offences were found to be the most common, Table 4.3 also reveals that one in three offenders were convicted of at least one violent offence—those offences against persons. For both male and female offenders, the most common violent offences were common and major assaults, as well as robbery. Fifteen percent of all male offenders (approximately 2 percent of the male cohort) and 26 percent of all female

offenders (just under 1 percent of the female cohort) were convicted at least once for a common assault during their court career. A further 7 percent of both male and female offenders (0.9 percent of the male cohort and 0.2 percent of the female cohort) were found guilty of committing at least one major assault by the age of 18.

Overall, when comparing all offences which led to the conviction of male and female offenders in the study, males were, at a minimum, twice as likely as females to be convicted of such offences as common assault, fraud and “other” administration of justice offences. At a maximum, males were almost 70 times more likely than females to have been convicted for sexual offences; 25 times more likely for other sexual offences; and 11 times more likely to have been convicted for break and enter and weapons-related offences. Not surprisingly, the only offence for which female offenders were more likely—almost 6 times—than males to have been convicted in youth court was for prostitution.

4.5 Type of Sentence and Cumulative Prevalence

The present study also examined the prevalence of convictions disaggregated by the type of sentences received throughout the court career. Table 4.4 reveals that approximately one in five male offenders (2 percent of the male cohort) and one in ten female offenders (just under 1 percent of the female cohort) were handed down at least one secure custodial sentence for offences they committed prior to age 18. Findings further indicate that 22 percent of male offenders and 15 percent of female offenders received an open custody sentence at some point in their court career—a form of custodial sentence used when it is decided that the young person presents minimal risk to the safety of the community.

Findings from Table 4.4 also reveal that the most common sentence received in the court careers of the cohort members was a sentence of probation. Approximately 8 in 10 individuals with at least one finding of guilt in youth court were sentenced to a term of probation. Translating these figures into prevalence, approximately 8 percent of the male cohort and 3 percent of the female cohort received a probation order—allowing their behaviour in the community to be supervised and controlled by probation authorities.

Table 4.4: Percentage of offenders and the cohort receiving each type of sentence in any youth court case, by gender

	Male			Female		
	N	% of offenders	% of the cohort	N	% of offenders	% of the cohort
Secure custody	4,114	17.64	2.06	574	9.55	0.31
Open custody	5,157	22.12	2.58	950	15.81	0.51
Probation	18,870	80.93	9.44	4,713	78.45	2.51
Fine	3,529	15.13	1.77	599	9.97	0.32
Restitution	2,169	9.30	1.09	272	4.53	0.14
Compensation	603	2.59	0.30	84	1.40	0.04
Pay purchaser	124	0.53	0.06	11	0.18	0.01
Compensation (in kind)	571	2.45	0.29	64	1.07	0.03
Community service	11,863	50.88	5.94	2,853	47.49	1.52
Prohibition/Seizure/Forfeiture	1,361	5.84	0.68	155	2.58	0.08
Other sentences	3,713	15.92	1.86	863	14.36	0.46
Conditional discharge	435	1.87	0.22	97	1.61	0.05
Absolute discharge	1,276	5.47	0.64	498	8.29	0.26

Note: Numbers in Table 4.4 do not add to the total number of offenders in the sample (23,317 males and 6,008 females) because individuals may be counted in more than one sentencing category. However, they are only counted once per category. For example, a female offender with 3 court cases in her court history who has received 1 sentence of probation and 2 sentences of community service would be counted once for the category of probation and only once for the category of community service.

Due to the over-arching prevalence of probation and community service orders received by young persons—which are often combined together or with other sentences—an equally

informative approach to examining the types of sentences received is to look at the most serious sentence over the entire career. Table 4.5 below, reveals that for 30 percent of the convicted males in the study—3.5 percent of the male cohort—the most severe sentence received during their court career was a custodial sentence. For an additional 55 percent, or 6 percent of the male cohort, the most serious sentence in their career involved a term of probation. Other sentences accounted for the remaining 15 percent of male offenders—2 percent of the male cohort. On the other hand, for 20 percent of the convicted females—almost 1 percent of the female cohort—the most serious sentence received in their career was a custodial sentence while 61 percent (2 percent of the female cohort) received a term of probation as their most serious sanction. Other sentences accounted for the remaining 20 percent of convicted females—or just over 0.5 percent of the female cohort.

Table 4.5: Most significant sentence received in the offenders’ court history, by gender

Most serious sentence	Male			Female		
	N	% of offenders	% of the cohort	N	% of offenders	% of the cohort
Secure custody	4,114	17.64	2.06	574	9.55	0.31
Open custody	2,934	12.58	1.47	638	10.62	0.34
Probation	12,720	54.55	6.37	3,647	60.70	1.94
Fine	1,282	5.50	0.64	276	4.59	0.15
Restitution	27	0.12	0.01	5	0.08	0.00
Compensation	45	0.19	0.02	9	0.15	0.00
Pay purchaser	13	0.06	0.01	—	—	—
Compensation (in kind)	60	0.26	0.03	9	0.15	0.00
Community service	1,159	4.97	0.58	436	7.26	0.23
Prohibition/Seizure/Forfeiture	16	0.07	0.01	3	0.05	0.00
Other sentences	219	0.94	0.11	91	1.51	0.05
Conditional discharge	8	0.03	0.00	3	0.05	0.00
Absolute discharge	720	3.09	0.36	317	5.28	0.17
Total	23,317	100.00	11.67	6,008	100.00	3.19

Overall, when comparing the most significant sentence received in the court career, males were 7 times more likely than females to receive a sentence of secure custody or a sentence of compensation (in kind). Males were also 5 times more likely than their female counterparts to receive an open custody sentence, a fine, restitution or compensation (monetary) as the most severe sentence in their court career. As well, they were only 3 times as likely to receive a probation or community service order or a conditional discharge. The ratio of male to female sentences was least for ‘other’ sentences and an absolute discharge where males were only twice as likely as females to record these sentences as the most significant in their court career.

In sum, an examination of the overall prevalence of various youth court sentences indicated that 90 percent of young persons convicted in youth court—or 6.8 percent of the birth cohort—came under the supervision of correctional or probation authorities at least once in relation to offences committed before their 18th birthday.

4.6 Annual Prevalence

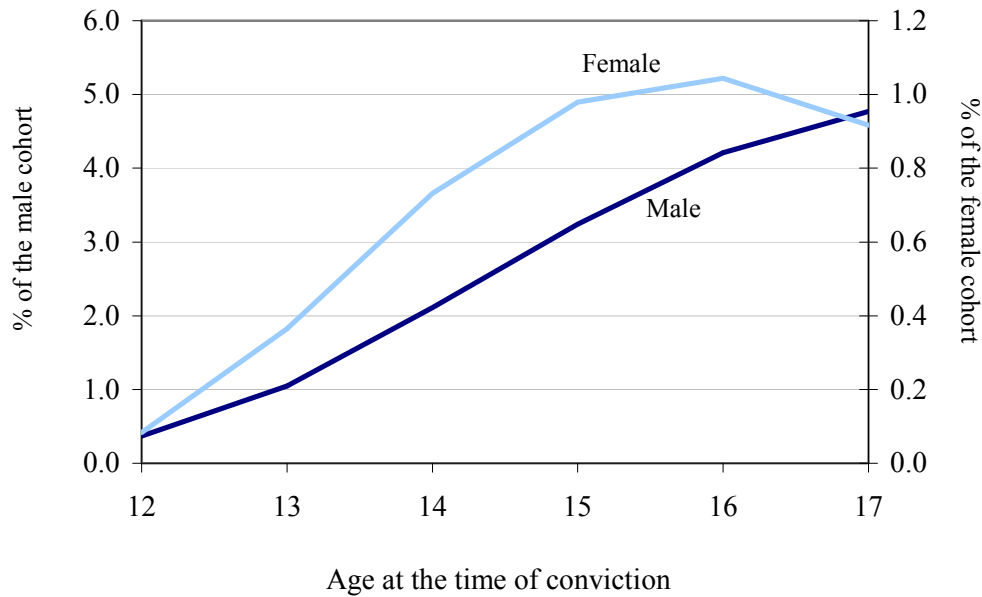
Annual prevalence, as defined above, is another measure used in criminal career research to examine the breadth of convictions within a given population. In the present study, it highlights the proportion of young persons who have been convicted at each year of age while under youth court jurisdiction. That is, unlike the examination of cumulative prevalence above—where each individual is counted only once if he or she was ever convicted in youth court—members of the cohort are counted once for each year of age that they were found guilty of the offences for which they were charged and referred to court.

Table 4.6: Annual prevalence of conviction, by gender

Age at the time of conviction	Male			Female		
	N	% of the offenders	% of the cohort	N	% of the offenders	% of the cohort
12	695	2.98	0.37	149	2.48	0.08
13	1,983	8.50	1.05	655	10.90	0.36
14	4,056	17.40	2.11	1,326	22.07	0.73
15	6,313	27.07	3.24	1,795	29.88	0.98
16	8,298	35.59	4.21	1,936	32.22	1.04
17	9,532	40.88	4.77	1,724	28.70	0.92
>17	5,065	21.72	2.54	856	14.25	0.46

As with age at first conviction prevalence, the overall rates of annual conviction in court also resembled the commonly reported age-crime curve—a sharp increase in offending activities during adolescence, with a marked peak in the mid- to late-teen years. As Table 4.6 and Figure 4.1 reveal, the overall patterns of conviction were similar for males and females, except that, prevalence for females rose relatively faster at young ages, and peaked earlier at ages 15 and 16, when approximately one-third of the female offenders (just under 1 percent of the female cohort) were found guilty of at least one offence at each of these ages. In contrast, 4.7 percent of the males in the cohort (or 41 percent of the male offenders) were convicted at the peak age of prevalence—17 years of age. Between the ages of 12 and 16, a greater proportion of female offenders relative to male offenders, were convicted of the crime for which they referred to court.

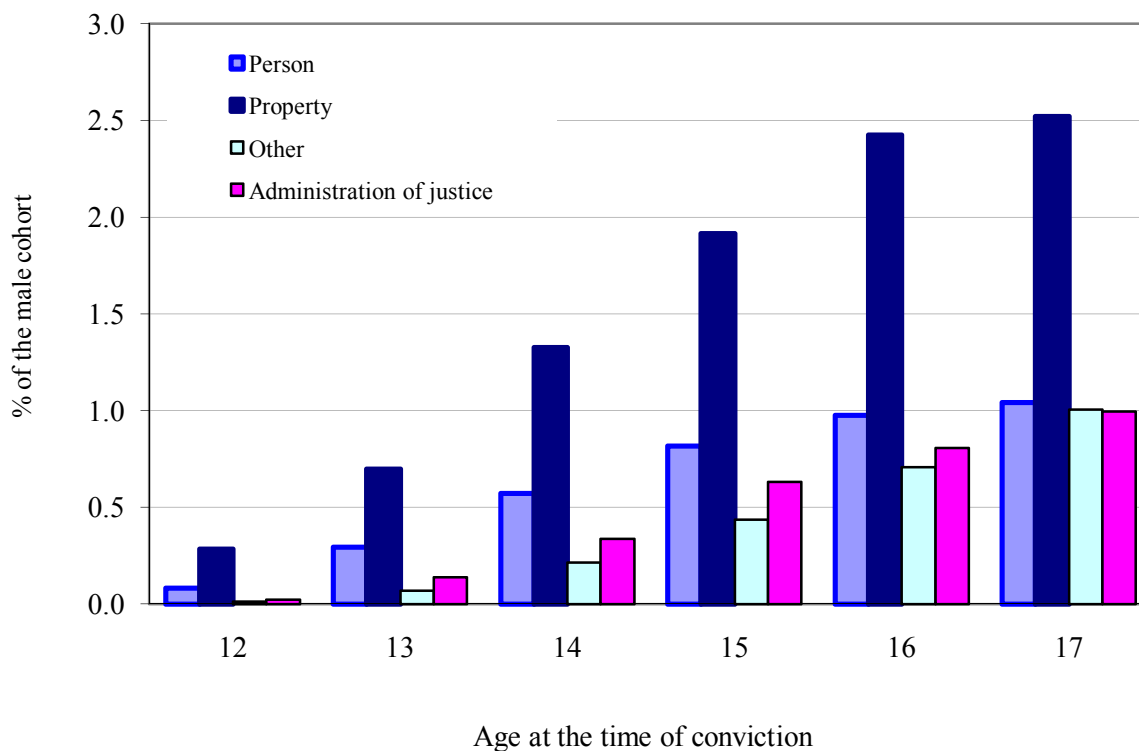
Figure 4.1: Annual prevalence of conviction, by gender



4.7 Type of Offence and Annual Prevalence

Male and female prevalence rates were found to vary not only with age, but also with the type of offence for which the young persons were found guilty. Figures 4.2 and 4.3 present the annual prevalence rates of conviction, separately for the four (aggregated) offence categories. Findings indicate that more male and female offenders were convicted at each year of age for incidents where the most serious offence was property-related than for the other types of offences. For males, rates of conviction for property-related offences rise steadily until the peak age of 17 when approximately 2.5 percent of the male cohort members were found guilty of offences against property. Annual prevalence rates of conviction for the remaining offence categories followed a similar pattern of rising steadily until age 17—at which time the rate of conviction for each type of offence is approximately equal.

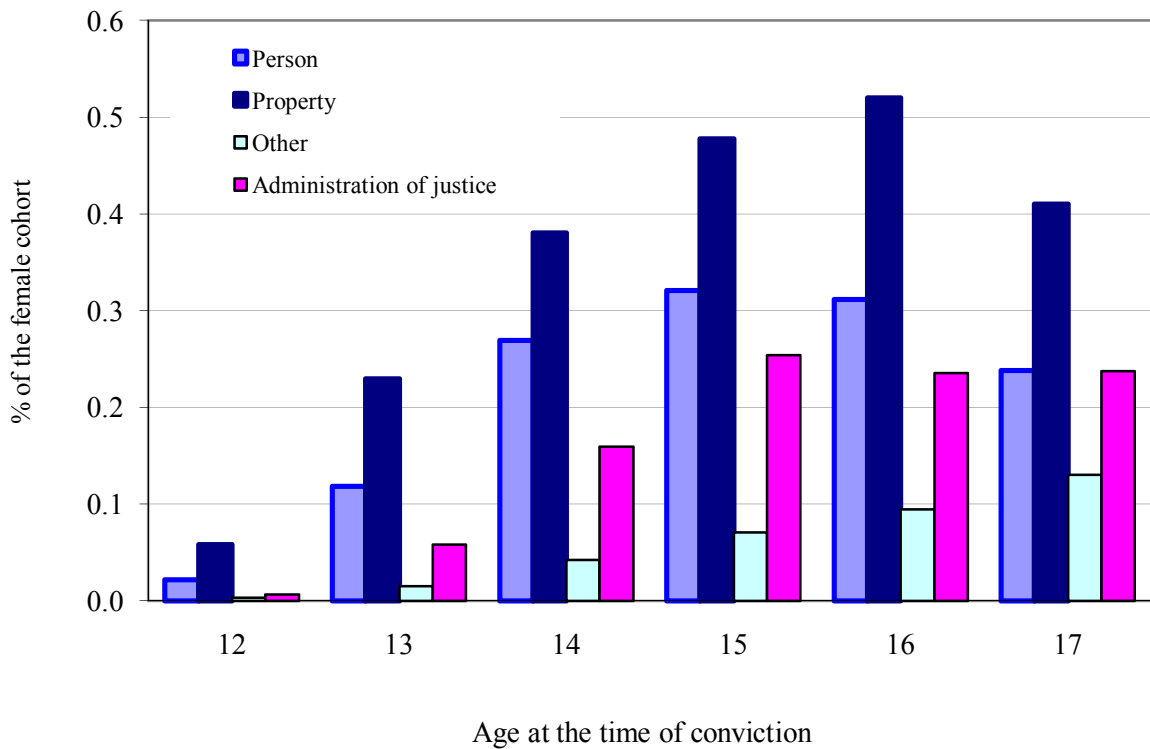
Figure 4.2: Annual prevalence of male conviction, by age at the time of conviction and type of offence



In contrast to the relatively invariant age-crime curve found for each category of offence type in the male careers, the age-specific prevalence for female convictions was found to vary significantly with the type of offence. The rate of conviction for property-related offences for females rises to the peak age of 16—when approximately 0.1 percent of the female cohort members are convicted for offences against property. Unlike the pattern of conviction for male offenders which continues to rise to the age of 17, the prevalence of convictions for property-related offences drops slightly at age 17 for female offenders. The rate of referral to court for an incident involving an offence against a person is also found to increase in the younger ages and peak earlier for females. This peak occurs two years prior—age 15—than

for male cohort members. As with the prevalence of property-related offences, the prevalence of offences against persons was also found to drop significantly after the peak age and up to age 17. The prevalence of convictions for “other” types of offences appeared to be the only offence category which resembled that of males—rising consistently to the end of the study.

Figure 4.3: Annual prevalence of female conviction by age at the time of conviction and type of offence.



4.8 Summary

The primary goal of the present chapter has been to describe the breadth of involvement of young persons in one component of the juvenile justice system—the youth court. It has accomplished this task by specifically examining the cumulative and annual rates of youth court convictions for all individuals born between April 1, 1979 and March 31, 1980.

Overall, findings replicate the well-documented fact that males are much more likely than females to be involved in criminal behaviour. It was found that 12 percent males and 3 percent of females in the cohort were convicted of at least one offence in youth court. Furthermore, it was found that the majority of these young offenders were found guilty of crimes against property—approximately 6 out of every 10 convicted individuals. While 4 percent of males and just over 1 percent of female cohort members were found guilty of a violent offence, the vast majority of offenders were convicted of very minor or common assaults—only 10 males and 1 female were found guilty of having committed a homicide before turning 18 years of age.

An examination of the sentences meted out to young persons revealed that 8 out of 10 convicted offenders received at least one sentence of probation over the course of their court career. This finding is not surprising, given that a term of probation is often combined with other available sentences. For almost one-half of the convicted young persons, this term of probation represented the most significant sentence of their court career. When looking at the most severe sentence available—secure custody—approximately 18 percent of convicted males and 9 percent of convicted females received at least one secure custodial sentence in

youth court. Taken, in sum, with community service orders, these findings indicate that virtually all young persons convicted in youth court came under the supervision of correctional or probation authorities at least once in relation to offences they committed.

Finally, findings also revealed that the prevalence of convictions in youth court varied with age. The familiar age-crime pattern reported in most criminological research was applicable to both male and female offenders. For males, the likelihood of beginning a court career and experiencing a court conviction at each year of age peaked in the final year of youth court jurisdiction—age 17. This age-crime pattern was found to be invariant across offence types with a higher percentage of the male cohort being found guilty of each category of offence at age 17.

A similar relationship between age and crime was also found for females, although both age at first conviction and age-specific prevalence peaked earlier —15 and 16 years of age. Unlike the age-crime patterns found for male offenders, the peak age of prevalence for female offenders did vary significantly across offence types. Prevalence of conviction for property-related offences peaked at age 17; convictions for offences against persons and the administration of justice peaked at age 15; and convictions for other offences peaked at age 16. The significance of specifically examining prevalence rates from a youth court perspective—especially higher rates—cannot be understated. The value of such an examination was aptly stated by Snyder (1988: 11),

...the high prevalence rates indicate that these juvenile courts had the opportunity to intervene in the lives of many juveniles at a moment when problems were evident and with an authority to stimulate change...It is therefore essential that a court's limited resources be efficiently expended and that the youth who need either the discipline or guidance the court can deliver be identified as quickly as possible.

Identifying the breadth of involvement of young persons with various stages of the criminal justice process should be seen as a requisite first step in guiding the development of the most appropriate and efficient responses to youthful offending in light of more and more limited and scarce criminal justice resources.

Chapter 5

Individual Conviction Frequencies

5.0 Introduction

The study of individual frequencies within criminal career research provides some measure of how *active* the officially recognized offender population is (Blumstein et al., 1986). The importance of the conceptual distinction between prevalence and incidence in most criminal career research is that different causal factors may be involved in these separate offending decisions and, more importantly, those differences would not be evident if the data were not disaggregated. Researchers suggest that the factors which may affect decisions to repeat a previously committed offence may vary from those which may affect the initial decision to initiate deviant behaviour (Blumstein et al., 1986; Farrington, 1997). This measure provides an indication of how *active* or the intensity at which the known population of offenders commits crime during a specified period of time.

Similar to the prevalence estimates presented earlier, the issue of incidence (or frequency) of court convictions may also be examined in terms of *cumulative* and *annual* rates.¹¹ Cumulative incidence simply refers to the number of offences—or convictions, in the present study—committed up to a certain age—usually the end of the study period for most research. Annual incidence, on the other hand, is calculated as the number of offences committed by individuals during each specific year under study. A close examination of

¹¹ The term *frequency* is used inter-changeably with the term *incidence* throughout the chapter.

annual incidence rates often provide a more accurate picture of the individual intensity of offending.

Throughout the literature on criminal careers, individual frequencies are often denoted by the Greek letter λ (lambda) (Blumstein et al., 1986; Kyvsgaard, 2003). Findings reported in the criminal career research have consistently highlighted that, "... measures of λ varies considerably across offenders so that the distribution of λ is highly skewed: the median offender commits only a handful of crimes per year, while a small percentage of offenders commit more than 100 crimes per year" (Blumstein et al., 1986: 4). While the literature is replete with various definitions and methodologies in computing λ , a commonly used definition is to calculate age-specific rates of offending (Carrington et al., 2005; Farrington and Wikström, 1994; Piquero et al., 2003). That is, to simply divide the total number of offences committed in a given year by the number of offenders who are known to have committed or been *active* during that same time period.¹²

In presenting findings of the individual court frequencies, this chapter will address the following research questions: (a) *What is the overall or cumulative frequency of convictions in the court careers of the 1979/80 birth cohort?* (b) *What are the age-specific or annual rates of convictions for individuals at each age under study (from their 12 up to 18th birthday)?* and, (c) *Does the frequency of convictions—both cumulatively and annually—vary with respect to offences committed?*

¹² See Piquero et al. (2003) for examples of various calculations of λ , including weighted or adjusted mean number of offence strategies.

5.1 Individual Frequencies and Prior Research

As noted earlier, one of the most significant findings of the Philadelphia study conducted by Wolfgang et al. (1972) highlighted the skewed distribution of police contacts in the male offenders in the 1948 birth cohort. Findings revealed that a small percentage of individuals, approximately 6 percent of the cohort (18 percent of the delinquent subgroup), were responsible for the majority (52 percent) of the recorded police arrests. This small group of offenders were found to have committed 5 or more offences and were subsequently classified as “chronic” offenders. Overall, findings revealed that offenders recorded an average of 2.9 arrests up to age 18—with chronic offenders recording an average 8.5 arrests (Wolfgang et al., 1972: 89). In their replication study, Tracy and his associates (1990) found that this skewed distribution was even more pronounced. Approximately 8 percent of the 1958 birth cohort (23 percent of the delinquent subgroup) was responsible for 61 percent of the total offences recorded (Tracy et al., 1990: 83). Offenders in the follow-up cohort recorded an average of 3.5 arrests up to age 18—with chronic offenders recording an average 9.4 arrests.

Court data analyzed by Snyder (1988) also revealed that a small percentage of youth were responsible for a large proportion of the overall court referrals attributed to the cohorts under study. Specifically, findings indicated that, “sixteen percent of all youth referred, those with four or more referrals in their careers, generated 51 percent of all juvenile court cases” (Snyder, 1988: 35). That is, one-sixth of all the young persons referred to the juvenile courts under study, accounted for over one-half of the courts’ total referrals. Furthermore, findings also indicated significant differences between the “chronic” group of male and

female offenders—defined as those with 4 or more court referrals. Twenty percent of males under study acquired four or more referrals and accounted for 56 percent of the court activity, while 8 percent of females were classified as chronic offenders and accounted for a total of 29 percent of the overall referrals by this group (Snyder, 1988: 35).

Kyvsgaard (2003) reported findings on both the cumulative and yearly crime frequencies of individuals in Denmark. Examining the most criminally active group of offenders, findings indicated that 2 percent of the individuals were responsible for 37 percent of the registered offences (Kyvsgaard, 2003: 91). Restricting the analyses of individual frequencies to penal code violations, findings revealed that that 18 percent of the offenders were responsible for 79 percent of the penal code offences recorded. Further analyses presented by Kyvsgaard examined the average age-specific annual frequencies from 15 to over 50 years of age for the offenders under study. Findings indicated that, “based on all offenses, the annual crime frequency is calculated to be just over 2.5 for the 15- to 19-year-olds, after which it slowly but steadily decreases to 1.3 offenses per year for those over the age of 50” (Kyvsgaard, 2003: 98). Furthermore, the individual crime frequencies were found to peak at ages 18 and 19—thus following an inverted-U age-crime distribution (Kyvsgaard, 2003: 106).

In a cross-national comparison of criminal careers in London and Stockholm, Farrington and Wikström (1994) reported dissimilarities in individual crime frequencies. In the Cambridge study, it was found that individual crime frequencies, “did not vary markedly with age and are always between 1 (the minimum possible value) and 2” (Farrington and Wikström, 1994: 76). Conversely, in *Project-Metropolitan* individual offending frequencies increased, “to a peak at age 15 (or 6.2 offences per offender) and then declines up to age 19,

after which it is tolerably constant, at about 3 offences per offender” (Farrington and Wikström, 1994: 76). The authors report a number of explanations for the apparent difference including both methodological and sample composition factors (see Farrington and Wikström, 1994: 76-77).

In the recent work by Carrington et al. (2005), the authors found that just over one-half (55 percent) of offenders had a court career consisting of only one incident. About 63 percent of females were one-time offenders, compared with 53 percent of males in the study. Repeat offenders—those referred to court in relation to 2 to 4 criminal incidents—accounted for approximately 28 percent of all alleged offenders. Chronic offenders, defined as persons referred to court in relation to 5 or more criminal incidents, made up the remaining 16 percent (Carrington et al., 2005). The authors also found that although chronic offenders made up the smallest group, they were responsible for 58 percent of all court referrals involving the young people under study. Overall, findings revealed that offenders had an average of 3.1 referrals to court with males averaging 3.3 referrals, and females 2.4 (Carrington et al., 2005: 17). When looking at age-specific rates of alleged offending, the researchers found very little difference between male and female offenders at most ages and similar patterns of change over the 11 years under study. Findings indicated that the rate of offending for male offenders peaked at age 15, when males, on average, were referred to court in relation to 2 criminal incidents. For females, this peak in offending occurred one year earlier—at age 14—when females were, on average, referred to court in relation to 1.7 incidents (Carrington et al., 2005: 24).

5.2 Cumulative Conviction Distributions

It was revealed in Chapter 4 that 29,325 young persons born between April 1, 1979 and March 31, 1980 had received at least one conviction while under the jurisdiction of Canadian youth courts. In total, 59,370 court convictions were attributable to this group of individuals. Table 5.1 shows that the vast majority of offenders received one conviction throughout their court career. The mean number of convictions per offender was 1.92 (1.97 for males and 1.74 for females). For sixty percent of male offenders and two-thirds (66 percent) of female offenders their court careers ended after their first court conviction. Another 32 percent of males and 28 percent of females were found to have been convicted in court in relation to 2 to 4 criminal offences. The remaining 8 percent of male offenders and 6 percent of females offenders were convicted 5 or more times for crimes they committed during their adolescent years.

Table 5.1 also reveals that the chronic group of offenders—those with 5 or more convictions—received a far greater share of convictions than their relative distribution in the cohort would suggest. Although accounting for only 8 percent of the male offenders, the chronic male offending group recorded 28 percent of the overall convictions. Similarly, 2,225 or 21 percent of all female convictions were attributable to the 5 percent of female offenders with 5 or more convictions in the court careers. Overall, findings reveal a clear skew in the distribution of convictions among the population of young offenders. The alpha (α) coefficients presented in Table 5.1 highlight that the male and female distributions of

conviction are very close in terms of skewness (α) with male convictions exhibiting a slightly greater skew (0.38 versus 0.34).¹³

Table 5.1: Distribution of the total number of offenders and convictions, by gender

	Number of convictions	Total number of offenders	% of offenders	Total number of convictions	% of convictions
Male					
	1	14,087	60.42	14,087	30.67
	2	4,194	17.99	8,388	18.26
	3	2,010	8.62	6,030	13.13
	4	1,173	5.03	4,692	10.21
	5+	1,853	7.95	12,736	27.73
	Total	23,317	100.00	45,933	100.00
		$\bar{x} = 1.97$	$\alpha = 0.38$		
Female					
	1	3,993	66.46	3,993	38.26
	2	1,031	17.16	2,062	19.76
	3	459	7.64	1,377	13.19
	4	195	3.25	780	7.47
	5+	330	5.49	2,225	21.32
	Total	6,008	100.00	10,437	100.00
		$\bar{x} = 1.74$	$\alpha = 0.34$		

Overall, the results presented above correspond with prior research which has consistently found that while some individuals will commit (or be convicted for) only one or two offences, others will commit crimes more frequently and an even smaller group of

¹³ The alpha coefficient (α) is a measure of offence skewness proposed by Fox and Tracy (1988) which makes use of the full offence distribution and assess the cumulative percentage of offences committed by the cumulative percentage of offenders at each level of offence. As the authors indicate, “a perfectly even distribution, one in which all cohort members commit the same number of offenses, would yield a diagonal straight line. The more skewed the distribution of offense share, the more bowed or convex the cumulative offense curve” (1988: 262). In the present study, the alpha coefficient measures the extent of the departure of the cumulative convictions curve from the diagonal and ranges from 0 (for complete equality in the share of convictions) to 1 (for complete unevenness or unequal share of convictions). See Fox and Tracy (1988) for a full discussion of the computation of the alpha coefficient. It should be noted that the alpha coefficient—as used by Fox and Tracy (1988) and Piquero et al. (2007)—appears to be the same as the Gini coefficient (and Lorenz curves) used by economists as the principal measure of inequality of income or wealth, but this has not been demonstrated. See Xu (2003) for a comprehensive review of the Gini coefficient and its various formulations and interpretations.

individuals will commit crimes very frequently (Carrington et al., 2005; Farrington, 1997; Kyvsgaard, 2003; Lee, 2000; Snyder, 1988; Tracy et al., 1990; Wolfgang et al., 1972; Wolfgang et al., 1987).

5.3 Distribution of Convictions for Different Offence Types

The next set of analyses examines whether the cumulative frequency of convictions vary according to the type of offences committed. Conviction distributions for each category of offence are classified according to three offender typologies—one-time, repeat, and chronic offenders. Similar to Wolfgang et al. (1972), but now classifying offender careers within each type of offence, one-time offenders for offences against the person are defined as those who recorded one youth court conviction for an offence against the person over their entire career, repeat offenders are those who had received 2 to 4 convictions for offences against the person, and chronic offenders were those who received 5 or more convictions for offences against the person, during the period under study.

Figures presented in Table 5.2 reveal that the pattern of skewed or uneven distribution of convictions is readily apparent for each category of offence. For example, although it was found in Chapter 4 (see Table 4.3) that 32 percent of male offenders and 38 percent of female offenders had been convicted for violent offences—those against persons—over 80 percent of these offenders (83 percent of males and 86 percent of females) were convicted on only one occasion for such offences. Very few individuals—19 or 0.3 percent of male offenders and 10 or 0.4 percent of female offenders—were convicted in youth court for 5 or more violent offences. The mean number of convictions for offences

against persons was 1.23 for males and 1.20 for female offenders. Furthermore, findings indicate that the male and female conviction distributions for person-related offences are very close in terms of skewness (α) with male convictions exhibiting a slightly greater skew (0.17 versus 0.15).

Distributions for the remaining three offence categories reveal similar variations in the amount of skew in the conviction distributions. The largest difference between male and female cumulative frequencies is found for offences against property. Sixty-eight percent of male offenders were convicted on one occasion for property offences, 29 percent received 2 to 4 convictions, and 3 percent were convicted on 5 or more occasions. The 426 chronic male offenders were responsible for 11 percent of all convictions for which the most serious offence was against property. In contrast, 81 percent of females were convicted on one occasion for property offences and accounted for 63 percent of all convictions in this offence category. Only 25 females—0.72 percent of female offenders—were classified as chronic property offenders and they were responsible for 3 percent of all convictions for property-related offences. The alpha (α) coefficients confirm that the male distribution of convictions for property-related offences exhibits a greater skew than the distribution for female offenders—0.28 versus 0.18.

Table 5.2: Distribution of the total number of offenders and convictions for each type of offence category, by gender

	Male				Female			
	Offenders		Convictions		Offenders		Convictions	
	N	%	N	%	N	%	N	%
Offences against the person								
One-time offenders (1 conviction)	6,074	82.63	6,074	67.03	1,931	85.59	1,931	71.04
Repeat offenders (2 to 4 convictions)	1,258	17.11	2,887	31.86	315	13.96	735	27.04
Chronic offenders (5+ convictions)	19	0.26	100	1.10	10	0.44	52	1.91
Total	7,351	100.00	9,061	100.00	2,256	100.00	2,718	100.00
	$\bar{x} = 1.23$	$\alpha = 0.16$			$\bar{x} = 1.20$	$\alpha = 0.15$		
Offences against property								
One-time offenders (1 conviction)	10,167	68.45	10,167	44.01	2,827	80.86	2,827	63.47
Repeat offenders (2 to 4 convictions)	4,260	28.68	10,423	45.12	644	18.42	1,490	33.45
Chronic offenders (5+ convictions)	426	2.87	2,510	10.87	25	0.72	137	3.08
Total	14,853	100.00	23,100	100.00	3,496	100.00	4,454	100.00
	$\bar{x} = 1.56$	$\alpha = 0.28$			$\bar{x} = 1.27$	$\alpha = 0.18$		
Other offences								
One-time offenders (1 conviction)	4,839	91.06	4,839	82.76	695	95.34	695	90.61
Repeat offenders (2 to 4 convictions)	473	8.90	998	17.07	34	4.66	72	9.39
Chronic offenders (5+ convictions)	2	0.04	10	0.17	—	—	—	—
Total	5,314	100.00	5,847	100.00	729	100.00	767	100.00
	$\bar{x} = 1.10$	$\alpha = 0.08$			$\bar{x} = 1.05$	$\alpha = 0.05$		
Administration of justice offences								
One-time offenders (1 conviction)	3,491	68.55	3,491	44.05	996	66.27	996	39.87
Repeat offenders (2 to 4 convictions)	1,450	28.47	3,528	44.52	444	29.54	1,103	44.16
Chronic offenders (5+ convictions)	152	2.98	906	11.43	63	4.19	399	15.97
Total	5,093	100.00	7,925	100.00	1,503	100.00	2,498	100.00
	$\bar{x} = 1.56$	$\alpha = 0.28$			$\bar{x} = 1.66$	$\alpha = 0.31$		

Note: Numbers in Table 5.2 do not add to the total number of offenders in the sample (23,317 males and 6,008 females) because individuals may be counted in more than one offence category. For example, a female offender with 2 assaults and 3 break and enter convictions in her court history would be considered a repeat violent offender (offences against persons) and a repeat property offender. In comparison, in Table 5.1 above, where offence was not being considered, this offender is counted as a chronic offender with 5 or more convictions.

The largest proportion of one-time offenders, for both males and females, can be found in the “other” offences category—which includes such offences as impaired driving, drug possession, weapons-related offences and prostitution. In fact, there are no female offenders who have been convicted of 5 or more such offences. As confirmed by the alpha

(α) coefficients, there is very little chronic offender ‘effect’ in the distribution of convictions for “other” offences—suggesting that there is a near 1:1 ratio of convictions to offenders in this category.

Finally, Table 5.2 indicates that the largest proportion of chronic offenders, for female members of the cohort, can be found in the administration of justice offence category. That is, of those females who had been convicted for an administration of justice offence, just over 4 percent of them (N=63) were convicted for this offence on 5 or more occasions and accumulated approximately 16 percent of the convictions (N=399) in this offence category. For male offenders, on the other hand, a similar proportion of male chronic offenders could be found in both the “offences against property” and “administration of justice” offence categories. That is, for both offence types, approximately 3 percent of the males convicted of each of those offences were responsible for approximately 11 percent of the total convictions for both property-related and administration of justice-related convictions. Overall, findings of chronicity relating to administration of justice offences is not surprising given that this category of offence is, in most cases, is associated with some violation of conditions attached to a prior youth court sentence (e.g. breach of probation conditions). As such, while some of the offences in this category are in fact *Criminal Code* violations (e.g. failure to appear or escape from lawful custody), the vast majority are administrative in nature and therefore do not often represent the commission of any *new*, substantive offence (e.g. an offence against a person or property).

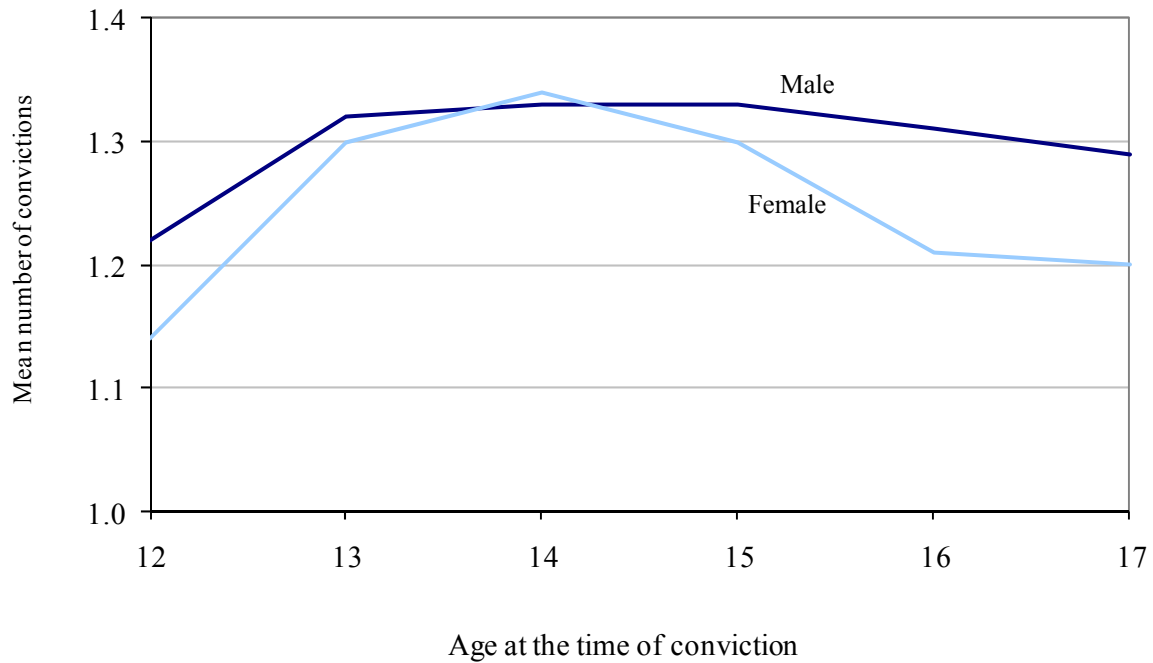
5.4 Annual Conviction Frequencies

Thus far, the analysis of conviction frequencies has examined the *cumulative* or total number of convictions over the entire court career. In the analyses which follow, the *intensity* or *rate* of conviction for each year under study will be examined. As discussed above, this indicator is most often denoted by the Greek letter (λ) throughout the criminal career literature. In the present context, lambda (λ) is calculated by simply dividing the total number of convictions at each specific age—for example at age 17—by the number of offenders receiving a conviction at 17 years of age.

Figure 5.1 reveals that while slight differences exist between the mean age-specific rates of conviction for male and female offenders, overall the differences are minimal at best. That is, the annual rates of conviction range between 1 (the minimum) and 2 for both male and female offenders over the 6-year period—never exceeding 1.3 convictions per offender at any age for either gender.

Figure 5.1 also highlights the relatively invariant pattern of age-specific rate of conviction for male offenders under study. While an increase is apparent at age 12, the annual rate of convictions for male offenders remains relatively stable until age 17 at approximately 1.3 convictions per offender.

Figure 5.1: Mean annual number of convictions involving active offenders (λ), by sex and age at the time of conviction



For female offenders, on the other hand, the age-specific pattern of convictions exhibits more variation with age. There is a sharp increase in the annual rate of convictions from age 12 to 13 which is followed by a distinctive peak at age 14—an age-specific peak which is not readily apparent for male offenders. The annual rate of convictions for females drops significantly at ages 15 and 16 at which time it levels off at approximately 1.2 convictions for every 17 year female offender.

As Figure 5.1 highlights, the age-specific rates of conviction for female offenders appears more consistent with the often reported age-crime curve which generally highlights a

sharp increase in offending during early adolescence, with a marked peak in the mid-to late teen years, followed by a steady decline into adulthood.¹⁴

5.5 Type of Offence and Annual Conviction Frequencies

The next set of analyses disaggregates the age-specific rates of conviction for four types of offences. For male offenders, there is no apparent age-related pattern in the rates of conviction for offences against persons and ‘other’ offences, but the rate of convictions for offences against the administration of justice deviate significantly from the overall age-specific rates of conviction presented above. Interestingly, the peak age of first conviction for these offences occurred in the first year of youth court jurisdiction—age 12—and declines steadily, thereafter (Figure 5.2 below). The age-crime pattern for property-related offences was similar to the overall or general pattern highlighted in Figure 5.1, above. That is, there is a sharp increase in the mean number of property offence convictions per offender from age 12 to 13, at which time it levels off until age 17—with only minor variation in the rates.

¹⁴ The suggestion that there is variation in the age-specific rate of convictions for females should be viewed with caution. It is certainly debatable whether a change from 1.1 convictions to 1.3 convictions is truly suggestive of variation. However, it should be noted that this rate of change relates to a real increase from 170 convictions at age 12 to 1702 convictions at age 14 for the female members of the 1979/80 cohort—an additional 1602 female convictions dealt with by the youth courts.

Figure 5.2: Mean annual number of convictions received by active male offenders (λ), by type of offence leading to conviction and age at the time of conviction

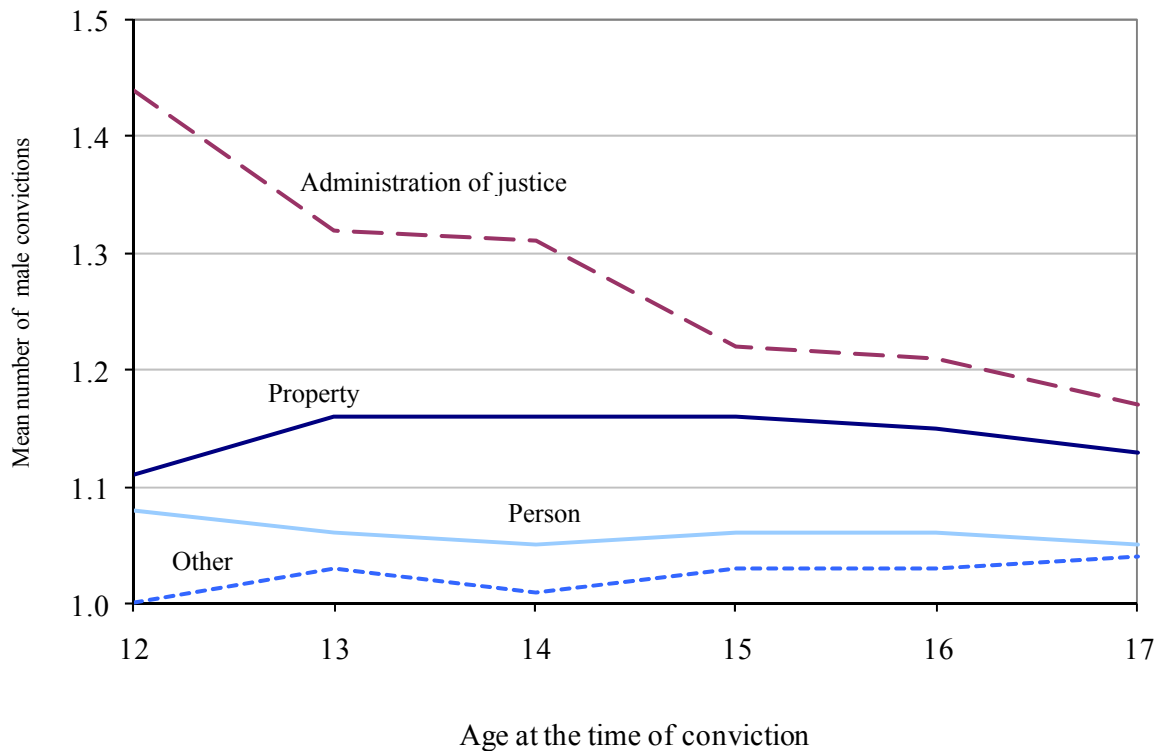
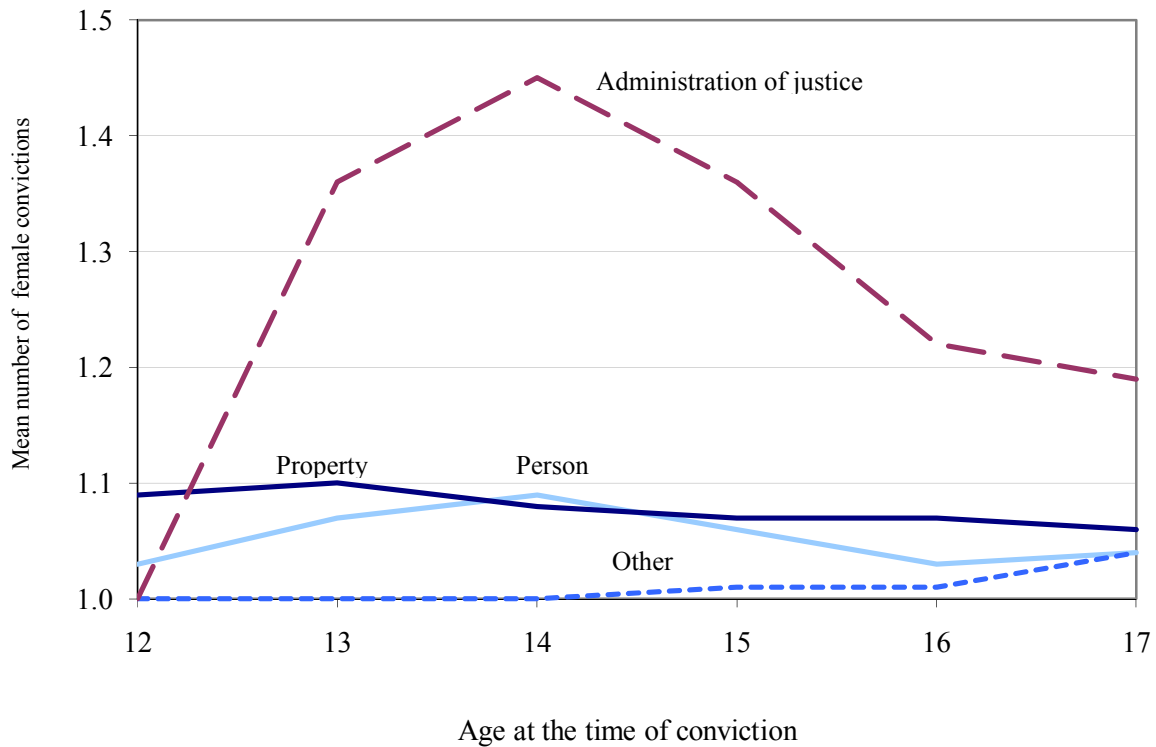


Figure 5.3 below highlights that the female rate of conviction appears to vary with age for each type of offence. Similar to the pattern for male offenders, this relationship appears to be most pronounced for administration of justice offences. This pattern parallels the general (all offences) age-specific conviction pattern for females as revealed in Figure 5.1 above—an increase up to the age of 14 (1.45 convictions), followed by a steady decline to the end of the study.

Although less pronounced, the relationship between age and conviction frequency is also apparent for the remaining three offence categories. That is, for each offence, there is a discernable peak age of conviction frequency—age 14 for offences against persons (1.09 convictions); age 13 for offences against property (1.10 convictions); and age 17 for ‘other’ offences (1.04 convictions).

Figure 5.3: Mean annual number of convictions received by active female offenders (λ), by type of offence leading to conviction and age at the conviction



5.6 Summary

The primary goal of the present chapter has been to describe the *intensity* of involvement of young persons with Canadian youth courts. It has accomplished this task by examining the cumulative and age-specific rates of individual court frequencies for male and female offenders in the 1979/80 birth cohort. These patterns were examined for general, and offence-specific, conviction frequencies in order to further highlight the relationship between age and the frequency of convictions in youth court.

Overall, findings revealed that the vast majority of offenders—60 percent of males and 66 percent of females—had a court career consisting of only one conviction for offences

committed prior to turning 18 years of age. Repeat offenders, those with two to four convictions, accounted for 32 percent and 28 percent of the overall number of male and female offenders, respectively. Offenders with 5 or more convictions in their career—classified as ‘chronic’—constituted the remaining 7 percent of offenders (8 percent of males and 5 percent of females), but were responsible for 27 percent of all convictions (28 percent of male convictions and 21 percent of female convictions) recorded by the members of the cohort.

A similar pattern of skewed or uneven distributions of convictions was readily apparent for each category of offence. The vast majority of offenders in each category were convicted on only one occasion for each offence type. The largest number of chronic offenders was found in the administration of justice category. Offenders with 5 or more administration of justice offences constituted 3 percent of male offenders and 4 percent of female offenders, but were responsible for 11 percent of all male convictions and 16 percent of all female convictions in this category.

Overall, mean age-specific rates of convictions were found to be similar for male and female offenders with the number of convictions per offender never exceeding 1.3 at any age under study. Trends in annual conviction frequencies were relatively invariant for male offenders which peaked at 1.3 convictions per active male offender at ages 13 to 16. Conviction frequencies for females, however, revealed greater variability with age. Age-specific rates of convictions increased from age 12 to 13 and peaked at 1.34 convictions per active female offender at age 14—after which, declined steadily to the end of the study.

Overall, much like the general (all offences) pattern of age-specific frequencies of convictions, there appeared to be little relationship between age and the number of

convictions across offence categories for male offenders. With the exception of convictions for administration of justice offences—which peaked at age 12 and declined steadily until age 17—findings revealed a relatively invariant pattern of age-specific rate of conviction for each category of offence of male convictions.

On the other hand, analyses suggested a much stronger relationship between age and frequency of convictions across all offence categories for female offenders. At no point, did the frequency of conviction go above 1.5 convictions per female offender but it was found to be highest at age 14 for offences against the administration of justice. Similarly, convictions for offences against persons—violent offences—also peaked at age 14, while convictions for offences against property and ‘other’ offences peaked at ages 13 and 17, respectively.

Phillips and Dinitz (1982: 267) have described criminal courts as vortices where, “Some who appear before them will be freed; others will be held for only a few spins; some unfortunates will be captured and forced into a downward spiral from which there is no release.” Furthermore, as Lee (1999: 5) asserts, “The court system responds to offences after the fact and cannot affect prevalence of first offenders”. Findings presented in the current chapter confirm the existence of a group of “unfortunates” who have been processed through youth courts on numerous occasions. For these individuals, the youth court may indeed—although debatable—have the ability (or at minimum, opportunity) to affect change and prevent re-offending. However, as the findings suggest, for the vast majority of the young persons in the present study their court careers ended after their first conviction—dispelling the image that most youth who come into contact with the courts go on to further criminal acts and eventually become *chronic* or *habitual* offenders.

Chapter 6

Age at First Conviction

6.0 Introduction

Age can be seen as one of the most important factors to consider when describing the nature and extent of criminal activity, and more specifically, changes in this activity over time. While volumes of criminal career research exist which attempt to explain this relationship, Tracy et al. (1990: 175) suggest, "...that the analysis of age and delinquency has usually taken three major modes: (1) the distribution of delinquent acts by age-specific categories; (2) the age-at-onset of delinquency; and (3) the effect of early onset of delinquency on later delinquency." While the first two approaches apply age as an antecedent variable which may affect criminal behaviour, the latter utilizes age as a measure of time.

Theoretical and empirical work which specifically examines issues related to the onset of offending attempt to highlight qualitative differences between offenders. According to Krohn, Thornberry, Rivera and Le Blanc (2001: 69), within this body of research, opposing theories are often:

...distinguished from one another in terms of their position on three matters of emphasis: the degree to which the theories assume that child delinquents are fundamentally different from those who initiate their delinquent behaviour later during adolescence, the degree of stability of antisocial behaviour they assume, and the key risk factors they posit for early onset behaviour.

Overall, however, there is general consensus within criminological research that problem behaviour earlier in life is often predictive or indicative of future criminal behaviour (Blumstein et al., 1986; DeLisi, 2006; Farrington, 1997; Krohn et al., 2001; Kyvsgaard, 2003; Loeber and Snyder, 1990; Moffit, 1993; Nagin and Farrington, 1992b; Patterson, DeBaryshe, and Ramsey, 1989; Piquero, Farrington, and Blumstein, 2007; Sampson and Laub, 2003; Thornberry, 1997; Tracy et al., 1990). According to Le Blanc and Fréchette (1989) the age at which delinquency begins has been confirmed by criminologists as a key factor in determining the continuity of delinquent behaviour as early as 1899 in the work of Cesare Lombroso. Furthermore, many researchers suggest that offenders who begin offending at an earlier age have more extensive and, often, more serious delinquent careers.

6.1 Age at Onset and Prior Research

Individuals are known to engage in illegal behaviour at different ages, and, as such, there is a growing consensus amongst researchers that the offender population is not homogenous, but rather, is comprised of distinct groups—with age at criminal onset being a key distinguishing attribute between them. This interest in criminal offending by those at young ages has been sparked by a number of key theoretical and empirical developments which have taken place in the field of criminology over the last several decades. Two prominent examples of typological or taxonomic theories which have influenced this area of research include the work by Moffit (1993; 2003) and various work by Patterson and his colleagues (Patterson, 1996; Patterson et al., 1989; Patterson and Yoerger, 1997).

Moffit's (1993) developmental taxonomy of offending differentiates between two specific groups of offenders which have with their own natural history and distinct aetiology: *adolescent-limited* and *life-course persistent*. The first group, the *adolescent-limited*, engage in criminal behaviour only during the period adolescence. According to Moffit (1993: 674), adolescent-limited offending develops as a "...maturity gap encourages teens to mimic anti-social behavior in ways that are normative and adjustive". The primary motivation behind such behaviour is a desire to demonstrate both maturity and a level of personal independence. For the most part, adolescent-limited offenders first offend after the age of 14 and often engage in offending which does not include violent behaviour, but rather, less serious acts such as minor theft, vandalism, smoking, and drug use.

The second group of offenders, the *life-course persistent*, on the other hand, are those who engage in criminal behaviour at various stages over the life course. According to Moffit's (1993: 674) taxonomy, for this group of offenders, early childhood "...neuropsychological problems interact cumulatively with their criminogenic environments across development, cumulating in a pathological personality". As such, unlike their adolescent-limited counterparts, this group of offenders have a much earlier onset of offending and their behaviour tends to be much more varied and serious in nature—including interpersonal violence (Moffit, 1993).

Similar to Moffit, Patterson and his colleagues have also differentiated between two distinct groups of offenders: *early starters* and *late starters*. *Early starters*, like the life-course persistent, are at the greatest risk of becoming persistent and serious offenders. According to Patterson et al. (1989) early starters are children who receive antisocial training from their families—often via inept parental discipline, poor parental monitoring and

disrupted family processes—and are then, later, denied access to various positive socialization forces such as normative peers or school. *Late starters*, on the other hand, are individuals who begin offending in mid- to late adolescence, and are primarily influenced or led to offending by their association with delinquent peer groups. The offending of late starters is much more transient in nature—often ceasing in early adulthood—and involves less serious criminal acts such as shoplifting, vandalism and underage drinking (Patterson et al., 1989; Patterson and Yoerger, 1997).

Most research to date indicates that initial criminal onset appears sometime between the age of 10 and 14 years, while the prevalence of criminal activity reaches a peak between 16 and 17 years of age (Farrington, 1997; Piquero et al., 2003; Thornberry, 1997). Furthermore, findings also suggest that early onset often predicts a relatively large number of total offences in a person's criminal career. In their comparison of criminal career findings based on official records versus self-reports, Farrington, Jolliffe, Hawkins, Catalano, Hill, and Kosterman (2003) found this to be the case for both official as well as self-reported delinquency. However, the authors note that for self-reports, this was largely due to the early onset offenders having more time at risk after onset. Furthermore, in their analysis, the researchers found that an early age of onset (age 11 or 12) predicted a higher rate of annual offending only in court referrals and not in self-reports (2003). The authors suggest that there may be a reluctance, on the part of authorities, to refer youths aged 11-12 which may, in turn, mean that those who are actually referred are possibly “extreme” in their persisting criminal potential (Farrington et al., 2003: 953).

In Farrington's (1992) review of criminal career research in the United Kingdom, findings were presented from the Cambridge study which indicated that individuals with an

earlier age of onset committed considerably more crime than those with a later onset. For example, Farrington (1992: 527) reported, “it can be seen that the average number of offences decreased with increasing age of onset, from 8.1 offences committed by those first convicted at age 10-13 to 1.5 offences by those first convicted at age 21-23.” Unfortunately, an explanation for these findings is not addressed by the author but rather, it is noted that, “it is important to investigate why an early age of onset predicts a long criminal career” (Farrington, 1992: 528).

In contrast, in a cross-national comparison of offending careers in London and Sweden, Farrington and Wikström (1994) presented findings which indicated that the frequency of offending in both groups was unrelated to age at onset. For ages of onset up to 20, it was reported that, “one offence was recorded per year of the criminal career in London and about 2.5 offences were recorded per year of the criminal career in Stockholm” (Farrington and Wikström, 1994: 82). The authors concluded that, “the greater number of offences committed by early onset offenders was a function of their longer criminal careers and did not reflect a higher frequency of offending during this career” (Farrington and Wikström, 1994: 82).

In a large-scale study of Danish offenders Kyvsgaard (2003) examined the relationship between age at onset and various criminal parameters including persistence, crime frequency and seriousness of continued crime. First, analyses revealed that persistence in offending (measured by recidivism) was related to both age at the time of the offence and age at onset. Regression analyses indicated, that “age at the time of the crime, however, presents a slightly stronger association to criminal persistence among the criminally active than does age at onset” (Kyvsgaard, 2003: 114). Secondly, analyses revealed that, “the age

at onset differentiates between the crime frequency of those aged 15 to 18, but fails to distinguish between those who are older” (Kyvsgaard, 2003: 117). Further analyses suggested that age at the time of crime differentiates criminal frequency for all age groups. As such, the author concluded that, “the age of the individual at the time of the crime is therefore relevant to crime frequency regardless of age at onset” (Kyvsgaard, 2003: 117). Lastly, in her evaluation of the relationship between age of onset and seriousness of continued crime (measured via the sentences handed down to individuals), the author found a considerable number of individuals receiving specific dispositions regardless of age at onset. As such, Kyvsgaard (2003: 118) ultimately concluded that, “there are thus no clear or systematic differences in the seriousness of crime committed by offenders with different ages of onset.”

Findings from Snyder (1988) revealed a continuous increase in the number of youth beginning their court careers at each age-level through to age 16—at which time a peak was observed. Comparing age at onset for the males and females at each age group revealed that “the ratio of the number of males to the number of females entering the court system at each age level was lowest in the 13—and 14—year old age groups and greater for both younger and older age groups” (Snyder, 1988: 17). Overall, Snyder found that age at onset was strongly related to the youth’s impact on the workload of the juvenile court. That is, youth who were referred to court before the age of 12 had twice as many referrals (averaging 4.5 in their career) than those who were first referred at age 15 (averaging 2.16 referrals in their career). However, when controlling for the *time at-risk* the analyses revealed that the yearly rates of re-offending were constant across all age-at-onset groups. Thus, the author

concluded that, “early age of onset youth were not more active, they simply had more time to accrue a larger number of court referrals” (Snyder, 1988: 19).

Loeber and Snyder (1990) confirm these results in a more recent study of frequency rates in male juvenile careers. Reporting on data from the same Maricopa County (Arizona) juvenile court records, the authors concluded that, “the rate of offending of active offenders (i.e., lambda) varied substantially as a function of age, increasing monotonically with age” (Loeber and Snyder, 1990: 97). However, the authors indicate that without exception, “the offending rate of active males at each age was independent of the cohort’s age at onset.” The authors situated their findings in the heart of the debates over the constancy of lambda and the value of longitudinal research. As the authors contended, “[if] offending rates are related primarily to the age of the offender, then background information on the individual’s criminal career is far less important, and policy development can be informed more easily by cross-sectional studies than by longitudinal research” (Loeber and Snyder, 1990: 106). In light of these implications purported by the authors, it should be noted that the researchers examined age-at-onset from ages 8 to 15 years—a time frame which does not incorporate peak criminal activity. A more practical recommendation derived from such results would suggest that,

...the juvenile justice system’s response to a youth should be molded more by the individual’s age at offending and his opportunity to continue this behaviour and less on his past record...But, if the juvenile justice system wants to have even more of an impact on crime rates and the overall workload of the justice system, it should focus more on those first-time offenders who are likely to become active offenders (Loeber and Snyder, 1990: 108).

Le Blanc and Fréchette (1989), in the Montreal study, examined the issue of criminal onset in both hidden (self-reported) and registered (official) delinquency. The authors found that there was a gap of approximately 3 years between the commission of the first offence—as self-reported by the young persons—and their appearance in the justice system. Le Blanc and Fréchette (1989: 79) reported an average age of onset of 10.6 years in the self-reports and 13.7 in the official records for their “delinquent sample” —those who had been before a youth court at least once when chosen for the study. For their “adolescent sample”— the representative population sample of 1,684 males—the official age of onset was found to be much later, with the average being 14.6 years. According to the authors, “...there is a gap of about 3 years between the commission of the first offense and the appearance of the adolescent in the justice system and of 4 years between the first offense and the first official sanction by the court”(Le Blanc and Fréchette, 1989: 79). Using a variety of correlation analyses, the authors examined the effect of early onset—what the authors refer to as “early activation”—on the frequency, duration and variety of criminal activities. Ultimately, the authors found strong support for the notion that, “the earlier the onset of illicit activity, the longer it lasts and the more frequent and varied it becomes” (Le Blanc and Fréchette, 1989: 177).

A more recent Canadian study by Carrington, Matarazzo and deSouza (2005) also found a strong relationship between the age at which the first incident was referred to court (age at onset) and the overall number of incidents in the court career. The authors found that the mean number of incidents in the career decreased rapidly with increasing age at first court referral. As part of their examination, the authors tested the possibility that the larger number of incidents in the career of persons with an earlier age of onset was due to having a

longer period at risk versus having a greater propensity to offend. Analysis of the mean annual recidivism rate for cohort members revealed, “that the propensity to re-offend is greater for those with earlier ages of onset”—highest for those who committed their first offence at age 12 and decreasing steadily thereafter (Carrington et al., 2005: 20). Furthermore, the authors also noted that while the probability of being a chronic offender decreased with age of onset, individuals who were first referred to court at ages 14 and 15 contributed the greatest number of chronic offenders in the study. The authors suggested that youngest of offenders in the study may not have figured as prominently in the chronic offender group may be reflective of “...a tendency on the part of police, prosecutors, and other screening agencies, to deal with alleged offenders younger than 15 by means other than the court process” (Carrington et al., 2005: 16).

In the present chapter, findings are presented which examine the relationship between age at first conviction and variation in youth court careers, and more specifically, the following research question: *What is the nature and extent of the relationship between age at first conviction and the frequency and seriousness of subsequent convictions in the court careers of the 1979/80 birth cohort?*¹⁵

¹⁵ It should be noted that due to limitations in the use of official court data the ‘true’ age of criminal onset cannot be established. The earliest age of official court contact is solely determined by the lower age limit set by the *Young Offenders Act*—age 12. Similarly, the court histories are also censored at age 18—at which time young persons are under the purview of the Adult Criminal Court system. Given these limitations, the age at first conviction in the present study is *not* used as a proxy for onset of actual offending behaviour.

6.2 Age at First Court Conviction¹⁶

Many studies consistently describe a pattern of onset which shows a sharp increase in offending activities during early adolescence, with a marked peak in the mid- to late-teen years; this is then followed by a steady decline into adulthood. Table 6.1 below, reveals that while the average age of first conviction was similar for both male and female offenders—approximately age 15—there were significant differences in the distribution of ages at first conviction between the two offender groups (Mann-Whitney $U_z = -11.98$, $p < .001$). There was a continuous increase with every year of age in the number of males who had been convicted for the first time in youth court. This onset peaked at 17 years of age, when approximately 26 percent of the male offenders received their first youth court conviction. For females, on the other hand, there was a much sharper increase in the number of first-time offenders at the younger ages and an earlier peak—which occurred at ages 15 and 16. Overall, the female pattern of first conviction, unlike that of the males, began to decline by the end of the period of observation—at age 17.

Table 6.1 also reveals that while a larger proportion of males than females were first convicted at age 12, overall, a slightly higher proportion of females were classified as ‘early onset’ offenders in the present study, with 33 percent having been convicted before the age of 15, compared to 27 percent of the males. However, for both groups, the vast majority of

¹⁶ Findings presented throughout this chapter exclude individuals who received their first youth court conviction after turning 18 years of age—2,431 (or 10%) of the male offenders and 480 (or 8%) of the female offender. As such, the number of male offenders from previous analyses ($N = 23,317$) has decreased to 20,886 offenders in the current analyses. Similarly, the number of female offenders has decreased from 6,008 to 5,528 from previous to current analyses, respectively. While these individuals—with an age of onset after 17 years of age—may have received further convictions for offences committed as young offenders, their subsequent criminal activity, for the most part, would have been processed within the adult criminal court system.

offenders—73 percent of males and 67 percent of females—were late onset offenders with their first court conviction being meted out to them between the ages of 15 and 17.

Table 6.1: Age at first conviction, by gender

Age at first conviction	Male				Female		
	N	Percentage of offenders		N	Percentage of offenders		
		% of offenders	Cumulative % of offenders		% of offenders	Cumulative % of offenders	
<i>Early onset</i>	12	695	3.33	3.33	149	2.70	2.70
	13	1,735	8.31	11.64	606	10.96	13.66
	14	3,225	15.44	27.08	1,075	19.45	33.10
<i>Late onset</i>	15	4,470	21.40	48.48	1,315	23.79	56.89
	16	5,292	25.34	73.82	1,328	24.02	80.92
	17	5,469	26.19	100.00	1,055	19.08	100.00
Total	20,886	100.00			5,528	100.00	
		$\mu = 15.36 (1.40)$			$\mu = 15.13 (1.37)$		
Mann-Whitney Uz = -11.98, p < 0.001							

When looking at age at first court conviction for specific types of offences, the gender differences noted above continue to be readily apparent. As revealed in Table 6.2 below, for each type of offence a larger proportion of female offenders, relative to their male counterparts, are classified as ‘early onset’ offenders. This is especially the case when looking at the onset patterns for “other offences” and “administration of justice offences”.

Table 6.2: Age at first conviction for each type of offence leading to conviction in an offender's court history, by gender

Age at first conviction for this type of offence	Male			Female		
	Percentage of offenders			Percentage of offenders		
	N	% of offenders	Cumulative % of offenders	N	% of offenders	Cumulative % of offenders
Offences against the person						
<i>Early onset</i>	12	2.44	2.44	39	1.88	1.88
	13	536	8.38	208	10.01	11.89
	14	1,003	15.68	452	21.76	33.65
<i>Late onset</i>	15	1,408	22.01	517	24.89	58.55
	16	1,616	25.27	501	24.12	82.67
	17	1,677	26.22	360	17.33	100.00
Total	6,396	100.00		2,077	100.00	
	$\mu = 15.74 (1.60)$			$\mu = 15.36 (1.52)$		
	Mann-Whitney Uz = -8.57, p < 0.001					
Offences against property						
<i>Early onset</i>	12	532	3.96	3.96	103	3.18
	13	1,180	8.78	12.73	389	12.01
	14	2,136	15.88	28.62	614	18.95
<i>Late onset</i>	15	2,930	21.79	50.41	749	23.12
	16	3,396	25.25	75.66	795	24.54
	17	3,273	24.34	100.00	590	18.21
Total	13,447	100.00		3,240	100.00	
	$\mu = 15.29 (1.42)$			$\mu = 15.08 (1.39)$		
	Mann-Whitney Uz = -8.01, p < 0.001					
Other offences						
<i>Early onset</i>	12	22	0.48	0.48	6	0.94
	13	129	2.84	3.33	27	4.23
	14	405	8.92	12.24	76	11.89
<i>Late onset</i>	15	821	18.08	30.32	125	19.56
	16	1,324	29.16	59.48	169	26.45
	17	1,840	40.52	100.00	236	36.93
Total	4,541	100.00		639	100.00	
	$\mu = 15.94 (1.13)$			$\mu = 15.77 (1.23)$		
	Mann-Whitney Uz = -3.02, p < 0.05					
Administration of justice offences						
<i>Early onset</i>	12	43	0.95	0.95	12	0.89
	13	248	5.49	6.44	98	7.25
	14	560	12.40	18.84	243	17.99
<i>Late onset</i>	15	991	21.94	40.79	366	27.09
	16	1,207	26.73	67.52	307	22.72
	17	1,467	32.48	100.00	325	24.06
Total	4,516	100.00		1,351	100.00	
	$\mu = 15.65 (1.25)$			$\mu = 15.36 (1.27)$		
	Mann-Whitney Uz = -7.98, p < 0.001					
Total						
<i>Early onset</i>	12	695	3.33	3.33	149	2.70
	13	1,735	8.31	11.63	606	10.96
	14	3,225	15.44	27.08	1,075	19.45
<i>Late onset</i>	15	4,470	21.40	48.48	1,315	23.79
	16	5,292	25.34	73.81	1,328	24.02
	17	5,469	26.19	100.00	1,055	19.08
Total	20,886	100.00		5,528	100.00	
	$\mu = 15.36 (1.40)$			$\mu = 15.13 (1.37)$		
	Mann-Whitney Uz = -11.98, p < 0.001					

Note: Numbers in Table 6.2 do not add to the total number of offenders in the sample because individuals may be counted in more than one offence category. For example, a female offender with 2 convictions for assault (one occurring at age 12 and one at age 14) and one conviction for failure to appear for court at age 15, would be counted once in the age 12 age-at-first-conviction group for offences against persons and counted once in the age 15 age-at-first-conviction group.

6.3 Frequency of Convictions and Age at First Conviction

Table 6.3 below, reveals, as expected, that an earlier age of conviction for both male and females had a significant impact on the overall workload experienced by the youth courts. That is, an earlier age of onset led to a larger number of convictions being recorded in the youth's court career. Both male and female youth convicted in court for the first time at age 12 had approximately twice as many convictions in their careers as did their counterparts whose first conviction was received at age 15 or later. Overall, the 5,655 male offenders who had an early onset conviction accumulated an average of 3.12 convictions, while the remaining 15,231 late onset male offenders accumulated an average of 1.69 convictions ($t = 37.92, p < .001$). Similarly, the 1,830 early onset female offenders accumulated an average of 2.44 convictions, while the remaining 3,698 late onset female offenders accrued an average of 1.48 convictions ($t = 17.54, p < .001$). This finding, however, is not overly surprising because those who began their careers at an earlier age had more time 'at risk' to accumulate more convictions. In order to explore this issue more closely, Table 6.3 also presents the annual rate of reconviction for each age at onset group. Similar to Snyder (1988: 20) and Carrington et al. (2005: 20) the annual rate of reconviction m for each age-at-first-conviction group (e.g., 12, 13, 14, etc.) is:

$$m = (n - 1) / (18 - a)$$

where n is the mean number of convictions involving the age-at-first-conviction group, and therefore $(n - 1)$ is the average number of convictions subsequent to the first one and a is the mean of the exact ages of the offenders at the time of their first convictions. The mean time

at risk (in years) is calculated by subtracting the mean of the exact ages of the offenders at the time of their first court convictions from age 18—the end of the observation period. For example, the 695 male cohort members receiving their first court convictions at age 12 were convicted, on average, of a total of 4.10 offences before their 18th birthdays and had a mean age at first conviction of 12.66 years. The annual reconviction rate for this group is:

$$(4.10 - 1) / (18 - 12.66) = 0.58$$

Findings from Table 6.3 indicate that the mean annual rates of reconviction decreased, slightly, with increasing age at first conviction for both male and female cohort members. This would suggest that early onset offenders (<15) may have been more active than late onset offenders (15+), aside from simply having more time to accumulate a larger number of court convictions.

Table 6.3: Average number of convictions and annual rate of reconviction, by gender

Age at first conviction	N	Mean number of convictions (including the 1st conviction)	Mean time at risk (in years)	Annual rate of reconviction	
Male					
<i>Early onset</i>	12	695	4.10	5.34	0.58
	13	1,735	3.42	4.44	0.55
	14	3,225	2.74	3.45	0.50
<i>Late onset</i>	15	4,470	2.12	2.49	0.45
	16	5,292	1.70	1.49	0.47
	17	5,469	1.32	0.51	0.63
Female					
<i>Early onset</i>	12	149	3.11	5.31	0.40
	13	606	2.89	4.40	0.43
	14	1,075	2.10	3.47	0.32
<i>Late onset</i>	15	1,315	1.72	2.49	0.29
	16	1,328	1.43	1.52	0.28
	17	1,055	1.23	0.52	0.44

6.4 Individual Conviction Frequencies and Age at First Conviction

The previous section examined the association between age at first conviction and the total number of convictions in the male and female court histories—confirming that early onset offenders accumulated a slightly larger number of convictions even after controlling for the time ‘at risk’. The current section examines the mean age-specific rates of conviction (age at the time of conviction) for male and female offenders with different ages of onset which highlights the *intensity* or rate of offending during a given time period (e.g. one year intervals). More specifically, Table 6.4 below, illustrates the extent to which age at first conviction, coupled with age at the time of conviction, contributes to the higher rate of convictions of early versus late onset offenders.¹⁷

First, the analysis reveals that individual court conviction frequencies are highest immediately following the age at first conviction and then slowly declines with age. Kyvsgaard (2003: 117) suggests, that this is indicative of “an inverse proportionality [which] exists between frequency and age at the time of the crime.” That is, a lower crime (or conviction) frequency is observed as age at the time of the crime (or conviction) increases. In part, this may be due to the fact that the rate of conviction may be artificially low during the year of onset because there is, generally, only half a year to accumulate convictions.

Furthermore, the calculation for each age of first conviction frequency (i.e. where age of onset and age at the time of the conviction is equivalent) includes a large number of one-

¹⁷ *Age at first conviction* refers to the age of the offender at the time of their very first conviction in youth court. *Age at the time of conviction* refers to the offender’s age at the time of the conviction. For one-time offenders, age at first conviction and age at the time of conviction will be the same. However, for example, if a repeat offender has been convicted for 3 assaults the first at age 12, the second at age 14 and the third at age 16, the age of onset (or age at first conviction) for this offender would be age 12. The age at the time of conviction would include age 12 (same as at first conviction), age 14 for the second assault and age 16 for the third assault.

time offenders who never go on to accumulate further convictions and are, therefore, not included in subsequent calculations.

Table 6.4: Average number of convictions per offender, by age at first conviction and age at the time of conviction, by gender

Age at first conviction		Age at the time of conviction					
		12	13	14	15	16	17
Male							
12	Mean	1.22	1.71	1.66	1.65	1.60	1.45
	N offenders	695	248	245	243	214	218
	N convictions	845	424	406	401	342	316
13	Mean		1.26	1.73	1.56	1.57	1.52
	N offenders		1,735	586	552	559	495
	N convictions		2,185	1,015	863	877	750
14	Mean			1.23	1.61	1.56	1.45
	N offenders			3,225	1,048	960	841
	N convictions			3,954	1,686	1,494	1,219
15	Mean				1.21	1.48	1.41
	N offenders				4,470	1,273	1,105
	N convictions				5,431	1,879	1,558
16	Mean					1.19	1.39
	N offenders					5,292	1,404
	N convictions					6,301	1,956
17	Mean						1.18
	N offenders						5,469
	N convictions						6,478
Total	Mean	1.22	1.32	1.33	1.33	1.31	1.29
	N offenders	695	1,983	4,056	6,313	8,298	9,532
	N convictions	845	2,609	5,375	8,381	10,893	12,277

Table 6.4: concluded
Average number of convictions per offender, by age at first conviction and age at the time of conviction, by gender

Age at first conviction		Age at the time of conviction					
		12	13	14	15	16	17
Female							
12	Mean	1.14	1.82	1.65	1.56	1.30	1.52
	N offenders	149	49	43	34	27	23
	N convictions	170	89	71	53	35	35
13	Mean		1.25	1.77	1.64	1.48	1.49
	N offenders		606	208	160	122	86
	N convictions		760	368	262	181	128
14	Mean			1.24	1.53	1.37	1.28
	N offenders			1,075	286	184	134
	N convictions			1,333	437	252	172
15	Mean				1.20	1.35	1.26
	N offenders				1,315	275	198
	N convictions				1,574	370	250
16	Mean					1.14	1.33
	N offenders					1,328	228
	N convictions					1,509	303
17	Mean						1.12
	N offenders						1,055
	N convictions						1,184
Total	Mean	1.14	1.30	1.34	1.30	1.21	1.20
	N offenders	149	655	1,326	1,795	1,936	1,724
	N convictions	170	849	1,772	2,326	2,347	2,072

NOTE: For each age-at-first-conviction (onset) group, Table 6.4 presents the average number of convictions at each subsequent year of age for members of that age-at-first-conviction group who were "criminally active" (i.e. had at least one conviction) at that age. For example, as indicated in Table 6.1 above and presented again in Table 6.4, 695 male offenders experienced their first youth court conviction (onset) at age 12 and experienced an average of 1.22 convictions per offender at age 12 (i.e. before their 13th birthday). Of these 695 male offenders, 248 were also handed down an average of 1.71 convictions per offender at age 13; 245 of them received an average of 1.66 convictions at age 14, etc. As well, Table 6.4 also presents the joint contribution of repeat offenders and first offenders at each individual age. For example, a total of 1,983 male offenders were convicted in youth court at age 13. This is made of 248 repeat offenders (those who had at least one conviction at age 12) and 1,735 offenders receiving their first youth court conviction at age 13.

Table 6.4 also reveals that, for both male and female offenders, the mean annual rate of convictions is slightly higher for each age group of offenders with earlier ages of onset. For example, the mean rate of convictions for 17 year old males with ages of onset of 12, 13, 14 are 1.45, 1.52 and 1.45, convictions respectively, compared to the 1.41 and 1.39 annual convictions for 15 and 16 year old onset groups. A similar pattern is also revealed for females. The mean rate of convictions at 17 years of age for female offenders with ages of first conviction of 12, 13, 14, 15 and 16 years of age are 1.52, 1.49, 1.28, 1.26 and 1.33 convictions per year, respectively.

6.5 Offences against Persons and Age at First Conviction

Beyond its association with the frequency of convictions, age of onset is also assumed to have importance and relevance to the seriousness of ongoing offending. That is, recent studies have found that individuals who were early-onset offenders were more likely than their late-onset counterparts to be involved violent crimes as their careers progressed (Kryvsgaard, 2003; Piquero et al., 2007)

Replicating the analyses presented by Piquero et al. (2007: 70) tables 6.5 and 6.6 examine the relationship between early and late onset and convictions for offences against the person. Table 6.5 reveals that, for both male and female cohort members, convictions for violent offences or offences against persons is more highly concentrated to those with earlier ages of onset. Interestingly, with the exception of 13 years of age at first conviction, a larger percentage of female offenders at each age of onset have been convicted for one or more violent offences. Furthermore, while the percentage of male offenders receiving a conviction

for violent offences appears to be dropping significantly into later onset (15 and older) the percentage of females remains at just over 40 percent.

Table 6.5: Age at first conviction, the percentage of offenders with at least one conviction for an offence against the person and the mean number of convictions for offences against the person, by sex

	Age at first conviction	Male			Female		
		N	% of offenders	Mean number of convictions	N	% of offenders	Mean number of convictions
<i>Early Onset</i>	12	695	42.6	0.69	149	47.7	0.74
	13	1,735	44.7	0.66	606	44.1	0.69
	14	3,225	40.6	0.55	1,075	45.4	0.58
<i>Late Onset</i>	15	4,470	33.6	0.42	1,315	40.2	0.46
	16	5,292	28.2	0.32	1,328	34.7	0.38
	17	5,469	23.8	0.25	1,055	27.9	0.29
Total		20,886	32.0	0.40	5,528	38.2	0.46

Similar to the patterns found with the percentage of offenders convicted of a violent offence, Table 6.5 also reveals that the mean number of convictions for offences against persons is also higher amongst those with the earlier ages of onset—ages 12, 13 and 14—relative to those with later ages. Once again, the analysis indicates that for each age of onset, female offenders have a higher mean number of violent convictions than their male counterparts.

Table 6.6 below, extends the above analysis to examine the overall relationship between early and late onset as it relates to convictions for offences against the person. The analysis of onset as a dichotomous measure confirms that there is a statistically significant difference between the percentage of early-onset males versus late-onset males convicted of violent offences ($\chi^2 = 366.5, p < 0.001$). Similarly, the difference between the percentage of early and late onset female offenders who are convicted of at least one offence against a

person also attains statistical significance ($\chi^2 = 56.1, p < 0.001$). Findings presented in Table 6.6 also reveal that early onset offenders accumulate a higher average number of violent convictions than their later-onset counterparts. For both male and female cohort members this relationship is shown to be statistically significant ($t = 22.15, p < .001$) and ($t = 10.76, p < .001$), respectively.

Table 6.6: Onset category, the percentage of offenders with at least one conviction for an offence against the person and the mean number of convictions for offences against the person, by sex

	Male			Female		
	N	% of offenders	Mean number of convictions	N	% of offenders	Mean number of convictions
<i>Early Onset</i>	5,655	42.1	0.60	1,830	45.1	0.63
<i>Late Onset</i>	15,231	28.2	0.33	3,698	34.7	0.38
Chi-square ^a (1 d.f)	366.5*			56.1*		
T-value ^b	22.15*			10.76*		

* $p < .001$

^a Continuity correction

^b Equal variances not assumed

6.6 Summary

The primary goal of the present chapter has been to examine the relationship between age at first conviction and variation in youth court careers, and more specifically, the nature and extent of the relationship between age at onset and the frequency and seriousness of subsequent convictions.

Overall, findings revealed that there was a continuous increase with every year of age in the number of offenders who had been convicted for the first time in youth court. For male offenders, this onset occurred at 17 years of age while for females there was a much sharper increase in the number of first-time offenders at the younger ages and an earlier peak—which occurred at ages 15 and 16. When looking at the various types of offences leading to conviction, similar patterns of onset were revealed. A larger proportion of females were identified as ‘early-onset’ offenders relative to their male counterparts.

Analyses in the current chapter also indicated, as expected, that an earlier age of conviction for both male and females had a significant impact on the overall workload experienced by the youth courts. That is, a larger number of overall convictions were recorded by both male and female offenders who were first convicted before 15 years of age—suggesting that the younger an individual was at the time of their first offence, the higher the propensity to receive further youth court convictions. This relationship between age at first conviction and subsequent convictions held even after controlling for the amount of time ‘at risk’ was taken into account—that is, the shorter time to receive convictions before their 18th birthday for those who received their first convictions at later ages.

The present chapter also identified two distinct patterns related to the mean annual rate of convictions for male and female members of the 1979/80 cohort. First, analyses indicated that for each group of offenders with the same age at first conviction, the mean annual rate of conviction was highest immediately following their first conviction and then declined slowly to the age of 17. Second, it was also found that the mean annual rate of conviction for each age group was consistently higher for offenders with earlier ages at first conviction.

The latter analyses in the chapter elaborated on the nature of the relationship between age at first conviction and seriousness of subsequent convictions in the court careers of the persons under study. It was found that convictions for violent offences or offences against persons were more highly concentrated to those with earlier ages of onset. While this was true for all offenders, this relationship was more evident for female members of the cohort under study. Furthermore, early onset offenders were not only more likely to have received a conviction for a violent offence, but were also more likely to have accrued more of these types of offences relative to their later-onset counterparts.

Overall, evidence has been presented which clearly highlights the relationship between age at first conviction and frequency and seriousness of subsequent convictions in the youth court career. However, as Kyvsgaard (2003) has highlighted in her own analyses, this relationship is “far from perfect”. While age at the time of first conviction certainly plays a role in understanding overall conviction frequencies, age itself at the time of the conviction is also necessary to ‘complete the picture’.

Chapter 7

Specialization and Versatility

7.0 Introduction

As already defined above, the criminal career “...is a characterization of the longitudinal sequence of crimes committed by an individual offender...[which] isolates the onset, the recurrence, and finally, the termination of criminal activity during an individual's lifetime” (Blumstein, Cohen, Das, and Moitra, 1988: 304). The present chapter will focus squarely on the ‘recurrence’ component of the criminal career and, more specifically, the patterns of specialization and versatility in the offences which led to the court convictions of the 1979/80 birth cohort members.

Kyvsgaard (2003) suggests that inquires examining patterns of specialization in offending date back to over 70 years to early work such as Sutherland's study of the professional thief. Since that time, numerous investigations have been carried out to confirm the existence of a general propensity for offenders to repeat the same offence or offence type during successive criminal events (*specialization*) versus the possibility of versatility or diversity—offending which spans a wide variety of different crimes or crime types.

7.1 Specialization in Offending and Prior Research

Research-to-date examining the issue of specialization in offending has not only yielded inconsistent findings, but has also been characterized by a number of debates over its presence or occurrence. The debates, in part, have surrounded the offence classifications used in the analyses along with the various methods for measuring and calculating the patterns of transition. Le Blanc and Fréchette (1989) suggest that much of the confusion surrounding the study of specialization is strictly due to varying operational definitions used within the criminological research—in particular, the restrictive or limited formulation of crime categories.

The seminal work of Wolfgang, Figlio and Sellin (1972) is a noteworthy starting place to address prior research findings in the area of offence specialization in criminal careers. Utilizing transition matrices the researchers examined transition probabilities from the first to the ninth police contact for the 9,945 boys in the Philadelphia birth cohort. While some specialization was found among offenders, overall the probability of being charged with the same offence for consecutive contacts appeared to be less than the probability of being charged with a different offence. Ultimately, the researchers concluded that there “...is practically no evidence to support a hypothesis of the existence of specialization among juvenile offenders” (Wolfgang et al., 1972: 254). Offence specialization was also examined by Tracy and his associates (1990) in their subsequent replication study using two separate Philadelphia birth cohorts—those born in 1945 and 1958. Once again, using transition matrices, the authors found that the most likely transition observed for both cohorts

was to a non-index offence regardless of the type of prior offence.¹⁸ However, the authors did note that the tendency to specialize—where like-offences were repeated—was found to be slightly stronger for the 1958 cohort. The authors further concluded that the evidence in support of some levels of specialization became more pronounced as the number of offences increased. That is, there was stronger evidence of specialization for recidivists as opposed to occasional delinquents who had few contacts with police. The various studies conducted by Wolfgang and his associates used a fairly straightforward approach to the study of specialization whereby the probability of the same type of offence at k and $k + 1$ was determined simply by $P = O/R$, where O is the observed value and R is the row total in the transition matrix—for example, the transition probabilities methodology outlined by Goodman (1962). Specialization would, therefore, be indicated by the probabilities along the diagonal cells of a matrix where the same type of offence would be repeated.

Using similar techniques as Wolfgang and his associates, Snyder (1988) examined patterns of offence transition in juvenile court careers from Utah and Maricopa County, Phoenix. Evaluating the joint impact of the number and nature of prior court referrals on subsequent referrals, matrices were presented for the first to the ninth transitions (Snyder, 1988: 49). Findings from the analyses showed “some degree” of specialization in offence contingencies up to the sixth court referral at which time a pattern of variability was more readily discernable. In summary, Snyder (1988: 54) concluded that,

...the study of juvenile court referral offense patterns presents a picture of officially recognized delinquency which progresses from less to more serious

¹⁸ In the US, the FBI’s uniform crime index is composed of a specific set of crimes which serve as a gauge of the scope and level of crimes occurring across the country. The eight index crimes are: criminal homicide, forcible rape, robbery, aggravated assault, burglary, larceny-theft, motor vehicle theft and arson. All other crimes outside of these categories are considered ‘non-index’ (Uniform Crime Reporting Program, 2004).

behaviours in which the youth specializes in various types of behaviour as their career unfolds.

While providing a strong foundation upon which future criminological research could be built, the measurement of specialization using raw probabilities has often been criticized for being over simplistic. For example, Bursik (1980: 855) took the position that, “transition probabilities in themselves do not constitute the proper focus of testing the specialization hypothesis”. Alternatively, Bursik supported the use of a ratio of the observed frequency to the expected frequency in the repetition of similar offences which he said would “turn up evidence of more specialization than one would randomly expect” (Bursik, 1980: 855). To statistically evaluate any observed deviations from the expected values, Bursik proposed the use of *adjusted standardized residuals* (ASR) which was first developed by Haberman (1973). The ASR would be used to assess whether the observed value in each cell of the transition matrix significantly departed from independence. The form of the ASR is represented as follows:

$$ASR = \frac{O - E}{\sqrt{R * C * (1 - (R/T)) * (1 - (C/T)) / T}}$$

(Bursik, 1980: 858)

where, O =observed frequency, E =expected frequency, R =row total, C =column total, and T =total number of cases. In his study of serious juvenile offenders in Cook County, Illinois Bursik (1980: 860) employed the use of the ASR methodology and concluded that,

...although the transition probabilities indicate that specialization in most offense types is not typically a dominant feature of a youth's offense history, the residual structure of the matrices shows definite evidence of some specialization tendencies for the white and nonwhite samples.

However, he did go on to note that as enlightening as stochastic models may be, they were still not completely satisfying in their application toward the concept of offending specialization and "...still leaves the dynamic study of delinquency in a very rudimentary position" (Bursik, 1980: 860).

More recently, Carach and Leverett (1999) utilized ASRs in their examination of offence specialization among juvenile offenders in New South Wales. Using matrices constructed from data on consecutive court appearances, the authors used ASRs to assess the statistical significance of transition patterns for seven different offence categories over five conviction transitions. Overall, patterns of both stability and versatility were found within the study, however, it was concluded by the authors that "...while violent and motor vehicle offenders tend to remain specialists over the course of their delinquent careers, the versatility of juveniles sentenced for the remaining offences tends to increase over time" (Carach and Leverett, 1999: 4).

Although the enhancement to the analysis of conditional turnover tables by Bursik is widely used in the study of specialization, it has also been equally criticized—primarily for its dependency on sample size (Farrington et al., 1988; Kempf, 1987; Kyvsgaard, 2003). That is, some researchers argue that transition probabilities may reflect changes in the sample size within each individual matrix as opposed to true changes in individual offending. For example, low-volume offences such as homicide are likely to have higher observed-expected ratios than more frequent or high-volume offences (e.g. theft or mischief) because their expected values tend to be very low. To overcome this limitation, and to more accurately examine patterns of transition which are independent of sample size, Farrington et al. (1988)

posited the *Forward Specialization Coefficient* (FSC). Also based on the use of transition matrices, the FSC focuses on the diagonal elements within the matrices and yields a value which ranges from 0 to 1—with 0 indicating total versatility and 1 representing total specialization. The FSC may be represented as follows:

$$FSC_{jk} = (O_{jk} - E_{jk}) / (R_j - E_{jk})$$

(Farrington et al., 1988)

where, O_{jk} is the observed number of cases occupying cell jk , E_{jk} is the number of cases that could be expected to fall into cell jk by chance alone, and R_j is the total number of cases in row j . As with the ASR, the FSC is also used as a measure of specialization for adjacent career transitions, the transition from k to $k + 1$, in a forward direction (Farrington et al., 1988: 473).

Farrington and his colleagues used the *FSC* to advance knowledge of offending specialization by analyzing official court records for a sample of 70,000 juvenile offenders from the state of Utah and from Maricopa County, Phoenix. The authors reported findings which suggested much more versatility amongst offenders than that which was previously reported in the criminological literature and concluded that “there was a small but significant degree of specialization in offending superimposed on a great deal of versatility” (Farrington et al., 1988: 483). This degree of specialization was mostly found amongst the most persistent of offenders (those with ten or more court referrals) and for specific types of offences—mostly liquor, drug and robbery offences. This modest degree of offence specialization within broad (non-violent) categories of crime among offenders with extensive

criminal histories has been supported throughout the American literature (Blumstein et al., 1988; Blumstein et al., 1986; Britt, 1996; Britt, 2000; Piquero, 2000).

Kyvsgaard (2003) reported various findings surrounding the issues of specialization and versatility in the types of offences committed by offenders in Denmark. Highlighting the need for breadth of the applied categories in specialization research, Kyvsgaard (2003: 147) reported that, “if only three categories are applied, then almost 90% of those offenders who have committed at least nine offenses have committed more than half within the same category.” In contrast, when 73 categories were used in the analysis, this figured dropped to approximately 25 percent of the offenders committing more than half of their offences within the same category. The study by Kyvsgaard utilized both the ASRs and the FSCs to evaluate patterns of transition in the Danish court data. Overall, the tendency toward specialization was observed to be greatest for sexual offences. Conversely, the tendency toward specialization was lowest for impaired operations offences and for some thefts. Furthermore, specialization was also found to be more common among females than males and among older versus younger offenders. Overall, mixed results were observed from the various analyses and Kyvsgaard (2003: 166) concluded that, “the criminal career is characterized by neither total specialization nor total versatility in type of offending. A tendency toward specialization exists side by side with a tendency toward versatility.”

Despite its popularity of use in studies of offence specialization, one clear limitation of the FSC is that it is limited to an examination of adjacent transitions in the criminal career. Recent studies by Piquero, Paternoster, Mazerolle, Brame and Dean (1999) and Mazerolle, Brame, Paternoster, Piquero and Dean (2000) have attempted to address this limitation by the use of the *Diversity Index* in their examination of specialization—an index derived by

Agresti and Agresti (1978) in their study of species diversity. According to the authors, the value of d_i is given by the following formula:

$$d_i = 1 - \sum_{m=1}^M p_m^2$$

(Mazerolle et al., 2000: 1154)

where the diversity index for a particular individual (d_i) is calculated as a proportion of the individual's offences (p_m) which are contained within the different offence categories $m = 1, 2, \dots$ and where M offending categories are identified (Mazerolle et al., 2000: 1154; Piquero et al., 1999: 286).¹⁹ Measures derived from the diversity index range from 0 to 1, where 1 indicates complete diversity or no specialization. As well, the authors also note that the maximum possible value for offending diversity depends on the number of offence categories used in the analysis. As such, the maximum diversity index is given by:

$$d_{\max} = (k - 1) / k$$

(Mazerolle et al., 2000: 1154)

where k equals the number of offence categories. Unlike findings derived from the use of the *ASR* or *FSC*, the diversity index allows researchers to, "... locate the measurement of specialization at the individual level" (Piquero et al., 1999: 286) which, it has been argued, is the most appropriate operationalization of specialization when applying a life-course

¹⁹ See *Section 7.3* below for further details on the calculation of the diversity index.

approach to the study of crime (Mazerolle et al., 2000; Sullivan, McGloin, Pratt, and Piquero, 2006).

Using data from the second Philadelphia birth cohort study, Piquero et al. (1999) tested various predictions regarding the relationship of age at first offence (onset) and specialization based on theoretical propositions posited by Moffit (1993) and Gottfredson and Hirschi (1990). More specifically, using the *FSC* and *Diversity Index* methodology, Piquero and his colleagues tested the hypothesis that age-at-onset was inversely related to offence versatility—that is, offenders who initiated their offending earliest would show higher levels of offending versatility. *FSCs* computed for each age of onset category revealed that, “...an earlier age of onset is marked by fairly small *FSCs* (little specialization), whereas later ages of onset are marked by higher values of the *FSC* (greater specialization)” (Piquero et al., 1999: 287). Results from the offending diversity index and age-at-onset analysis yielded similar results in support of the theoretical propositions advanced by Moffit and Gottfredson and Hirschi. However, when the authors controlled for age—by examining the most common offending ages for each age-of-onset group—the earlier inverse relationship between onset age and versatility disappeared. As such, the authors concluded that, “versatility differences between onset age groups have more to do with the effects of age itself than they do with the onset age” (Piquero et al., 1999: 294).

Mazerolle et al. (2000) extended their earlier work through an examination of the interaction between gender and age at onset and its relationship to offending specialization. Once again, using *FSCs* and the *Diversity Index*, the authors tested various predictions put forward by Moffit and Gottfredson and Hirschi. Results from the analyses did lend support to the notion that, “...offenders who begin their offending behavior early in the life course

and persist into adulthood exhibit more diverse and versatile offending patterns than those who do not” (Mazerolle et al., 2000: 1167). However, the authors did not find support for their anticipated hypothesis that males would be more versatile in their persistent offending than females. Their results found that males and females did not differ statistically—or substantively—in their levels of offending versatility over the first five offending transitions examined.

A recent Canadian study by Carrington, Matarazzo and deSouza (2005) also examined the issue of specialization/versatility in the mix of offences referred to court for the 1979/80 birth cohort currently under study. Using all charges related to the case being referred to court of the entire population of offenders, the authors found that approximately two thirds were considered “specialists”. When their analyses were restricted to repeat offenders only—those with two or more referred incidents in their careers—the reverse was found. Approximately one-third of the offenders were considered “specialized” while the remaining two-thirds exhibited versatility in the offending which led to their court referrals. This proportion of specialists, however, decreased sharply as the number of incidents in the career increased, which lead the authors to conclude that,

...this pattern suggests that versatility and specialization in offending are not so much the expression of tendencies on the part of offenders, but simply a result of the volume of criminal activity: the more incidents, the less likely that they will be limited to one type (Carrington et al., 2005: 30).

Similar to the findings by Mazerolle et al. (2000), the authors found that female repeat offenders were more likely to be specialized than males and that while the proportion of

specialized offenders increased with age at onset, they indicated that, “this may simply be a result of the fact that the number of (referred) incidents in the career decreases with age of onset...and specialization has an inverse relationship with the number of referred incidents (Carrington et al., 2005: 31).

Overall, since the original work by Wolfgang and his associates, researchers appear to have found very weak evidence in support of specialization in offending, but rather, have found that many offenders engage in a variety of criminal behaviour over successive criminal events. In keeping with the extant criminal career research, two specific research questions addressing the issue of specialization and versatility are examined herein: *What is the nature of the relationship between consecutive offences leading to convictions in court careers of the 1979/80 birth cohort?* and, *what is the relationship, if any, between gender and age at first conviction and offending specialization/versatility?*

7.2 Specialization and Versatility in Court Convictions²⁰

As discussed above, *specialization* is the general tendency for individuals to repeat the same offence or offence type during successive criminal events. In the first part of this chapter, a *specialist* is a repeat offender whose court career contains convictions for only one category of offending. Conversely, a *versatile* offender is one whose offences leading to conviction fall within more than one offence category. Later in the chapter, individuals are

²⁰ Findings throughout this chapter utilize a subset of offenders from the 1979/80 birth cohort who had two or more convictions since issues related to specialization and versatility are not considered relevant for those with only one conviction in their court histories. Furthermore, in order to properly evaluate the relationship between specialization/ versatility and age-at-first conviction, individuals who received their first youth court conviction after turning 18 years of age were also excluded from the analyses. In total, 7,760 males and 1,396 females met the criteria for inclusion in the analyses.

not assigned to one category or the other, but are given a score indicating how specialized or versatile their career is.

As Mazerolle et al. (2000: 1155) indicate, “at present, there is no consensus in the field regarding the appropriate number of categories in studying specialization”. However, as the authors further note, increasingly researchers are using three broad categories to assess specialization—including violent, property and other offences—which allows an analysis that is meaningful and at the same time fairly straightforward (Mazerolle et al., 2000: 1155).²¹

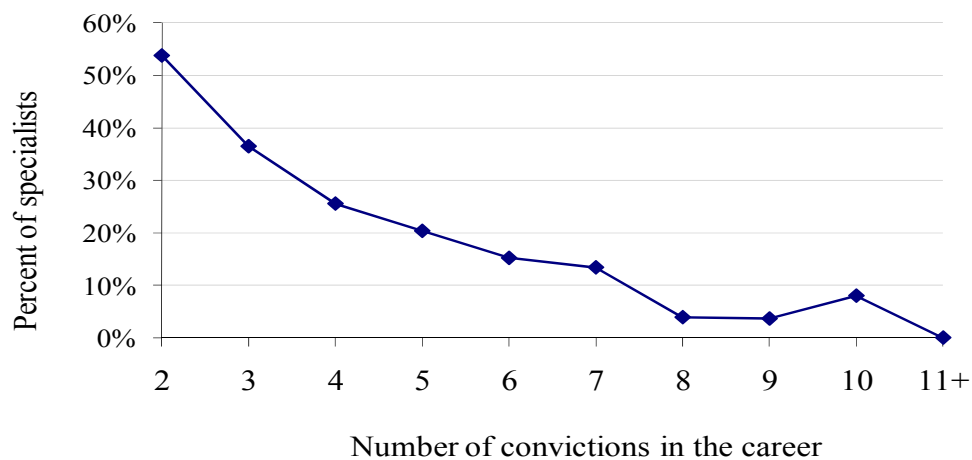
As discussed above, a consistent finding within the criminological literature is that specialization has an inverse relationship with the number of events in one’s criminal history—as with the decreased likelihood of obtaining only a *head* with each subsequent flip of a coin, one would expect the likelihood of specialization in offending to decrease in a similar fashion. Consistent with earlier findings by Carrington et al. (2005) Figure 7.1 below reveals the strong relationship between the number of convictions in a young person’s court history and specialization in the offences which led to their convictions.

Fifty-four percent of the offenders with two convictions in their court histories are considered specialists in one category of offending. The proportion of offenders who are considered specialists decreases rapidly with the number of offences leading to convictions and is especially pronounced from two to eight convictions: the proportion of specialists dropping from 54 percent to 4 percent. By the time offenders have accumulated 11 or more convictions in their criminal histories, there are no longer any offenders who can be

²¹ In keeping with previous research on specialization, the current study excludes offences against the administration of justice (e.g., failure to appear, breach of probation, failure to comply with order, etc...).

classified as specialists.²² Similar to the conclusions drawn by Carrington et al. (2005) this pattern would suggest that specialization and versatility in the offences leading to conviction may not only reflect tendencies on the part of offenders, but rather, they may simply be reflective of the volume of convictions.

Figure 7.1: Percentage of offenders with only one type of offence leading to their convictions (specialists), by the number of convictions in their career



Similar to the early work by Wolfgang and his associates, Table 7.1 below reports diagonal or transitional probabilities of being convicted for the same type of offence for the first four transitions—from the first to the fifth conviction—in the court histories of the 1979/80 birth cohort members.²³ A comparison of the diagonal probabilities indicates that, overall, those convicted of property offences exhibit significantly more specialization in offending in comparison to their violent or “other” offender counterparts.

²² Results for the percentage of specialists with 8 or more convictions, in Figure 7.1, should be viewed with caution given the diminishing number of individuals in these groups (N=77 for those with 8 convictions, N=55 for those with 9 convictions, N=25 for those with 10 convictions and N=23 for those with 11 or more convictions).

²³ The number of birth cohort members diminishes significantly with each subsequent offence leading to conviction, therefore, it is necessary to limit the number of offences to 5 in order to ensure adequate numbers for the various specialization comparisons—particularly those involving gender comparisons.

Table 7.1: Diagonal probabilities for the first j conviction transitions, by the offence leading to conviction

Diagonal probabilities for each of the first j conviction transitions					
Offence category leading to conviction at each of the first j conviction transitions	$j = 1$	$j = 2$	$j = 3$	$j = 4$	Mean $j = 1$ to $j = 4$
Offences against persons	0.36	0.37	0.42	0.33	0.37
Offences against property	0.69	0.67	0.68	0.68	0.68
Other offences	0.24	0.21	0.19	0.16	0.20

Sample size at each of the first j conviction transitions				
Offence category leading to conviction at each of the first j conviction transitions	$j = 1$	$j = 2$	$j = 3$	$j = 4$
Offences against persons	2,297	952	519	272
Offences against property	5,880	2,768	1,350	727
Other offences	979	447	234	102
<i>Total</i>	<i>9,156</i>	<i>4,167</i>	<i>2,103</i>	<i>1,101</i>

As revealed in Table 7.1, at each transition approximately 68 percent of property offenders are convicted for a subsequent property-related offence while just over one-third (37 percent) of violent offenders and one-fifth of those convicted of “other” offences were convicted of similar offences at each transition. While the likelihood of repeating a property-related offence appears to be consistent across transitions, this is not the case for the remaining offence categories. That is, the probability of being convicted for a repeated offence against the person occurs slightly later in the court history—between the third and fourth convictions—while for offenders convicted of “other” offences the likelihood of being convicted for a similar-type offence is highest immediately in the career—that is, in the first transition or between the first and second convictions.

As stated previously, the drawback of analyses based on raw transition probabilities (as in Table 7.1) is that they are affected by the marginal distribution of the categories of offences. For example, for this subset of offenders, 63% of the 25,683 total convictions they accumulated over their first 5 convictions are for property-related offences, while offences against persons and “other” offences accounted for the remaining 25% and 12%, respectively. Thus, the higher probability of specialization (i.e. repeating the same offence) among property offenders may simply reflect the high proportion of property-related convictions. This weakness of analyses based on raw transition probabilities motivates the use of the *forward specialization coefficient (FSC)*, which compares observed and expected probabilities.

Table 7.2 below, provides the FSCs for transitions within the same category of offence. As indicated earlier, the FSC can vary from 0 to 1, where 0 indicates complete versatility or diversity in offending and 1 indicates complete specialization. As revealed in Table 7.2, none of the offence categories are characterized by either complete specialization or complete versatility at any point in cohort members’ court histories. However, with the exception of the last transition for those convicted of “other” offences (where $FSC = 0.02$), the findings do indicate that the proportion of offenders convicted for a similar offence type on a subsequent conviction is significantly greater than being convicted for a different offence. While these findings—for each transition and for each offence—do meet the threshold for statistical significance, they can be seen as weak at best.²⁴ That is, for each

²⁴ The adjusted standardized residuals (*ASR*) are assessed for each cell in the table to determine statistical significance. According to Bursik (1980) the *ASR* is normal distributed, where values represent variance from a mean of 0. As such, as Fisher and Ross (2006: 156) suggest, a value greater than 2 would indicate statistical significance at the .05 level. Alternatively, as Kyvsgaard (2003: 162) highlights, the rule of thumb is that an FSC value under .10 would indicate that the number of individuals repeating the same offence is non-significant. Although two transitions in the table reveal FSC values of .09, their ASR values of approximately 4.0 would suggest statistical significance.

transition there is only a slightly greater likelihood of being convicted for the same offence on a subsequent conviction than based on chance alone.

Table 7.2: Forward specialization coefficients for j conviction transition, by the offence leading to conviction

Forward specialization coefficient for each of the first j conviction transitions					
Offence category leading to conviction at each of the first j conviction transitions	$j = 1$	$j = 2$	$j = 3$	$j = 4$	Mean $j = 1$ to $j = 4$
Offences against persons	0.16	0.16	0.21	0.13	0.16
Offences against property	0.15	0.13	0.15	0.12	0.14
Other offences	0.12	0.09	0.09	0.02	0.08

Sample size at each of the first j conviction transitions				
Offence category leading to conviction at each of the first j conviction transitions	$j = 1$	$j = 2$	$j = 3$	$j = 4$
Offences against persons	2,297	952	519	272
Offences against property	5,880	2,768	1,350	727
Other offences	979	447	234	102
<i>Total</i>	<i>9,156</i>	<i>4,167</i>	<i>2,103</i>	<i>1,101</i>

Table 7.2 above, also reveals clear fluctuations in the *FSC* values for offences against persons and similarly for offences against property. This indicates that there is no clear tendency to repeat a similar type offence—as the one most recent offence leading to conviction—as more convictions are acquired in the court history. Conversely, for the category of “other” offences, it is clear that a tendency toward less specialization—or more diversity—in offending occurs with additional court convictions; almost reaching complete diversity ($FSC = 0.02$) by the fourth transition.

7.3 Gender and Specialization

Thus far, diagonal probabilities and FSC values have provided an assessment of specialization of the first four conviction transitions in the court histories for the cohort members under study; emphasizing the intersection between like offences along the diagonal. However, two clear limitations of these measures are easily discernable. First, they can only be calculated at the group level—that is they do not provide an individual measure of specialization or versatility but rather only the probabilities associated with, for example, categories of offences. Secondly, they only provide measures of specialization based on patterns derived from adjacent convictions in the career—those that come immediately before or immediately after another. As indicated earlier (see section 7.1, above), one measure recently utilized in the criminological research which overcomes both of these shortcomings, is the *Diversity Index* which “...unlike the FSC directly captures the overall amount of offending versatility that each individual exhibits” (Mazerolle et al., 2000: 1154) and, “...unlike a transition matrix, does not consider the order of offenses when determining specialization” (Sullivan et al., 2006: 209).

In Table 7.3 below, the offending diversity of male and female members of the cohort is compared, using values of the diversity index calculated in a stepwise fashion over an increasing numbers of convictions: the first 2 convictions in the career ($k = 2$), the first 3 convictions ($k = 3$), etc. The reason for controlling for the number of convictions (k) in this way is that the value of the diversity index is sensitive to the number of observations (convictions) over which it is calculated: it tends to get larger as the number of observations (convictions) increases. Due to the decreasing numbers of persons—particularly female

cohort members—with higher numbers of convictions in their careers, 5 is the maximum number of convictions that can be examined in this way. As noted above, the formula for the value of the diversity index for individual i , calculated over k convictions, is:

$$d_i = 1 - \sum_{m=1}^M p_m^2$$

where, m indexes offence categories, M is the number of offence categories (which is always 3 in this study) and p_m is the proportion of the individual's k convictions which are in offence category m . In theory, the diversity index ranges in the limits from 0 to 1, with a value of 0 representing complete specialization (Mazerolle et al., 2000; Piquero et al., 1999). However, the maximum value of the diversity index is related to the number of observations (convictions) as well as the number of offence categories: $d_{max} = (q - 1)/q$, where $q = \min(M, k)$, where M is the number of offence categories, and k is the number of convictions, over which the index is being calculated. Since the number of offence categories in this study is fixed at 3, the maximum value of d varies with the number of convictions being considered: $d_{max} = 0.5$ if $k = 2$ and $d_{max} = 0.67$ if $k = 3$. For 4 or 5 convictions, d_{max} is limited to 0.67 because there are only 3 offence categories. For example, if a person has received 5 convictions, all of which were for offences committed against property, the offender would be considered a specialist and their diversity index score would be calculated as follows:

$$d_1 = 1 - \{(1.0)^2 + (0.0)^2 + (0.0)^2\}$$

$$d_1 = 1 - \{(1.0) + (0.0) + (0.0)\}$$

$$d_1 = 1 - 1$$

$$d_1 = 0$$

Similarly, the diversity index for a second person who has received 5 convictions, including 3 for offences against the person, 1 for an offence against property and 1 conviction for an ‘Other’ offence, their diversity index score would be:

$$d_2 = 1 - \{(0.6)^2 + (0.2)^2 + (0.2)^2\}$$

$$d_2 = 1 - \{(0.36) + (0.04) + (0.04)\}$$

$$d_2 = 1 - 0.44$$

$$d_2 = 0.56$$

Given the number of convictions and the different types of offences committed by the second offender, he or she shows a strong tendency toward the specialization end of the specialization-versatility continuum—recalling that the maximum diversity index score would be .67 when there are only three offence categories.²⁵

Results comparing gender and diversity in offending can be found in Table 7.3, below. For both male and female offenders, the level of diversity in offences which have led to conviction increases slightly with each subsequent conviction. That is, as both groups moves forward in their criminal career the likelihood of specializing in only one offence type

²⁵ It should be noted that diversity index values could be standardized by dividing d by its maximum value given by $(k-1)/k$ in order to return it to a 0-1 bounded index. For example, a diversity index value of .56, in the second example, could be divided by its maximum value of .67 to produce a standardized value of .84. As Agresti and Agresti (1978) point out, when comparisons are being made between groups with the same number of categories, either measure is appropriate. However, in the present study, the differing number of offences and categories limits the use of any standardization and the unadjusted measure of diversity is considered desirable. For a full discussion of the advantages and disadvantages of standardization of the diversity index, please see Lieberman (1969: 860-861).

diminishes. Furthermore, considering the offences leading to the first two convictions up to the first five, there are no significant—or substantive—differences in the offending diversity between male and female members of the 1979/80 birth cohort.²⁶ While this finding is somewhat unexpected given male offenders’ more substantial involvement in persistent criminal behaviour, it is to be found is consistent with previous research by Piquero et al. (1999) and Mazerolle et al. (2000). Researchers in both previous studies found that males and females did not differ, statistically, in their respective levels of offending specialization across a similar number of offending transitions.

Table 7.3: Diversity index for the first k convictions, by sex

First <i>k</i> convictions	Maximum <i>d</i> value	Male		Female		$\chi^2_{(1)}$
		<i>d</i>	<i>N</i>	<i>d</i>	<i>N</i>	
<i>k</i> = 2	.50	0.22	7,760	0.23	1,396	3.71
<i>k</i> = 3	.67	0.29	3,665	0.30	502	0.83
<i>k</i> = 4	.67	0.32	1,899	0.33	204	0.02
<i>k</i> = 5	.67	0.34	999	0.37	102	1.15

* *p* < .05

²⁶ Consistent with prior research (see Mazerolle et al., 2000; Piquero et al., 1999; and Sullivan et al., 2006) nonparametric Kruskal-Wallis χ^2 tests are used to assess statistical significance in the bivariate analyses. The use of a nonparametric test is suggested where diversity index scores are not normally distributed.

7.4 Age at First Conviction and Specialization

Table 7.4 below, shows the relationship between diversity in offending and the type of offender, characterized by his or her age at onset.²⁷ Similar to the earlier results concerning the comparison between offending diversity and gender, it appears that both early onset offenders and their late-onset counterparts exhibit a tendency toward more diversity as their court careers progress.

The index of diversity in offending for both early and late onset offenders for the offences leading to their first and second convictions was found to be .22 while their diversity scores by the fifth offence was .34 and .36, respectively. This finding, however, is not completely unexpected. As already presented above, there is a strong inverse relationship between the level of offending specialization and the number of repeated court convictions—as the number of convictions increase, it would be expected that diversity in offending would also increase. However, late onset offenders are slightly more diverse in their offending at all stages of the career after the first 2 convictions, and up to the first 5 convictions. The difference is found to be statistically significant for the first 3 and first 4 convictions, but becomes non-significant for the first 5 convictions, as the population of offenders becomes relatively small.

²⁷ In the present analyses, early onset offenders are defined as those cohort members experiencing their first youth court conviction up to and including the age of 14. Consequently, late onset offenders are those whose first youth court conviction was received between the ages of 15 and 17 years of age.

Table 7.4: Diversity index for the first k convictions, by onset category

First <i>k</i> convictions	Maximum <i>d</i> value	Early Onset		Late Onset		$\chi^2_{(1)}$
		<i>d</i>	<i>N</i>	<i>d</i>	<i>N</i>	
<i>k</i> = 2	.50	0.22	3,982	0.22	5,174	1.97
<i>k</i> = 3	.67	0.28	2,360	0.30	1,807	6.83*
<i>k</i> = 4	.67	0.32	1,444	0.34	659	6.30*
<i>k</i> = 5	.67	0.34	857	0.36	244	1.20

* $p < .05$

Contrary to prior research which has identified, “...an inverse relationship such that individuals with a first conviction at an earlier age will tend to have engaged in many more different kinds of offenses than those experiencing a first conviction at a later age” (Piquero et al., 2007: 71) results in the current study indicate that late-onset, as opposed to early-onset, offenders are slightly more likely to engage in ‘crime mixing’ as their careers progress. The difference between the results reported here and, for example, those reported by Piquero, Farrington and Blumstein, is probably due to the fact that their comparison of early- and late-onset offenders did not control for the number of offences (convictions) in the careers, as Table 7.4 (above) does.

7.5 Gender, Age at First Conviction and Specialization

The previous sections presented main effect comparisons of offending diversity with two sub-groups of cohort members—contrasting gender and age at first conviction separately. The current section examines the interaction between gender and age at first

conviction by comparing across levels of offending diversity for four specific groups: early onset males, late onset males, early onset females and late onset females.

Table 7.5: Diversity index for the first k convictions, by sex and age at onset category

First k convictions	Maximum d value	Males				Females				$\chi^2_{(3)}$
		Early Onset		Late Onset		Early Onset		Late Onset		
		d	N	d	N	d	N	d	N	
$k = 2$	.50	0.22	3,254	0.22	4,506	0.22	728	0.25	668	7.73*
$k = 3$	.67	0.28	2,014	0.30	1,651	0.29	346	0.33	156	9.24*
$k = 4$	.67	0.32	1,276	0.34	623	0.32	168	0.39	36	7.08
$k = 5$	.67	0.34	769	0.35	230	0.36	88	0.41	14	2.86

* $p < .05$

Table 7.5 above, reveals that some statistically significant differences ($p < 0.05$) in the diversity of offending which has led to the convictions of the various cohort members when controlling for gender and the age of onset category (early vs. late). At each stage in the career ($k=2$ through $k=5$), late onset female offenders exhibit higher levels of diversity in offending in comparison to their male and early-onset female counterparts. The difference is found to be statistically significant for the first 2 and first 3 convictions, but becomes non-significant for the first 4 and 5 convictions, as the population of offenders becomes relatively small. Contrary to previous research which has identified a greater tendency for female offenders to specialize in offending as their criminal careers progress, findings from the subgroup comparisons indicate that female offenders share similar offending tendencies as male offenders in the 1979/80 birth cohort. More specifically, the interaction between gender and age at first conviction, in their effect on diversity in offending, would suggest that late-onset

females are slightly more likely to have switched from one offence type to another at various stages in their court careers.

7.6 Summary

The primary goal of the present chapter has been to examine the patterns of specialization and versatility in the offences which led to the court convictions of the 1979/80 birth cohort members and, more specifically, the nature and extent of the relationship between gender, age at first conviction and these patterns of offending over the course of their court career.

Several methods of analysis were used. The first analysis (Figure 7.1) simply classified each offender's court career as versatile or specialized, and examined changes in the proportion of specialized careers as the number of convictions in the career increased. Consistent with other research, it found that specialization decreases as the number of convictions increases. Examining individual transitions between pairs of adjacent convictions in the career (Table 7.1), it was found that individuals convicted of a property offence are much more likely to be convicted of the same offence at the next conviction (i.e. to be specialized). However, this method of analysis does not control for the frequency of each type of offence. Analysis of transition probabilities using the forward specialization coefficient (Table 7.2) found that those convicted of property offences exhibited significantly more specialization in offending in comparison to their violent or "other" offender counterparts. However, findings also revealed a strong inverse relationship between the number of events in one's court career and specialization—that is, as the number of

convictions in the court history increased, the likelihood of specialization in offending decreased.

Use of the *diversity index* as a measure of individual-level versatility in offending allowed for the examination of multiple offences which led to conviction—without concern for the ordering of these convictions—and allowed for specific sub-group comparisons. Contrary to expectation, but consistent with previous research, the diversity index revealed that, overall, male and female cohort members were much more alike in their levels of versatility of offending and, as the court careers progressed from the second to the fifth conviction, females even showed a slightly greater tendency toward ‘crime mixing’.

In a similar vein, the *diversity index* was also used to assess the relationship between ages-at-first conviction and offending patterns—and, once again, yielded unexpected results. It was found that late-onset offenders—particularly when they had accumulated 3 or 4 convictions in their court careers—were more likely than their early-onset counterparts to show versatility in the offences which led to their convictions. Some previous research had established the overall expectation that, “individuals who experience an earlier onset tend to have much longer criminal careers than individuals who experience a later onset and to also have engaged in many more—and more kinds of—offenses throughout their careers” (Piquero et al., 2007: 69). However, controlling for the number of offences (convictions) in the careers, as in the analyses presented in this chapter, helps reduce the potential confounding effect which frequency of offending may have on the relationship between age-of-onset and patterns of offending found in previous research.

Finally, analyses were conducted which examined the interaction between gender and age at first conviction by comparing across levels of offending diversity for four specific

groups: early onset males, late onset males, early onset females and late onset females. Consistent with the earlier findings presented above, *diversity index* scores examining the court careers from their second to fifth convictions suggested that late-onset females were slightly more likely to have switched from one offence type to another at various stages in their court careers.

Throughout this chapter, multiple measures of specialization and versatility were used to provide a more ‘complete picture’ of the relationship between the various offences which led to the court convictions of the 1979/80 birth cohort. Ultimately, however, findings revealed—consistent with *all* previous research in the area of specialization and versatility—that the youth court career is characterized by neither complete specialization nor complete versatility, but rather that these two tendencies exist side by side.

Chapter 8

Discussion and Conclusions

8.0 Introduction

As indicated in Chapter 2, since the early works of Sheldon and Eleanor Glueck in the 1930's, the criminal career has become a well established and central concept within the field of criminology. In its most general sense, a criminal career is the longitudinal sequence of criminal acts committed by individuals within, or across, various life stages—including childhood through to adolescence and onto adulthood. Central to the study of the criminal career are four basic parameters or structures including: *prevalence*, *frequency*, *seriousness* and *career length* (Blumstein et. al., 1986). Although the research on each of these basic parameters, most often through cross-sectional designs, is widespread, studies utilizing the criminal career paradigm have been quite limited in Canada—with a few notable exceptions.

Using the *Youth Court Survey* as a source of longitudinal data, the purpose of this dissertation was to describe the youth court convictions of a birth cohort of Canadian offenders from the time they officially entered the system at age 12 up to their 18th birthdays. A conceptual framework informed by the criminal career paradigm was adopted in order to provide a detailed and descriptive portrait of these conviction histories. Key parameters permitted by the data and, therefore, examined were the *prevalence*, *frequency*, *onset* and *patterns of transitions* of the convictions within these histories. This final chapter reviews and integrates the key findings from each of these four criminal career parameters as

well as highlights some of the limitations, policy implications and suggestions for future research.

8.1 Youth Court Conviction Histories: Key Findings

To begin, regarding the prevalence of conviction, two specific prevalence-related questions were addressed in order to identify the “size of the problem” or how widespread or limited convictions of the birth cohort were. The first determined *what proportion of the population under study has ever been convicted in a Canadian youth court for offences committed prior to their 18th birthday*, and the second examined *the proportion of young persons who have been convicted at each year of age while under youth court jurisdiction*. Findings confirmed the well-documented fact that males were much more likely than females to be involved in crimes for which they were ultimately convicted. It was found that 12 percent of males and 3 percent of females in the cohort were convicted of at least one offence before their 18th birthday. As expected, most cohort members were convicted in youth court for property-related offences with only a small percentage of males (4 percent) and females (1 percent) being found guilty of violent offences against persons—with the majority being common assaults. The prevalence of convictions was found to peak at age 17 for male cohort members while slightly early—at age 16—for their female counterparts. Findings clearly demonstrated that this age-crime pattern was invariant across offence types for male offenders while for female offenders this pattern did vary significantly: convictions for offences against persons and against the administration of justice peaked at age 15;

convictions for “other offences” peaked at age 16; and convictions for property-related crimes were found to peak at age 17.

Turning to individual convictions frequencies, an attempt was made to describe the *intensity* of convictions for the active members of the birth cohort. To this end, three specific frequency-related questions were addressed: (a) *What is the overall or cumulative frequency of convictions in the court careers of the 1979/80 birth cohort?* (b) *What are the age-specific or annual rates of convictions for individuals at each age under study (from their 12th up to 18th birthday)?* and, (c) *Does the frequency of convictions—both cumulatively and annually—vary with respect to offences committed?* The vast majority of offenders—60 percent of males and 66 percent of females—had a court history consisting of only one conviction for offences committed prior to turning 18 years of age. Repeat offenders, those with two to four convictions, accounted for 32 percent and 28 percent of the overall number of male and female offenders, respectively. Offenders with 5 or more convictions in their career—classified as ‘chronic’—constituted the remaining 7 percent of offenders (8 percent of males and 5 percent of females), but were responsible for 27 percent of all convictions (28 percent of male convictions and 21 percent of female convictions) recorded by the members of the cohort. Such a finding helped to highlight the extent to which the phenomenon of concentration of offending, which has been noted in numerous countries, is present in Canada. Findings further revealed that the largest number of chronic offenders were found—as one would expect—in the category of *administration of justice offences*. Offenders with 5 or more convictions for administration of justice offences constituted 3 percent of male offenders and 4 percent of female offenders, but were responsible for 11 percent of all male convictions and 16 percent of all female convictions in this category. Overall, mean age-

specific rates of convictions were found to be similar for male and female offenders with the number of convictions per offender never exceeding 1.3 at any age under study. Once again, findings revealed a relatively invariant pattern of age-specific rates of conviction for each category of offence of male convictions. On the other hand, for female cohort members, analyses suggested a much stronger relationship between age and frequency of convictions across all offence categories with the highest rate of convictions occurring at age 14 for offences against the administration of justice.

Consistent with the extant body of criminal career research, the current study went on to examine the general issue of age of onset and, more specifically, *the nature and extent of the relationship between age at first conviction and the frequency and seriousness of subsequent convictions*. Overall, findings revealed that there was a continuous increase with every year of age in the number of offenders who had been convicted for the first time in youth court. For male offenders, this peak occurred at 17 years of age while for females there was a much sharper increase in the number of first-time offenders at the younger ages and an earlier peak—which occurred at ages 15 and 16. Furthermore, analyses in the Chapter 4 also indicated, as expected, that an earlier age of conviction for both male and females had a significant impact on the overall workload experienced by the youth courts. That is, a larger number of overall convictions were recorded by both male and female offenders who were first convicted before 15 years of age—suggesting that the younger an individual was at the time of their first conviction, the higher the propensity to receive further youth court convictions; this relationship held even after controlling for the ‘time at risk’. The latter age-at-onset analyses elaborated on the nature of the relationship between age at first conviction and seriousness of subsequent court career convictions. It was found that convictions for

violent offences or offences against persons were more highly concentrated to those with earlier ages of onset and more evident for female members of the cohort under study compared to their male counterparts. Early onset offenders were not only more likely to have received a conviction for a violent offence, but were also more likely to have accumulated more of these types of offences relative to those cohort members with a later onset.

Finally, patterns of transition between successive convictions were examined in order to address specific questions related to the issue of specialization and versatility. More specifically, analyses addressed the following questions: *What is the nature of the relationship between consecutive offences leading to convictions in court careers of the 1979/80 birth cohort?* and, *what is the relationship, if any, between gender and age at first conviction and offending specialization/versatility?* Overall, findings revealed that the youth court career is characterized by neither complete specialization nor complete versatility, but rather that these two tendencies in offending exist side by side. Examining pairs of adjacent convictions in the career, it was found that individuals convicted of a property offence were much more likely to be convicted of the same offence at the next conviction. Findings from analyses controlling for the frequency of each type of offence—using the *forward specialization coefficient*—confirmed this finding and also revealed a strong inverse relationship between the number of events in one’s court career and specialization—as the number of convictions in the court history increased, the likelihood of specialization in offending decreased. Beyond group-level patterns, individual-level patterns of transition between convictions were also examined using the *diversity index*. This specific measure allowed for an examination of the various convictions without concern for their ordering (i.e.

all convictions over the career and not only adjacent convictions) and allowed for specific sub-group comparisons. Contrary to expectation, the diversity index revealed that, overall, male and female cohort members were much more alike in their levels of versatility of offending and as the court careers progressed females members of the cohort even showed a slightly greater tendency toward ‘crime mixing’. Furthermore, it was found that late-onset offenders—particularly when they had accumulated 3 or more convictions—were more likely than their early-onset counterparts to show versatility in the offences which led to their convictions. Finally, analyses which examined the interaction between gender and age at first conviction found that late-onset females were most likely to have switched from one offence type to another at various stages in their court careers.

8.2 Court Convictions: Implications for Policies

So why is the understanding of these youth court histories important? As indicated above, besides having intrinsic value as basic information about the criminal behaviour of Canadian youth and the various judicial reactions to this behaviour, these patterns have implications for judicial decision-makers. Crime is by no means a static social phenomenon and, therefore, requires ongoing assessments to ensure the most effective and efficient response by those responsible for the administration of justice in Canada. One can only begin to address issues surrounding crime and criminality once they are able to acquire some approximation of the “size of the problem” or the breadth of individual involvement.

The prevalence rates presented above provide some indication not of the ‘true’ levels of offending within society but rather that youth courts had the opportunity to intervene in

the lives of approximately 40,985 referred or 29,325 convicted young persons before their 18th birthdays. While Lee (1999: 5) may be correct in her assertion that, “The court system responds to offences after the fact and cannot affect prevalence of first offenders”, court interventions are considered by some to be “landmark events” where an opportunity exists for youth courts to identify problems—relational, monetary, practical, personal or otherwise—influencing the initiation of crime and to potentially stimulate change and possibly disrupt or prolong the likelihood of re-offending by these young persons.

Findings from the present study help to dispel the image that most youth who come into contact with the courts go onto further criminal acts and eventually become *chronic* or *habitual* offenders. The majority of offenders under study were one-time offenders with court careers consisting of only one youth court conviction. However, the current study did confirm the existence of the phenomenon that a concentration of offending is present in Canada. A small percentage of offenders were responsible for the majority of court-related activity. While no panacea exists in addressing crime within our society, both fiscal and crime-control strategies may be better achieved by identifying this small, high-rate and repeat subgroup of offenders who account for a disproportionate amount of all convicted and an equally significant portion of the limited resources afforded to Canadian youth courts. As expected, many of the lengthier court histories—those with 5 or more convictions—were found to contain numerous offences against the administration of justice. Findings highlighting the role of these offences in the development of offending histories will continue to help inform ongoing policy debates on the issue of the justice systems effectiveness in responding to such offences in light of their significant portion of the caseload—or more accurately, overload—in courts and corrections in Canada.

Evidence was also presented which highlighted the relationship between age at first conviction and the frequency and seriousness of subsequent convictions in the youth court career. However, as others have found, this relationship was determined to be far from perfect. That is, while age at the time of first conviction certainly played a role in understanding overall conviction frequencies, taking account of the age of the offender at the time of each conviction itself was also necessary to provide a more complete picture of the court career. As previously stated, a practical implication of such findings is that the youth court system's response to a youth should be moulded as much, if not more, by the individual's age at the time of the current offence, but coupled with more attention to those early-onset offenders who are likely to become chronic offenders. If crime reduction is indeed considered one of the goals of the juvenile justice system, this focus may lead to a measurable reduction of crime and workload within our youth courts—recognizing that the justice system, which intervenes at the final stage of the social process leading young persons to commit crime, can only play a limited role in the control and prevention of youth crime.

Findings that the court career could be characterized by both specialization and versatility in the offence leading to conviction also stand out as have some key implications. If certain types of offending by young persons are more likely to be specialized—for example property-related offences in the current study—knowledge about earlier types of offences may be used to help judicial decision-making and provide some indication of the likelihood of re-offending. Furthermore, findings also revealed that each stage in the career, late-onset female offenders exhibited higher levels of versatility or diversity in offending in comparison to their male and early-onset female counterparts. Such findings point to the

difficulty—for this sub-group of offenders—to accurately predict future offending and, more importantly, the most appropriate crime control and prevention strategies to be used.

8.3 Limitations and Future Research

Although the present study does contribute and advance the current literature base on the development of adolescent offending and may assume some policy relevance, there are several limitations worth noting which could serve as directions for future research.

As indicated in Chapter 3, two major considerations in choosing the Youth Court Survey data for the present study were: the appropriateness of their content for the primary research interest and their comprehensiveness. Most research-to-date has utilized police contacts, and more specifically, arrest data, to evaluate the sequencing of events in the offending careers of repeat offenders from a law enforcement perspective. The YCS data, on the other hand, provided a unique opportunity to describe the official court histories of young persons within the context of the youth court and therefore provided information which is directly relevant to youth court functioning. However, the use of the YCS data was not without its drawbacks.

A primary limitation of the current study is that it only covers offences committed by the birth cohort up to the age of 18 and while still under the youth court jurisdiction. As such, an examination of further career parameters such as desistance—the end of an offender’s career—would have been either limited or futile. Where possible, future research should follow the histories of young people beyond their youth court activity and examine any future activity contained within adult court records. This would allow for a full

exploration into various issues surrounding the duration and termination or desistance of the offending behaviour as well as a comprehensive examination of relationship of the career to various stages in the life-course (e.g. adolescent-limited, adult-onset or life-course persistent).

A further limitation of the current study has been its reliance solely on the youth court data—that is, they only represent the “tip of the iceberg” when it comes to exploring the development of offending behaviour over the life-course. As we know, while criminal behaviour may be widespread among the adolescent population, a certain amount never comes to the attention of the police agencies and even fewer proceed formally through the youth court system. Beyond issues related to “hidden delinquency”, research based solely on cases processed in youth courts can be seen as providing only a partial or incomplete “picture” of offending and re-offending. The youth court system is only one critical part of the overall youth justice system in Canada and will provide a very different picture than that which would stem from research utilizing other data sources such as police contacts and arrests. Consequently, one must be clear when presenting findings from research utilizing official data to ensure that conclusions are not drawn about the “true nature” of law-violating behaviour. Ideally, in order to deal with some of the shortcomings of only utilizing court data, issues related to the development of offending over the life-course may be better informed by combining or linking these records with police-reported crime data. This would allow for the capturing of critical information never reaching the youth or criminal courts. The combination of these two sources alone, would allow for a more detailed examination of the relationship between official court intervention and its impact on offending. A more complete understanding of the impact of specific types of sentences—and combination

thereof—on re-offending would represent a critical step to understanding the effectiveness of judicial sanctions in deterring future offending and will provide information for future assessment of the impact of specific provisions of the youth justice legislation.

Although certainly an ambitious endeavour, the use of official police and court data could be further complemented by the collection and use of self-reported delinquency data. While it is recognized that self-reported data are very costly and time consuming to track individuals over a number of years, this information would help to identify a portion of the “hidden delinquency” plaguing most studies which rely solely on the use of official data. Furthermore, self-reported data, unlike official data, may be a more effective method for identifying some of the associated factors linked to the initiation, continuation and possible termination of the offending behaviour.

8.4 Final Thoughts

As teenagers make the transition into early adulthood, many may be involved in behaviour which could be considered “law-violating”. For many, however, this behaviour goes undetected and simply represents a regular part of growing up. For others, not only is this behaviour detected but it is also reported, marking their first contact with the formal criminal justice system and setting a different pathway in this *life course* transition.

For most young people, these contacts are for very minor types of infractions and are often isolated to the early years of adolescence after which many simply grow out of this behaviour and become well integrated and productive members of society. Unfortunately,

regardless of what the empirical reality may be in relation to youthful offending, ongoing public fear of youth crime stubbornly resists statistics.

The current research has attempted to provide a detailed description of the court convictions of a group of Canadian youth while under the purview of the youth court system. It has highlighted some basic elements of their contact with the courts and has utilized central concepts within the criminal career paradigm to disaggregate convictions in youth court to the individual-level—a perspective rarely presented in Canadian research. The present study represents a leap forward in an area of Canadian research which has been virtually uncharted and has advanced only in the smallest of increments. With ongoing investments for more comprehensive data and further development of methods used in this program of research, it may be possible as Kyvsgaard (2003: 254), suggests, “...that patterns of individual offending will no doubt enter the standard criminological consciousness and become part of the routine procedure used in decoding crime data” within the Canadian context.

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