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Heterogeneity in Patterns of Recidivism Among Sexual Offenders

in the Initial Stages of Criminal Careers

by

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ABSTRACT

This research examines recidivism amongst sexual offenders in the context of the life course perspective and the criminal careers paradigm. It explores the type of offence, the recidivism rates and offending patterns of 391 sexual offenders taken from official police data. It is argued that although popular belief would assume that sexual offenders specialize exclusively in sexual offences, they are in actuality a heterogeneous group of criminals that commit a variety of offences. This research investigates the stability and instability of recidivism and the timing patterns of re-offence among subgroups of sexual offenders using survival analysis. This analysis contributes to the literature on sexual offenders by empirically examining five separate offences. The findings indicate that sexual offenders are a diverse group of offenders throughout the initial stages of their criminal careers, and suggest a need for further examination of escalation and variation in sexual offenders' criminal behaviour.

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TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

HETEROGENEITY IN PATTERNS OF RECIDIVISM AMONG

SEXUAL OFFENDERS IN THE INITIAL STAGES OF

CRIMINAL CAREERS

CHAPTER ONE:

INTRODUCTION AND

CONCEPTUAL FRAMEWORK

Introduction

Sexual offences are commonly understood to be one of the most physically and psychologically damaging criminal acts (Corrections Canada, 1995b) and research has shown high rates of sexual victimization among women and children (Worsmith and Hanson, 1992; Finkelhor, 1986). The past twenty years have shown an increase in public awareness of the effects of sexual offences on victims. Attention to the issue of sexual crimes has increased, largely as a result of the feminist movement, and more recently as a result of media attention (Worsmith and Hanson, 1992). Although there has also been an increase in official reports of sexual offences, the rates still remain quite low in relation to the reports of other violent offences. These findings have resulted in the need to further our understanding of sexual offences and of the threat they may pose to individuals as well as to society and its institutions.

In the past ten years, Blanchette (1996), Corrections Canada (1995a) and McGrath (1991) have noted an increase in the proportion of sexual offenders in prisons in relation to other incarcerated individuals. This increase has been brought to the attention of the courts,

social service organizations, correctional agencies, mental health professionals and criminologists. Consequently, the question of what to do with these offenders has arisen, and the discussion has necessitated the development of risk assessment for previously convicted sexual offenders. There have been numerous studies in relevant disciplines with a variety of methods, which have resulted in a large quantity of important research surrounding sexual offenders. However, the causes and correlates of recidivism among sexual offenders are still not well understood.

Recidivism is contingent on a variety of factors, and research of sequencing and timing of deviant behaviour needs to be extended in order to improve our understanding of those factors (Visher et al, 1991; Shover & Thompson, 1992; Moffit, 1993; and Lattimore et al, 1995). This analysis is interested in the continuity and discontinuity of criminal recidivism among sexual offenders in the initial stages of their criminal careers. The examination of recidivism is theoretically, methodologically and empirically a complex issue. This research will concentrate on and empirically establish the recidivism rates, the types of re-offence, the timing of re-offence and *if* and *when* certain offenders move from one offence to the next.

The purpose of this research is to systematically explore the offending careers of a group of sexual offenders over a portion of the life course. This analysis will examine the stability and instability of offending behaviour among sexual offenders from their first to their fifth offence. Stability implies that the sexual offenders will behave similarly throughout the five offences, whereas instability implies differential patterns among individuals or subgroups of offenders. I will investigate these patterns of offending over time to facilitate a better understanding of what, if any, patterns exist in the offending

careers of sexual offenders. Specifically, I will examine similarities and differences between subgroups of sexual offenders, within the subgroups of offenders and between the different transitions of re-offence.

This research builds on and contributes to our understanding of various structural aspects of constancy and diversity among sexual offenders. Retrospective longitudinal data were provided from police and criminal justice agencies in a western Canadian city. Event history analysis, in the form of life tables, is employed in this study to empirically estimate the risk and timing of recidivism through five separate offences. In addition, distinctive patterns of offending and re-offending among heterogeneous subgroups of sexual offenders are investigated. The sexual offenders are examined as they move either from one crime to another or desist from criminal behaviour in order to investigate the frequency of offending, the timing of offending and the possible patterns of offending. This analysis will be placed in the context of *life course* and *criminal careers* perspectives

The following chapter begins with a discussion of differentiation over the life course and reviews the similarities of conventional and non-conventional careers. It discusses the life course perspective and how it can be applied to criminological investigation. It then considers the ongoing ontological debate between criminologists concerning the advantages and disadvantages of examining crimes within the criminal careers framework. It outlines this debate by examining the *persistent heterogeneity* and the *state dependent* approaches to crime. Finally, this chapter reviews issues in recidivism and research on sexual offenders, in order to generate research questions for further examination.

Differentiation: Conventional and Non-Conventional Careers

Social change is ubiquitous within any modern society. The study of social change dates back to the canonical social theorists, whose primary concern was the shift from pre-industrial to industrial society. For Spencer, (1898 as cited in Sztompka, 1993), change was the movement from simple homogeneity to complex heterogeneity. Spencer believed that differentiation must accompany growth of social aggregates. Like Spencer, Durkheim (1933/1964) maintained that change was the movement from mechanical solidarity of primitive societies to organic solidarity of complex modern societies. He was concerned with the *nature of order* in the context of social development. In *The Division of Labour in Society* (1933), Durkheim indicated that differentiation between people and groups of people in the economic sphere was necessary, natural and unavoidable within a complex society.

Social change can be seen as alterations of behaviour patterns,[1] and because change is patterned, it can be studied. Differentiation becomes a way to examine employment and careers. Change in the function of a career can be seen as specialization or differentiation in employment paths (Sztompka, 1993). In the 1950's Everett Hughes and the Chicago School were among the first to use the term *career* (Hall, 1991). Hughes studied many conventional occupations and helped give a basis for understanding of people entering jobs, moving through jobs, changing jobs and moving out of jobs. This movement can be seen as patterned and knowable (Hall, 1991).

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[1] Social change is not exclusively seen as alterations of behaviour patterns. It can also be described as altering social relationships, institutions or social structures (Sztompka, 1993).

Since Hughes, there has been a multitude of research of careers over the long term. Many of these researchers have examined careers in the context of the life course perspective. As individuals move through the life course their career can be seen as fluid movement (Pavalko, 1997). This movement is patterned and includes a *sequence*, a *pace* and a possible *reversibility*. The sequence refers to the ordering of events and pace refers to the number of events and speed of occurrence of those events. Reversibility is removal from the movement or termination of events. There are two types of important turning points that can be examined within a career, *cutting back* and *digging in*. Cutting back refers to a partial or full removal from a career, whereas digging in implies a complete commitment to that particular career (Kerckhoff, 1994).

Given that change is everywhere and inescapable, the concepts of differentiation used to examine conventional careers can be applied to all aspects of social life, and everything can possess qualities of differentiation. Cloward and Ohlin (1960), Goffman (1962) and Becker (1963) all examined differentiation in relation to deviant behaviour. Cloward and Ohlin (1960 as cited in Arnold and Hagan, 1992) suggested that there was a parallel between legitimate and illegitimate activities. Goffman (1962) investigated the *careers* of mental patients. A patient's career line began with an individual's psychiatric evaluation and ended with their release from the hospital. Becker (1963) investigated deviant occupations and demonstrated that the conventional career model is versatile and can be applied to various deviant groups.

In the past decade, many contemporary sociological criminologists have examined criminal career differentiation in the context of the life course perspective (see Sampson and Laub, 1993). Studying crime over the life course allows for an examination of possible

patterns of recidivism as well as investigations of consistency and diversity in criminal behaviour (Sampson and Laub, 1993). A criminal career is the sequence of offences during a part or the entirety of an individual's life. The type of offences offenders commit, the pattern of offending and the timing of recidivism may differentiate various types of criminals and can be examined in much the same way as a conventional career. Criminal careers can be examined by looking at intervals of offending between the beginning and the end of a criminal career.

Examinations of criminal careers allow for an examination of differing patterns of offending and whether offenders are *digging in* or *cutting back* (Kerckhoff, 1994). Digging in can be seen as offenders embedding themselves in a criminal lifestyle. Cutting back can be seen in either a desistance from criminal activity or reluctance on the part of the offender to re-offend.[2] The intersection of criminal behaviour and social change can be seen as a dynamic process (Horney et al, 1996). The life course perspective provides useful tools for studying that intersection (Hardy, 1997). The following section will outline the life course perspective and the criminal careers model in order to explain these developmental perspectives that will be applied to the empirical analysis of sexual offenders' criminal activity.

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[2] This reluctance can be seen in a large length of time between offences.

Life Course Perspective

Sampson and Laub (1990, 1993) examine differentiation in criminal behaviour and apply the life course perspective to the area of criminology. This theory is able to integrate the concepts of conventional career differentiation to that of non-conventional careers. Sampson and Laub (1990, 1993) documented changes in offending across the life span, and the life course perspective suggests that criminal behaviour is fluid and can change over time. The life course perspective is a state dependent approach to crime. Each particular time period affects the possibility of offending depending upon all factors involved. Sampson and Laub (1993) stress the importance of informal social controls and how they associate with interpersonal bonds. However, they do not discount the essential role of formal social controls such as criminal justice agencies in an offender's career. Life course perspective also examines the influence of labels and on criminal behaviour.

The two key concepts of life course perspective are *trajectories* and *transitions*. A trajectory is the pathway of an individual's life, which includes conventional activities, but can also include unconventional activities or criminal lifestyles (Laub and Sampson, 1993). These trajectories are marked by conventional and unconventional transitions. Conventional transitions are specific events such as marriage and employment, whereas non-conventional transitions are other events such as convictions or incarcerations. The transitions link across the trajectory (Sampson and Laub, 1990). Transitions may generate turning points or even large-scale life changes. Both transitions and trajectories are affected by formal and informal social controls, and each individual can modify their trajectory (Laub and Sampson, 1993). Individuals can also commit themselves even further to their immediate situation; just as one can become embedded in a specific type of

conventional employment, one can also become embedded in a criminal lifestyle (Nagin and Farrington, 1992).

Investigating criminal activity within the life course perspective allows for examinations of *sequence, pace* and *reversal* of criminal activity. Sequence is the type or types of crimes committed and the order in which they are committed. Pace is the speed at which these crimes are committed. Crimes committed consecutively indicate a fast pace, whereas sporadic or episodic indicate a slow pace. Reversibility refers to the possibility of termination of criminal behaviour (Pavalko, 1997). Unlike other ways of examining criminal behaviour such as specifically focussing on control (Hirschi, 1969), differential association (Sutherland and Cressey, 1969), labeling (Lemert, 1972) or other specific theories, the life course perspective allows a multitude of theories to come together in explaining criminal behaviour.

Sampson and Laub (1990) emphasize the causes and consequences of events in the life course. Many theories can be integrated under the life course perspective. Sampson and Laub (1990) stress social controls as affecting criminal behaviour, but do not discount the possibility of an underlying criminal propensity. There are many factors in an offenders life that are state dependent. Labeling can play a role in an offender's life and affect an offender's choices (Akers, 1997). Labeling is a state dependent effect that reinforces criminal behaviour (Nagin and Farrington, 1992). If criminals are pushed outside of conventional options by a deviant label they may then increase their criminal activity (Sipe et al, 1998). Deterrence is also a state dependent effect, but decreases the likelihood of re-offence. A criminal's contact with criminal justice agencies can deter them from committing another crime (Nagin and Farrington, 1992).

Sampson and Laub (1993) also argue that criminologists have devoted a large portion of research to youth crime and the initial offence, but not enough attention has been paid to desistance (termination) from crime and the different paths offenders can take. The life course approach allows for the possibility of change at any stage in life or trajectory. The duration, timing and ordering of events become important in examining offenders' lives as patterns may emerge. These patterns can then be examined within the context of a particular crime or subtype of criminal. In examining the life course of offenders, the pattern of sequence, pace and reversibility of criminal behaviour can possibly differentiate the trajectories of each offender or subgroup of offenders.

As mentioned above, the life course of a criminal involves both criminal and conventional activities, and both stability and change have causal implications for offending behaviour (Paternoster et al, 1997). The institutions of social control that vary across an individual's life can be both formal and informal in nature. Each of the formal conventional institutions affects the life course, and this can be extended to the formal institution of the criminal justice system (Laub and Sampson, 1993). There are many factors that can effect offenders' criminal choices, and these factors need to be studied in order to come to a better understanding of offending behaviour.

Criminal Careers

Much like the life course perspective, the criminal careers paradigm is also a *developmental approach* (*state dependent approach*) to criminal activity. The criminal careers perspective places emphasis on questions of *when* and *why* people start offending, and is also interested in *if* and *when* people stop offending. There is an emphasis on the

importance of the development of sequences in offending, as well as the seriousness and frequency of offending by different individuals and subgroups of criminals (Stander et al, 1989). The criminal careers paradigm outlines the importance of longitudinal research as essential for the study of recidivism (Blumstein et al, 1988a, 1988b, Stander et al, 1989 and Farrington, 1992).

The criminal careers model advocates an examination of the life of an offender in order to determine patterns of criminal behaviour (Farrington, 1992). Blumstein et al (1988a) define a criminal career as a *longitudinal sequence* of the offences committed by an individual. However, they maintain that a *criminal career* may be one or more criminal acts by an individual offender. Every person that has committed a crime has a criminal career (Farrington, 1992). Therefore, the term *career* does not necessarily imply a lifestyle or the way in which one attains their livelihood (Hagan and Palloni, 1988).

Blumstein et al. (1988a) outline that this model involves examining individuals as being continually shaped by their environment. The criminal career paradigm looks specifically at the key features of offenders over time in order to determine the causal factors that influence criminal activity. Those features are the *onset, duration* and *termination* of an offender's criminal behaviour mark the longitudinal sequence of a criminal career. The onset of the career is defined as the first criminal offence of an individual. The duration of the criminal career is the length of the career, measured from the first to the last known offence within a period of study (Blumstein et al, 1988a). The termination refers to the end of the career; however, Blumstein et al (1988a) maintain that this can only truly be defined in the death of the individual offender because there is always a possibility they will re-offend. Nevertheless, the criminal careers perspective suggests

that with a longitudinal study one may be able to predict or estimate the termination of a career and estimate the risk of re-offence.

There are two key concepts of the criminal careers approach: *prevalence* (*participation*) and *frequency* (*lambda* or *incidence*). These concepts demonstrate the two ways in which crime levels vary. Prevalence refers to the proportion of the population that is actively offending. Frequency is defined as the individual crime rate (Blumstein et al, 1988b). Frequency helps identify distinct features of offending as well as possible subgroups of offenders and can be seen through both escalation and specialization of criminal activity (Blumstein, 1988a and 1988b). Escalation refers to an increase in speed and intensity of criminal activity (Arnold and Kay, 1999), whereas specialization refers to criminal activity becoming more specific, as seen in a repetition of the same crime (Loeber and LeBlanc, 1990). In cases where criminals commit many types of crime, they may be differentiated from those who specialize, and therefore, may have different patterns of recidivism.

The distinction between frequency and prevalence can affect public policy by implementing measures that may decrease crime through either a reduction of the number of crimes committed by specific individuals (reduction in frequency), or a decrease in the number of crimes committed in the total population (reduction in prevalence). This could allow for crime specific incarceration and selective incapacitation. Another important implication for differentiating between prevalence and frequency concerns the issue of change over time (Blumstein, 1988a). Prevalence and frequency are not identical, and prevalence varies more over time than frequency. There are changes in the proportion of the population committing crimes over time, but time does not necessarily change the

number of crimes committed by each individual offender (Blumstein et al, 1988a). Farrington (1992) points out that prevalence and frequency need to be examined separately as they may have different causes.

There is an ongoing ontological debate within the criminology literature as to whether crime should be studied as a *dynamic pathway (state dependent approach)*, or from a *persistent heterogeneity* interpretation. On the one hand, the criminal careers model is considered a state-dependent perspective. State dependency suggests crime and criminal behaviour are dependent on both individual variations and social factors (Farrington, 1992). On the other hand, Gottfredson and Hirschi (1986) believe that a criminal careers approach is inapplicable and irrelevant. Their perspective is one of persistent heterogeneity, which maintains that criminal behaviour is derived from an underlying criminal tendency. These two views differ on important empirical, theoretical and methodological issues (Tittle, 1988).

Gottfredson and Hirschi (1988) claim that criminal behaviour rests on low self-control or a *criminal propensity* that remains stable throughout an offender's life. Thus, Gottfredson and Hirschi argue that studying onset, duration and desistance (or termination) of criminal careers is not a useful approach. The best predictor of crime is prior behaviour often expressed as low self-control. Gottfredson and Hirschi argue that prior behaviour is an indicator of a criminal propensity, and since this propensity remains stable, there is no need to examine crime from a state-dependent perspective. Gottfredson and Hirschi (1988) maintain that it is not necessary to differentiate between *participation* and *lambda* because the correlates are the same for each. The propensity for crime to diminish over time is

independent of any other factors besides maturation, which occurs during an individual's late teens (Gottfredson and Hirschi, 1986).

Persistent heterogeneity theorists suggest that there is no difference between participation and frequency; they are meaningless and misleading. The age-crime relationship peaks during the late teen years and then declines rapidly. This holds true across gender, country, time and type of offence (Gottfredson and Hirschi, 1986). Therefore, longitudinal research, which examines changes and reasons for change is unsubstantiated. Instead Gottfredson and Hirschi suggest that cross-sectional research is the most appropriate way to measure criminal propensity (Gottfredson and Hirschi, 1988).

Gottfredson and Hirschi (1986 and 1988) advocate the comparison of offenders to non-offenders as opposed to comparing different types of crimes and numbers of crimes committed. It is participation that they see as important for study, not frequency (Gottfredson and Hirschi, 1986). Persistent heterogeneity theorists maintain that control theory will apply to all types of offenders equally, and therefore, there is little value for offender classification data (Greenberg, 1991). Gottfredson and Hirschi (1986 and 1988) do not classify types of offences because they examine overall crime patterns. There is then a general theory of crime or one overarching pattern of criminal behaviour that is persistent. Gottfredson and Hirschi (1986 and 1988) maintain that there is no need for recidivism research and longitudinal research is not only ineffective, but also costly and time consuming. The persistent heterogeneity and the state dependent approaches both

have policy implications. Persistent heterogeneity would not support selective incapacitation, whereas the state dependent approach would (Tittle, 1988).[3]

Other criticisms of the state dependent approach to the study of crime are Gottfredson and Hirschi's (1986) critiques of the concepts of onset, duration and termination, and the ideas of specialization or escalation. They maintain that there is substantial evidence of criminal versatility, which invalidates the criminal careers approach. Furthermore, because they suggest there is no skill needed for certain types of crime, they disregard the concepts of specialization and escalation. However, according to Blumstein et al (1988a), a criminal career does not necessarily imply specialization or escalation. The examination of time specific stages of an individual's criminal career does not imply linear progression of a career. A criminal careers framework, by examining these stages separately, allows us to estimate any differentiation between causal factors and examine diversity among offenders (Blumstein et al, 1988a). The criminal careers paradigm also takes into account other external factors that exert influence over the patterns of criminal behaviour.

State dependent approaches to crime are essentially developmental perspectives of crime. Past criminal behaviour is viewed as important for predicting future criminal behaviour within a criminal careers framework. However, prediction of future criminal acts is not explained merely by a criminal propensity, as suggested by Gottfredson and Hirschi. The criminal careers perspective supports the idea that there is a "causal linkage

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[3] This is a point of contention (see Greenberg, 1991). At no point do those proponents of a criminal careers approach directly support selective incapacitation. However, their distinction between *frequent* and *occasional* offenders would imply those that are 'frequents' are at greater risk of recidivism, which could have policy implications for selective incapacitation.

whereby past criminal involvement reduces internal inhibitions or external constraints to future crime or increases the motivation to commit crime" (Nagin and Farrington, 1992:235). Essentially, the state dependent approaches suggest that all events, criminological or conventional, positively and negatively affect future criminal events (Nagin and Farrington, 1992).

Among others, Blumstein et al. (1988a and 1988b) outline the problems of Gottfredson and Hirschi's (1986 and 1988) critique of criminal careers. They maintain that Gottfredson and Hirschi have misinterpreted the term *career*. *Career* does not require more than one offence, nor does it necessarily imply a way of making a living. Rather, *career* is defined as a sequence of crimes throughout an individual's life. Furthermore, within the criminal careers paradigm, career and frequency do not necessarily imply specialization. Certain crimes will lack specialization, and those offenders may display heterogeneity in offending, which could indicate specific characteristics of that crime. Whether or not there is specialization or escalation, the criminal careers approach is useful in analyzing offending sequences and patterns (Blumstein et al, 1988a). Blumstein et al (1988a) concede that the criminal careers approach is not a theory of crime, but rather a way of structuring key features of criminal activity for empirical observation. The criminal careers approach permits predictions allowing researchers to test a multitude of theories. This approach provides a structure for examining the lives of sexual offenders.

The criminal careers approach and the life course perspective can be the ground work for the study of any type of crime. The purpose of this study is not to test one particular theory or to develop a new theory. This research is an innovative exploratory approach driven by the view that sexual offenders are a specific type of criminal. This

research examines sexual offenders under the general principales of the life course perspective and criminal careers paradigm. The following section gives an overview of recidivism and its implications. The discussion then moves to previous research within both sociology and psychology of sexual offenders in order to outline the base of knowledge previously established. Then sexual offenders and recidivism are placed in the context of differentiation, the life course perspective and the criminal careers paradigm. Research questions are generated from this overview.

Recidivism and the Sexual Offender

Recidivism

Recidivism is an important aspect of studying sexual offenders because, at some point, they will be released from prison resulting in a threat of re-offence (Barlow, 1984). Recidivism is "a falling back or relapse into prior criminal habits" (Blumstein and Larson, 1971: 124). General recidivism is considered as re-offending with any type of criminal activity, and specific recidivism is re-offending with the same prior criminal activity. There are several ways of measuring recidivism rates. Police often determine that a re-offence is a re-arrest, whereas correction agencies may define it as a re-incarceration, (Blumstein and Larson, 1971). Certain researchers may use self-reports in order to determine recidivism rates (Kaufman et al, 1996; and Weinrott and Saylor, 1991). Other measurement methodologies include revocation of parole or suspension (Motiuk and Brown, 1993), conviction, or a combination of some or all measures of recidivism. One of these proxies must be employed to measure recidivism, because recidivism cannot be measured directly (Blumstein and Larson, 1971).

Accurate information of recidivism rates is difficult to attain. Demonstrating that one has not been arrested or convicted may not prove that he or she has not committed another offence. Blumstein and Larson (1971) point out potential *Error Types* that can occur in selecting a particular proxy for recidivism. *Type I Errors* are an overestimation of recidivism due to improper charges or convictions. *Type II Errors* are those crimes that do not come to the attention of the police and criminal justice agencies. In the case of sexual offences Type II Errors can be seen in the low reporting rates.

When using official statistics, one must always take into consideration the many difficulties associated with their use (see Gurr, 1981 and Gibbs, 1987). Official conviction data will include Type I Error, but not to the extent of using charges as the proxy for recidivism. These data will also include Type II Errors, but not to the extent of re-incarceration as a proxy for recidivism. Self-report proxies also involve Type II Error because of the problems of underestimation of offences by criminals in order to avoid charges, incarceration or stigmas associated with their criminal behaviour (Scully, 1990). In this research, recidivism is the commission of any type of criminal behaviour resulting in a conviction after an individual has previously been convicted of a crime. This particular empirical analysis of sexual offenders is interested in the *general recidivism* rate, which can be divided into the sexual recidivism rate (*specific recidivism*) and the non-sexual recidivism rate.

The follow-up period is important for studying recidivism. The longer the follow-up period, the larger the proportion of offenders captured in the recidivism rate. There are very few studies of sex offenders with more than a five-year follow-up period and a minimal amount of research exists on the life of an offender (Zamble and Quinsey, 1991).

Zamble and Quinsey (1991) call for dynamic and encompassing recidivism research that would be able to deal with many of these problems. There is a need for more time oriented analyses of crime (Lattimore et al, 1995), with long follow-up periods (5 years+) (McGrath, 1991), and large heterogeneous samples of offenders (Romero and Williams, 1985).

Sexual Offenders

Sexual offences are a complex issue that has political, social and psychological implications. Resicks' (1993) review of sexual assault victims illustrates the degree of severity of the effects of sexual offences. The psychological impact of sexual offences is broad and persistent, often including post-traumatic stress syndrome, low self-esteem, social adjustment problems, sexual adjustment problems, fear and anxiety. Corrections Canada (1995a) found that the majority of victims of all types of sexual offences experience severe trauma shortly after the occurrence and many continue to experience long term negative effects.

Sexual offences are prevalent in North American society. Hanson and Bussière (1998) and Koss (1993) found that 10% of boys, 20% of girls and 10-20% of adult women have experienced a sexual offence.[4] In recent years there has been as an increase in the number of incarcerated sexual offences. For example, between 1984 and 1988, the proportion of people imprisoned for sexual offences increased from 7.4% to 11.4%. In 1995 this number had further increased to 26% (Corrections Canada, 1995a and 1995b).

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[4] These numbers vary depending on the research question and the scope of the study, however, these particular numbers are relatively stable across findings. The other common proportions are one in four women and one in ten men have experienced a sexual offence at some point in their lives (Scully, 1990; and Russell, 1984).

The absolute growth is disproportionate to the growth of other incarcerated offender populations. However, it should be noted that this increase is likely due to changes within the law, the courts, victim's reports and public response rather than an increase in sexual crimes (Corrections Canada, 1995a).

Media attention has brought the issue of sexual offences into the public sphere, raising several important issues. The recent increase in attention given to *repeat* sexual offenders has increased fear among women and parents (Corrections Canada, 1995a). The public perception has generally been that sexual offenders are 'sick' (this is especially the case for child molesters) and 'incurable', imposing the perception that they will continually sexually re-offend (Worsmith and Hanson, 1991; Corrections Canada, 1995a and 1995b). Even with this growing public concern, few sexual offenders receive more than minimal jail sentences.[5]

The upsurge in recent public and political discourse surrounding recidivism of sexual offenders has often been in regards to community notification laws (Lieb, 1996). These community notification laws ensure that the police and the justice system alert the community of a released sex offender.[6] This policy is a result of the fear, by the general public, of high sexual recidivism of previously convicted sexual offenders.[7] Much of the discussion surrounding the issue of community notification comes from the United States; however, it has also come under review in Canada, and has been applied in certain

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[5] This is dependent on one's definition of minimal prison time, however, fewer than one in four sexual offenders were given a federal sentence in 1989 (two years or more). In 1991 the average federal sentence served by sexual offenders was 4.3 years, which is similar to the average sentence length of all federal offenders (4.13 years) (Corrections Canada, 1995a and 1995b).
[6] In 1996 Community Notification Laws existed in 20 American States.
[7] See Megan's Law in the United States (see Hunter and Lexier, 1998).

instances. The implications of these laws are far reaching in the political, legal and social realms. The debate will unlikely be quickly resolved as there are no long-term data available to assess the impact on the offender, the community, and society (Lieb, 1996).[8]

Given the attention brought to the crime, research on sexual offenders has become prevalent. There are many studies of sexual offenders; some of these are cross- sectional and examine characteristics of offenders, while others are longitudinal and examine recidivism rates of sexual offenders and the correlates of this particular crime. The longitudinal studies have often focused on the initial re-offence, and are mostly psychological or sociological/ criminological analyses.

Soothill and Gibbens (1978) explore the conflict between clinical psychologists and criminologists on recidivism rates of sexual offenders. Psychologists see sexual offenders as causing a persistent problem and believe they are very likely to re-offend sexually. Criminologists contend that sexual offenders have much lower specific (sexual) recidivism rates than other offenders do. These contradictory results come from two different viewpoints. Psychologists predominantly deal with a biased sample of sexual offenders with serious psychiatric problems, whereas sociological criminologists use a more representative sample, but usually lack in their follow up period (three to five years). However together, both disciplines bring a variety of essential findings about sexual offenders.

Psychological researchers tend to focus their efforts on examining treatment of sexual offenders and its effect on recidivism rates. There appears to be promising results

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[8] For an outline of the issues surrounding Community Notification Laws see Berliner, 1996; Prentky, 1996, Lieb 1996; and Hunter and Lexier, 1998.

with many treatment programs (Brannon and Troyer, 1991; Longo and Groth, 1983; Marshall et al, 1991; and McGrath et al, 1998); however, there is continual debate within clinical psychology as to which type of treatment should be used (McGrath, 1991). Furthermore, Blanchette (1996) contends that treatment research has yielded inconclusive results. In addition to studying treatment, psychological studies examine individual characteristics and their effect on re-offence.[9] Psychological researchers also call for studies to address and uncover heterogeneity among sexual offenders and examine risk in order to determine adequate management of treatment strategies (Brown and Forth, 1997).

Sociological criminologists investigate recidivism by examining aggregate correlates of recidivism, and also by comparing recidivism rates of different groups of sexual offenders. Criminologists have found that sexual offenders have a higher non-sexual recidivism rate than a sexual recidivism rate. The exact results, however, have been inconsistent. Hanson and Bussière (1996), in a five year follow up study, found that sexual offenders had a 13% *specific recidivism* rate (sexual recidivism), and a 49% *general recidivism* rate (both sexual and non-sexual offences). Kahn and Chambers (1991) found a 7.5% specific recidivism rate and a 50% general recidivism rate in a 20-month follow-up study. Romero and Williams (1985) in a ten-year follow-up study found an 11.3% specific recidivism rate and a 57% general recidivism rate.

> **Question one: What are the *general recidivism* and the *specific recidivism* rates for sexual offenders, and how do they change from the first to the fifth offence?**

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[9] These include disorders within the DSM III, penile plethysmography (associate with deviant sexual arousal), fetishes and deviant sexual fantasies (Marshall et al, 1991).

The follow-up length affects the captured recidivism rates of sexual offender research (McGrath, 1991). Brannon and Troyer (1991) found a sexual recidivism rate as low as 1.9%; however, they used a 10 to 12 month follow-up, which may not have been a substantial enough time period to capture the sexual recidivism rate. This is a problem that has been acknowledged in the research community, Hagan et al (1994) state that few studies have executed a long-term follow-up of recidivism rates. Soothill and Gibbens (1978) who conducted a 24-year follow-up of sexual offenders demonstrated that after five years only one quarter of the recidivism rate was captured.[10] Hanson and Bussière (1998) found that the average follow-up period for sexual recidivism research was 5.5 years. And finally, Lattimore et al. (1995) assert that there is a need for longer follow-up periods in order to capture the *true recidivism* rate.

Question two: Does this retrospective longitudinal research capture recidivism that other research with shorter follow-up periods would be unable to capture?

The correlates of sexual recidivism also are inconsistent (Gerdes et al, 1995). McGrath (1991), in his examination of multiple studies of recidivism of sexual offenders, found that alcohol abuse, unemployment and single status increased recidivism rates. Overholser and Beck (1989) found that age, race, marital status, education, length of time in prison and educational level did not have an effect on recidivism rates. Prior offence history, especially prior sexual offence history, was the most consistent factor in increasing the probability of recidivism among sexual offenders (Hanson et al, 1995; McGrath, 1991; Hanson and Bussière, 1998; Brannon and Troyer, 1991; and Kahn and Chambers, 1991).

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[10] This study was from the 1950's to the 1970's. More recent studies might yield different results given the changes in laws since the 1970's.

Zamble and Quinsey (1991) advocate further research and a better understanding of all factors influencing sexual recidivism. There will most likely be policy implications if specific factors are shown to increase or decrease recidivism of sexual offenders.There is a need for more longitudinal research of sexual offenders if we are to understand the correlates and patterns of criminal behaviour (Lattimore et al, 1995; Kahn and Chambers, 1991; Hanson et al, 1995; Overholser and Beck, 1989; Romero and Williams, 1985; McGrath, 1991; Brown and Forth, 1997; Martinez, 1997). McGrath (1991) also suggests that there is much more we need to learn about sexual offenders as a group as there are gaps in the research and many researchers have yielded contradictory or inconclusive results.

Perspectives on Patterns of Recidivism

This empirical analysis of sexual offenders and recidivism will examine sexual offenders from their first through to their fifth offence. These offences will be categorized into four transitions: (1) first transition: first to second offence, (2) second transition: second to third offence, (3) third transition: third to fourth offence, and (4) fourth transition: fourth to fifth offence. Each crime committed is classified as either a sexual or a non-sexual offence. Therefore, there are five possible movements the offenders could take in each transition. The sexual offenders could move from (1) a sexual to a sexual offence, (2) a sexual to a non-sexual offence, (3) a non-sexual to a sexual offence, (4) a non-sexual to a non-sexual offence, or (5) a sexual or non-sexual offence to no offence.[11]

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[11] These are referred to as censored cases, which will be explained in chapter two.

I will examine sexual offenders in the context of differentiation, criminal careers and life course perspectives. Differentiation implies that sexual offenders may change over the course of their criminal career. Through the longitudinal sequence of events many differences between offenders may occur. There may be different patterns of offending for different subtypes of sexual offenders, much like differentiation between different paths of employment. As time passes and offenders commit more crimes or drop out of criminal activity, these patterns of re-offence may change, and new differences may be found among sexual offenders.

Question three: Is there evidence of differentiation and/or stability in comparing the similarities and differences between offender groups, within offender groups and between transitions?

Question four: If offenders recidivate, does the pattern change as the number of offences increases?

From the life course perspective, there may be different and distinct trajectories and transitions for each sexual offender or each subgroup of sexual offenders. There may also be transitions that alter the path of the trajectory. This perspective can also be useful in examining the movement from one type of crime to another, and as such, may influence policy decisions. Certain types of criminals could be considered to be in a high risk offending category and a threat to society, and as a result, treated differently (Sampson and Laub, 1990). The life course perspective can be helpful in examining pattern, sequence, pace and desistance of offender's criminal behaviour.

Life course perspective also, further allows one to understand the dynamics of recidivism and examine those who re-offend. The perspective can examine the timing of re-offence, the type of re-offence as well as those who do not re-offend. This research will

examine the possibility of patterned life trajectories among sexual offenders. Sexual offenders may have a pattern of specialization indicated by a persistence in sexual offences (Farrington, 1992), or they may demonstrate escalation indicated by an increase in intensity of offending. There is also the possibility that sexual offenders may not recidivate or they may commit a non-sexual re-offence, thereby changing their trajectory (Blumstein et al, 1988b). Finding these patterns and understanding them will help further recidivism research.

Question five: What does the pattern of sequence (type of offence) and pace (stability or escalation) of re-offence look like for the subgroups of offenders over four offence transitions?

The criminal careers perspective allows for the existence of subtypes of crime and criminals instead of an overarching general theory of crime which Gottfredson and Hirschi (1990) would support. The criminal careers concepts of *onset, duration, termination, participation* and *frequency* can be determined for the various crime types and individual criminals in order to determine different criminal careers (Blumstein, et al, 1988a). This allows for separate analyses of different types of crimes and individual criminals, which can be expanded to studying recidivism rates. The timing between offences for recidivists can also be examined in terms of the criminal careers approach.

Question six: Do the different subgroups show differentiation or stability in duration of career, termination of career and frequency of criminal offences?

This chapter outlined the conceptual background for the research of patterns of offending among sexual offenders. The next chapter addresses the methodological issues and concerns for the study of sexual offenders and recidivism. Chapter three illustrates the findings from the survival analysis of the four subgroups of recidivists. These findings are

given for each of the four offence transitions. The findings could be considered more descriptive than analytical, but they add important pieces to the puzzle of understanding stability and instability of sexual offenders' criminal careers. Lastly, chapter four discusses the findings in reference to the research questions outlined in the present chapter. It attempts to place the empirical analysis of sexual offender's patterns of recidivism in the context of differentiation of criminal behaviour in the initial stages of criminal careers.

CHAPTER TWO:

METHODOLOGY

The conceptual issues surrounding the ontological argument between the *persistent heterogeneity* and *state dependent* approaches directly reflect the methodological debate around the study of crime. This chapter will discuss some of these issues also outlining the key concepts and principles of my methodology as they apply to the empirical analysis of my research questions. The chapter begins with a discussion of the methods of examining crime, and the current debate around the use of longitudinal data versus cross-sectional data. I look at the differences between prospective and retrospective longitudinal research, and examine the benefits and limitations of the use of official secondary data for criminal research. This discussion outlines the necessity of using this type of data for this particular analysis. I discuss issues in the sampling frame of the data, the collection of data, the classification of offences and why certain cases were removed from the data set. Finally, I provide an explanation for the use of event history data and survival analysis for this research.

Longitudinal Data

The criminal careers and life course perspectives are developmental paradigms that imply a need for the study of criminal behaviour over time. The concepts of *onset*, *duration*, and *termination*, derived from the criminal careers model are inherently based on the progression of behaviour over time. The concepts of *transitions* and *trajectories* from

the life-course perspective also imply the need to examine the processes of criminal behaviour. These developmental perspectives indicate the need for longitudinal data by emphasizing the movement of a group of offenders from one event to another.

Longitudinal research permits observations over an extended period of time whereas cross sectional data involves a study of individuals at one point in time (Babbie, 1998; Wall and Williams, 1970). Currently there is a debate regarding the value of longitudinal data collection in comparison to cross-sectional data collection (Blumstein et al, 1988a, 1988b; Gottfredson and Hirschi, 1986, 1990; Greenberg, 1985). The debate relates directly to the previously discussed disagreement on the nature of criminal behaviour and what types of criminal entities exist, and is between those who adhere to a developmental perspective versus those that support the notion of persistent heterogeneity in criminal behaviour. Gottfredson and Hirschi (1986, 1990) follow the latter and maintain that there is no value to longitudinal research in criminal behaviour, but rather that cross-sectional research is sufficient for the of study crime.

Esbensen and Menard (1990) believe that Gottfredson and Hirschi's complete dismissal of longitudinal data is not justified, as this methodological choice should depend upon the research questions. Cross-sectional data are *socio-static* as they provide a simultaneous study of the situation at the specific time of inquiry; therefore, this type of data cannot estimate the unfolding of the causal sequencing of events (Singleton et al, 1993; Wall and Williams, 1970). Gottfredson and Hirschi (1986, 1990) believe that longitudinal results are no different from those collected cross-sectionally; furthermore, cross-sectional data are less expensive and take less time to collect. However, Singleton et al (1993) maintain that cross-sectional data are not suitable for making inferences about

process and change, nor are they able to determine direction of causality and temporal ordering of events. Longitudinal data are therefore necessary for this research due to the fact that it examines change and constancy of criminal behaviour over time.

Longitudinal data can be collected *prospectively* and *retrospectively*. Prospective research involves a follow-up period where those being studied are examined over time in order to track their behaviour (Wall and Williams, 1970). Many studies of sex offenders and recidivism rates have been collected prospectively; however, this method of data collection is time consuming, expensive and often the follow-up periods are not substantial enough to capture the true existence and nature of recidivism (McGrath, 1991). Furthermore, it is unclear as to the appropriate length of the follow-up period needed in order to determine recidivism rates, and all studies seem to have differing follow-up lengths with no true justification for their choices (McGrath, 1991).[12]

Retrospective research approximates longitudinal studies in that it examines individuals' histories, but in recollection as opposed to follow-up intervals (Wall and Williams, 1970). Retrospective studies are simpler and cheaper than prospective longitudinal studies which can often take years to accomplish. Also, retrospective studies avoid the problem of attrition, which often plagues prospective studies (Wall and Williams, 1970). Retrospective longitudinal research often relies upon the memory of those under study, which often leads to misrepresentation of events, recall error or erroneous estimations (Blumstein et al, 1988b; Wall and Williams, 1970). However, the data set used

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[12] Motiuk and Brown, 1993 use a 12 - 17 month follow-up whereas others such as Hanson and Bussière, 1996 used a 5 year follow-up, Romero and Williams, 1985 used a 10 year follow-up and Soothill and Gibbens, 1978 used a 24 year follow up.

in this study is of individuals' official criminal records; therefore, recall error, estimation problems and misrepresentation will be avoided. This study will trace the official criminal histories of a particular group of sexual offenders in order to determine the occurrence and timing of recidivism.

Data Set

This data set for the study of sexual offenders and recidivism is official secondary data. Primary data are eyewitness accounts of events by the researcher, whereas these secondary data are indirect evidence obtained from other sources (Singleton et al, 1993). Secondary data are those that have been previously collected, and were not necessarily specifically designed for the purpose of the research questions at hand (Wall and Williams, 1970). There are several problems with secondary data. They should be used for limited and specific purposes, and one has to be wary of the collection process of other researchers (Singleton et al, 1993). Singleton et al. (1993) suggest that data are often collected with a specific purpose in mind which may not be appropriate for a secondary analysis.

Despite the above concerns, secondary data have many advantages as they allow a researcher to focus on analysis rather than collection. The time required for data collection is great, especially with longitudinal data. Secondary data are also cheaper and can potentially cover a wide variety of sources. This expands the number of possible observations which then produces a more comprehensive analysis that could not be attained through primary data collection (Newman, 1997). This particular data set is specific to the study of important aspects of recidivism among sexual offenders, and has never been analyzed. The data were collected with this type of analysis in mind.

This data set was collected from official criminal justice agencies in a large, western, Canadian city. It details the criminal histories of 391 known sexual offenders. These data are estimated from convictions only and, therefore, do not include charges that were not substantiated in court. Unfortunately, criminal agencies are unable to record all criminal behaviour. This leaves certain criminal events undetected (Blumstein et al, 1988b).[13] Nevertheless, these data are unique and provide a great opportunity to study sexual offenders' criminal behaviour. These recidivism data are particularly specific and accessible only through official records. These data allow for an examination of entire criminal histories that would otherwise be inaccessible.

The main advantages of official criminal data are that they allow for the study of the unfolding of criminal events and the exact sequence of those events. Furthermore, other types of data collection of sexual offenders are not feasible. The self-report method would be extremely time consuming and would contain the problems of denial, memory failure and bad estimates of events (Scully, 1990). In addition, these data would only include those offenders who have had police contact. It would not be feasible to attain a sample of 'unknown' sexual offenders. Research surrounding sexual offenders will remain underestimated so long as victim reports and convictions remain at such low levels. At this point in time official data are the most informative way to examine criminal behaviour because all known criminal activities are recorded by criminal justice agencies. Therefore,

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[13] The difficulty of these particular data, (outlined in chapter one) lies in the fact that sexual offences are one of the most under-reported crimes in North America (Brownmiller, 1975; Russell, 1984). Due to the nature of the crime, many survivors of such violations do not come forward, and those who do come forward, often risk unlikely convictions. Within the past decade, the number of reports have increased, yet there remains a gap between self-report victim questionnaires and convictions of offenders (Russell, 1984; Resick, 1993).

despite the problems with official data collection, there is a large amount of information in this type of data, and its analysis is beneficial for the understanding of criminal behaviour.

Many criminological and conventional factors can contribute to the criminal career of an offender. Among those factors are alcohol use, drug use, marital status and employment status which could advance the understanding of recidivism amongst sexual offenders. However, these variables were inconsistently recorded and are, therefore, unavailable in this data set. The particular criminal histories available in the data set do include the exact dates and details of offences as well as the type of offences committed. This allows for the examination of the repetition of a specific crime or a change in type of criminal behaviour. All prison data are available in the data set, including exact dates of incarceration as well as the length of incarceration.[14]

There have been few studies of sexual offenders that concentrate on the pattern of criminal events (McGrath, 1991). As previously stated, much research has concentrated on the effectiveness of different types of treatment,[15] and the social and psychological correlates of recidivism among sexual offenders. However, these studies need to be built upon in order to come to a better understanding of sexual offender's behavioural patterns (McGrath, 1991; Motiuk and Brown, 1993). Because it is known that past criminal behaviour is an important indicator for future behaviour (Motiuk and Brown, 1993), this secondary official data set from criminal justice agencies allows for identification of

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[14] Ethical considerations make it difficult to generate a sample of sexual offenders. All names and identifying characteristics have been removed from the data set and a contract has been signed with police services in order to avoid ethical dilemmas. Regardless of these precautionary measures, all applicable SSHRCC ethical guidelines were followed at all times.

[15] See Sapp and Vaughn, 1991 for an assessment of treatment programs for sexual offenders; and Worsmith and Hanson, 1992 for an overview of Canadian treatment programs.

criminal patterns and changes. This makes the data a rich, unique and valuable source for research with its benefits far outweighing its limitations.

Sampling Frame and Offence Classification

Due to the low base rate of convicted sexual offenders, this sample originally had 399 sexual offenders. These offenders were convicted for sexual offences in a large, western, Canadian city between January 1, 1996 and December 30, 1996. The sampling frame was the Police Information Management System (PIMS). All criminal histories, both sexual and non-sexual, were collected from Alberta Corrections Management Information System (COMIS). These data were transferred into the Statistical Package for Social Sciences (SPSS) for analysis.

Originally there were four female sexual offenders in the sample. However, there is evidence that there are many important differences between male and female sexual offenders (see Blanchette, 1996). Due to this evidence, and in order to avoid contamination of the data, the female offenders were removed from the sample. Four other cases were removed from the sample due to errors in coding that could not be corrected. The sample was thus reduced to 391 convicted male sexual offenders. For all 391 offenders, the data set contains all of their unique criminal histories as well as their incarceration information.

A police VCD code originally classified each crime. A VCD code is a six-digit code that determines the type of offence committed. Appendix A outlines a list of the original police coding and demonstrates the range of the possible crime types.[16] Appendix

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[16] These start only with the base number of the beginning of the code, but each crime has a separate six-digit code.

B outlines the sexual offence classification complete with the corresponding Criminal Code classification. These codes indicate the different types of sexual crimes as well as the changes in the law over the years and are thus captured in the data set. These VCD codes allowed for the classification of sexual and non-sexual offences. All criminals committing crimes coded from 130000 to 139999 indicate sexual offences and all others were coded as non-sexual offences.[17]

As stated in the previous chapter the offenders were classified into subgroups for analysis over four offence transitions. As all individuals in the data set have committed a sexual offence at some point during their criminal histories, this research will categorize the offenders into five separate mutually exclusive and exhaustive groups. The first group will be those whose first and second offence were both sexual in nature. The second group will be those whose first offence was sexual, and whose second was non-sexual. The third group will be those whose first offence was non-sexual, and whose second offence was sexual. The fourth group consists of those whose first and second offence was non-sexual. The last group will be those who do not re-offend (censored cases). The same type of classification will be used through all four offence transitions.

Event History Analysis: Survival Analysis

Event history analysis is an ideal method for this research because it is interested in patterns and correlates of occurrences of events over time (Yamaguchi, 1991). Event history is an excellent method for analyzing developmental crime patterns as it can examine

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[17] Crimes not coded as criminal code violations are not considered offences.

the frequency of offending, the length between crimes and the length of a criminal career (Schmidt and Witte, 1988). Event history analysis includes a variety of non-linear statistical procedures that examine patterns and correlates of the occurrence and nonoccurrence of events (Allison, 1984; Singer and Willet, 1991; Yamaguchi, 1991). Event history is not a new statistical technique and its oldest form is the life table. The life table has been historically used to examine life expectancy of individuals at certain points in time, but can also be used to examine events during specific time intervals (Allison, 1984). Event history analysis places emphasis on events over time. An event is defined as "some qualitative change that occurs at a specific point in time" (Allison, 1984:9). Survival analysis allows for examination of social processes, as it is not merely the occurrence of an event that is important to this research, but also the timing of that event (Allison, 1984).

Longitudinal data are required for this type of analysis, because of the dimension of time in this research. Time between one event and another is central to this analysis, and event history analysis is ideal for the examination of time. Temporal ordering of events is also important in this analysis (Allison, 1984). Multiple regression is not robust, as a statistical method, to model time. Also, with this type of data set event history analysis is appropriate as it can handle missing cases. This is a feature other statistical methods such as multiple regression cannot handle.

Traditionally the question of *if* an offender is going to re-offend has been examined, however this research moves beyond that to examine *when* an offender will re-offend. Survival analysis is necessary for answering both questions simultaneously. Survival analysis can be used to examine criminal behaviour and allows for predictions and

estimations of timing of events (Yamaguchi, 1991). *Survival rates* refer to the proportion of individuals that did not have a particular event occur during the time of study (Yamaguchi, 1991). This statistic allows for a calculation of the average length of time before re-offence. Survival rate can either stay the same or decrease due to the occurrence of the event (see Motiuk and Brown, 1993).[18]

In this analysis, offending is the specific *target event*. The event is defined as an actual conviction for a criminal offence. Event histories analyze duration data which includes the event and the time of non-occurrence of the event (Yamaguchi, 1991). This analysis will deal with the number of events (offences), both sexual and non-sexual, up until the fifth offence.[19] Most importantly, the data will allow for the examination of the length of time between events and the risk of re-offence over time in order to track the patterns of criminal behaviour of sexual offenders.

In event history analysis, there are also the concepts of *risk period, risk set* and *hazard rate*. The *risk period* is the period of time when the event can occur. For sexual offenders that are incarcerated, there is no risk of the event occurring. The opportunity to offend must be present, and therefore, the offender must be within the larger community. The distinction between risk and non-risk requires the assumption that all sexual offenders who are not incarcerated are at risk of re-offending (Yamaguchi, 1991). Therefore, the time spent incarcerated was removed from the time between offences. The *risk set* is the

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[18] Survival Rate is calculated as follows:
S(t) = number of offenders surviving longer than *t*
              total number of offenders
where *t*= interval time (Lee,1992)

[19] Offences went up to a possible 38 convictions, however the numbers decreased significantly after the fifth offence and therefore the fifth offence was determined as the cutoff point for the frame of this research.

group of individuals that are at risk of experiencing the event at a certain point in time. This group excludes those that have already experienced the event, those that have already re-offended, and excludes those not considered in the risk period (Allison, 1984).

The *hazard rate* (*h(t)*) is the rate of occurrence of offences during the risk period for the risk set in a given interval (Yamaguchi, 1991). According to Allison (1984) the hazard rate can estimate the probability that an individual will re-offend during a specific time period provided that the individual has not already re-offended. The hazard rate is an unobserved dependent variable that demonstrates the occurrence and the timing of events for the offenders. It is the conditional failure rate, or the probability of failure during a given interval (Lee, 1992). For the purpose of this research, the hazard rate measures the probability that an offender will re-offend during a given six-month interval. Those that do not re-offend within the six-month interval will have survived and will be represented in the *cumulative proportion surviving at end*. The change in the hazard rate in each interval represents the different probabilities of re-offending during that particular interval.[20]

Also included in the analysis is the *median survival time*, which demonstrates the time when 50% of the sample have experienced the target event. The median is used as the central tendency statistic in event history analysis. This is done because a small number of offenders that either re-offend extremely quickly or take a long time to re-offend, will cause the mean survival time to be disproportionately skewed in one direction or the other (Lee, 1992). One must always keep in mind when using event history analysis that even if the

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[20] hazard rate or *h(t)* is defined as:

number of offenders re-offending in the interval at time *t*

   (number of offenders surviving at *t*)(interval width)   (Lee,1992)

event does not occur in the period of study, that it may eventually occur. Those sexual offenders that have not re-offended during the sampling time frame are considered *censored cases* because it is unknown as to whether these individuals will ever experience the event (Allison, 1984).

This research will track each individual sexual offender's history from his first conviction, which could either be sexual or non-sexual in nature through to his conviction of a sexual offence between January 1, 1996 to December 30, 1996. Each history will be unique in length and starting date, although there are many who have only been convicted of one offence in the specific time period of data collection. All of these cases will be *right censored* (Allison, 1984) since the analysis will be unable to determine whether they will re-offend in the future.

Previous research of recidivism of sexual offenders is interested in the first re-offence.[21] However, this analysis follows through to the fifth offence in order to track the pattern of criminal behaviour of this group of male sexual offenders. This analysis will examine whether a criminal event will occur and the length of time for that event to occur throughout the four of transitional periods. This will facilitate an examination of the previously outlined research questions. It is recognized that the data does not lend itself to robust theoretical conclusions; however, this is a new empirical undertaking and is making contributions to our understanding of sexual offenders' patterns of recidivism.

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[21] For example, Motiuk and Brown's (1993) study of survival rates of released sexual offenders used event history analysis, this study was a prospective longitudinal study that followed the offenders from release to possible suspension of parole, using a 17 month follow-up period.

CHAPTER THREE:

FINDINGS

In chapter one I discussed the importance of differentiation as an integral part of social change. The dynamics of social differentiation can be explored by examining stability and instability in criminal behaviour over time. This research empirically examines the frequency of offences and sequencing of different or similar types of offending during the initial stages of offenders' criminal behaviour. The criminal careers paradigm implies an examination of timing and frequency of offending and duration of criminal lifestyles. I examine whether sexual offenders appear to gravitate towards offence specialization early in their criminal careers or whether they are a heterogeneous group of offenders that commit a diversity of crimes. This chapter also examines the patterns of offending among sexual offenders in order to observe the sequence, pace and possible termination of criminal careers over four offence transitions.

This analysis is of four subgroups of sexual offenders as well as the censored cases in order to examine the frequency of offences and *if* and *when* they move from one event to another. As previously stated, these four subgroups of recidivists are the (1) sexual to sexual offenders, (2) sexual to non-sexual offenders, (3) non-sexual to sexual offenders, and (4) non-sexual to non-sexual offenders.[22] I begin with basic descriptive statistics in

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[22] This subgroup classification, along with the fifth group being the censored cases, will remain throughout the analysis of the four offence transitions, this will facilitate comparisons within and amongst these groups as well as between the transitions.

each of the four transitional periods in order to demonstrate the recidivism rates, the types of criminal offences and the frequency of those offences. Then I explore the survival rates using life tables in order to compare the subgroups of criminals and look for specific forms of diversity and stability within groups, between groups and between offence transitions. The survival analysis examines general trends of consistency and change by using the median survival times, the lengths of time for entire groups to re-offend, and the hazard rates.

First Transition

This first section deals with the first two offences for these sexual offenders. This examination of sexual offenders will begin with basic descriptive statistics, as an overview of the sources of diversity between the first and second offence. I examine the number of offences, the type of offences, the number of recidivists and the number of censored cases in order to estimate possible patterns of variation. Then I examine the median survival times and the length of time before re-offence. Lastly, I explore the similarities and differences in hazard rates and survival curves among the four groups of recidivists. This will allow for an examination of the differences and similarities among this group of sexual offenders.

Table 3.1: First Offence Type

Type of Offence	#	%
Sexual offences	228	58.3
Non-sexual offences	163	41.7
No offence	0	0
Total	391	100

Table 3.1 shows the breakdown of sexual and non-sexual offences for the first

offence. Of the 391 initial offenders, 58.3% (N=228) commit a sexual offence for their first

offence. Table 3.2 shows the breakdown for the second offence, 41.4% (N=162) of the

offenders only committed one offence within the time of data collection, and are therefore

right censored. All 162 of these cases are sexual offences due to the fact that every

individual has to have committed a sexual offence at some point in their criminal career to

be included in the data set. Given that this is their only offence it can be concluded that it is

a sexual offence.

Table 3.2: Second Offence Type

Type of Offence	#	%
Sexual recidivists	91	23.3
Non-sexual recidivists	138	35.3
Censored cases	162	41.4
Total	391	100

The combination of both the sexual and non-sexual re-offences in Table 3.2

demonstrates that 58.6% (N=229) of these offenders are recidivists. This finding is

comparable to the findings of Romero and Williams (1985) who found a 57% general

recidivism rate for sexual offenders and The United States Department of Justice (as cited

in McGrath, 1991) also found that 60% of sexual offenders re-offend. Brannon and Troyer

(1991) found a general re-offence rate as low as 34%, but they only had a 10 to 12 month

follow-up period and this may account for the low recidivism rate. Table 3.2 shows that in

the first re-offence 23.3% (N=91) were sexual recidivists and 35.3% (N=138) were non-

sexual recidivists.[23] These numbers show a much higher sexual recidivism rate than in

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[23] Throughout this entire analysis the most severe non-sexual conviction was for assault. There were no murder offences within the data set.

other studies. Brannon and Troyer (1991) found a sexual re-offence rate as low as 1.9%, Kahn and Chambers (1991) found a sexual recidivist rate of 7.5% and Romero and Williams (1985) found a sexual re-offence rate of 11.3%.

This high sexual re-offence rate of 23.3% (N=91) is most likely an artifact of the data in that all of these offenders have committed a sexual offence at some point in this data set. The first sexual offence is not necessarily the offender's first offence. Table 3.1 shows that 41.7% (N=163) of the first offences are non-sexual. This provides an early glimpse into the heterogeneity of sexual offenders; most sexual recidivism research concentrates on the first sexual offence and then examines the re-offence rate. However, many sexual offenders also have previous records of non-sexual crimes, (McGrath, 1991; Kahn and Chambers, 1991; Soothill and Gibbens, 1978) which shows that sexual offences may be part of a larger pattern of criminal behaviour for many offenders (Kahn and Chambers, 1991).

Table 3.3 indicates the five separate patterns of offence. The largest group in this first transition is the censored cases (N=162), and after the initial offence they do not re-offend in the frame of this analysis. As previously stated there is no way of determining whether they will re-offend in the future. In fact, the criminal careers paradigm maintains that the only way of knowing for certain that one will not re-offend is in death (Blumstein et al, 1988a). The largest group of recidivists is the non-sexual to non-sexual offenders who make up 28.4% (N=111) of the cases. This again indicates the centrality of the non-sexual criminal history of sexual offenders, given that such a large amount of offenders have not committed a sexual offence in either of the first two offences.

Table 3.3: First to Second Offence

Offender Group	#	%
Sexual to sexual	39	10.0
Sexual to non sexual	27	6.9
Non-sexual to sexual	52	13.3
Non-sexual to non-sexual	111	28.4
Censored cases	162	41.4
Total	**391**	**100.0**

The second largest group of recidivists are those whose first offence was non-sexual and second was sexual in nature. This group makes up 13.3% (N=52) of the cases and they are followed by the sexual to sexual offenders who only make up 10% (N=39) of the cases. However, the smallest group is the sexual to non-sexual offenders who make up 6.9% (N=27) of the cases in this first transition. This smallest group was an unexpected result, especially in relation to previous research, which demonstrated that non-sexual recidivism of already convicted sexual offenders, should be much higher. For example, Romero and Williams (1985) found a 45.7% non-sexual recidivism rate, and Kahn and Chambers (1991) found a 42.5% non-sexual recidivism rate for sexual offenders.

The previous descriptive tables have provided evidence of heterogeneity among sexual offenders. The cumulative survival and hazard rates for the subgroups of sexual offenders as they move from the onset of conviction to a second conviction are modeled in Table 3.4. The life table is a detailed analysis of the timing of re-offence, the risk of re-offence and the shifts between offences. This analysis selects parts of the life table to examine the research questions, rather than examining each 6-month interval. The median survival times are the measure of central tendency used in this analysis and show the length of time it takes for half of the offenders to re-offend. The shortest median survival time is for the sexual to non-sexual offender group at 5.40 months, followed by the sexual to

sexual offender group with a median survival time of 6.48 months. The non-sexual to non-sexual offenders have a median survival time of 9.00 months, and the longest median survival time is for the non-sexual to sexual offender group at 16.80 months.

Not only do the sexual to non-sexual offender group have the smallest median survival time they also only take 24 months (2 years) for all to re-offend, therefore, this group of offenders has the highest risk for re-offending the fastest. Consequently, even though they were the smallest group of recidivists, their recidivism would be captured in a short follow-up period of study, whereas other re-offences perhaps need a longer follow-up period in order to capture the recidivism rate. The second fastest group to re-offend is the non-sexual to non-sexual offenders; however they take 126-months (10.5 years) for every offender to re-offend. This is substantially longer than the sexual to non-sexual offender group, and longer than many follow-up periods of most sexual recidivism research.

The next group is the non-sexual to sexual offenders who take 192 months (16 years) for the entire subgroup to recidivate, and the sexual to sexual offenders take the longest at 216-months (18 years). This exemplifies the need for long follow-up periods or retrospective data. Perhaps the reason recidivism rates, in previous research, are as low as they are for sexual re-offences is because of an insufficient follow-up period (Hanson and Bussière, 1998; and McGrath, 1991). Hanson and Bussière (1998) in their meta-analysis of 61 follow-up studies of sexual offender recidivism found that the mean follow-up period was 5.5 years and the median was 4 years. Many of these previous studies might be unable to capture the recidivism rates of sexual offenders.

Table 3.4: Transition Rates from First Offence to Second Offence for Sexual Offenders

Interval (in months)	Sexual Offence to Sexual Offence			Sexual to Non-Sexual Offence		
	Number Entering Interval	Cumulative Proportion Surviving at End	Hazard Rate	Number Entering Interval	Cumulative Proportion Surviving at End	Hazard Rate
0	39	.513	.644	27	.444	.769
6	20	.359	.353	12	.333	.286
12	14	.333	.074	9	.185	.571
18	13	.282	.167	5	.037	1.333
24	11	.205	.316	1	.000	2.000
30	8	.205	.000			
36	8	.205	.000			
42	8	.205	.000			
48	8	.179	.133			
54	7	.179	.000			
60	7	.154	.154			
66	6	.154	.000			
72	6	.154	.000			
78	6	.154	.000			
84	6	.128	.182			
90	5	.128	.000			
96	5	.128	.000			
102	5	.128	.000			
108	5	.128	.000			
114	5	.077	.500			
120	3	.077	.000			
126	3	.051	.400			
132	2	.051	.000			
138	2	.051	.000			
144	2	.051	.000			
150	2	.051	.000			
156	2	.051	.000			
162	2	.051	.000			
168	2	.026	.667			
174	1	.026	.000			
180	1	.026	.000			
186	1	.026	.000			
192	1	.026	.000			
198	1	.026	.000			
204	1	.026	.000			
210	1	.026	.000			
216	1	.000	2.000			
	Median Survival Time: 6.48 months			Median Survival Time: 5.40 months		

hazard rates of .000 indicates that during that particular interval there is no terminating event, there is no re-offending during that interval

Table 3.4: Transition Rates from First Offence to Second Offence for Sexual Offenders

Interval (in months)	Non-Sexual to Sexual Offence			Non-Sexual to Non-Sexual Offence		
	Number Entering Interval	Cumulative Proportion Surviving at End	Hazard Rate	Number Entering Interval	Cumulative Proportion Surviving at End	Hazard Rate
0	52	.711	.337	111	.559	.567
6	37	.577	.209	62	.441	.234
12	30	.481	.182	49	.396	.107
18	25	.423	.128	44	.351	.120
24	22	.365	.146	39	.261	.294
30	19	.346	.054	29	.216	.189
36	18	.327	.057	24	.162	.286
42	17	.327	.000	18	.144	.118
48	17	.308	.061	16	.126	.133
54	16	.269	.133	14	.117	.074
60	14	.250	.074	13	.090	.261
66	13	.211	.167	10	.072	.222
72	11	.192	.095	8	.045	.461
78	10	.173	.105	5	.027	.500
84	9	.154	.118	3	.018	.400
90	8	.135	.133	2	.009	.667
96	7	.135	.000	1	.009	.000
102	7	.115	.154	1	.009	.000
108	6	.115	.000	1	.009	.000
114	6	.077	.400	1	.009	.000
120	4	.058	.286	1	.009	.000
126	3	.038	.400	1	.000	2.000
132	2	.038	.000			
138	2	.038	.000			
144	2	.038	.000			
150	2	.038	.000			
156	2	.038	.000			
162	2	.038	.000			
168	2	.038	.000			
174	2	.038	.000			
180	2	.038	.000			
186	2	.038	.000			
192	2	.000	2.000			
198						
204						
210						
216						
	Median Survival Time: 16.80 months			Median Survival Time: 9.00 months		

The hazard rate ($h(t)$) captures the risk factor for the subgroups of offenders in each 6-month interval. The hazard rates are largest for all offender groups in the first 6-month interval. The largest hazard rate is for the sexual to non-sexual offenders at .769 which leaves only 44.4% remaining at the end of the interval. For this group the $h(t)$ remains high through all intervals and in the fourth interval goes up to 1.333; however there are only 5 cases in this interval and a drop of 4 cases which affects the hazard rate substantially. The sexual to sexual offenders have a hazard rate of .644 in the first interval with 51.3% surviving at the end. The non-sexual to non-sexual offender group have a .567 $h(t)$ in the first interval which leaves 55.9% surviving at the end. The smallest hazard rate in the first interval is .337 for the non-sexual to sexual offenders with 71.1% surviving at the end.[24]

When all measures of timing are taken into account the non-sexual to sexual offender group take the longest to recidivate. They have a much more gradual survival curve than the other three offender groups. This suggests that non-sexual offenders may be more reluctant to re-offend sexual.[25] Researchers comment that sexual offenders commit non-sexual offences, but that non-sexual offenders rarely commit sexual offences (Hanson and Bussière, 1998). However, this analysis demonstrates that many sexual offenders begin with non-sexual offences (41.7%) and that although they may be reluctant to move into sexual crimes, they do commit sexual offences.

Previous sexual offender research tends to concentrate on the initial re-offence, which limits our understanding of frequency, escalation or desistance among various

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[24] See Figure 3.1 in Appendix C for an illustration of the survival curves for the four subgroups of offenders in this first transition.
[25] The sexual to sexual offender group also have a long survival time, potentially liking timing to the type of re-offence rather than the initial offence.

individuals or groups of offenders. Although most research includes criminal histories and discusses prior non-sexual offences as key variables in predicting recidivism (McGrath, 1991; Kahn and Chambers, 1991; Romero and Williams, 1985), and some discuss the importance of sexual deviance, (Longo and Groth, 1983; Marshall et al, 1991; Gerdes et al, 1995), none make non-sexual criminal offences central to their analysis. This analysis starts at the beginning of the criminal career making sexual offences part of different patterns of criminal behaviour. Given that the most important predictor of future criminal behaviour is often defined as past criminal behaviour (McGrath, 1991; Lattimore et al, 1995), it seems important to include the entire offence history in the analysis of change or stability over time. Therefore, this next section deals with the movement from the second to third offences, in order to demonstrate the importance of all criminal behaviour in the patterns of sequence and pace of re-offence.

Second Transition

The first transition indicated some support for the concept of heterogeneity among sexual offenders. However, the results may be specific to that particular transition. Therefore, these findings are compared and re-evaluated with the analysis of the transition from the second to third offence. This will allow an analysis of whether the patterns change or if the same patterns emerge in the second transition. The second transition has no systematic sexual offender research to weigh against; therefore, it is primarily compared to the first re-offence in order to detect similarities and differences. Again this analysis begins with simple descriptive statistics of the types of offence and examines the different offender groups.

Table 3.5: Third Offence Type

Type of Offence	#	%
Sexual recidivists	54	23.6
Non-sexual recidivists	116	50.6
Censored cases	59	25.8
Total	229	100

Table 3.2 showed the breakdown of second offences and there were 229 recidivists. Table 3.5 shows these 229 offenders moving to possible third offence, 25.8% (N=59) of the cases do not commit a third offence and are therefore censored at this point in the analysis. The combination of both the sexual and non-sexual recidivists show that 74.2% (N=170) are third time offenders. This is a large increase from the initial re-offence, where only 58.6% were second time offenders. As previously stated other sexual recidivism studies found recidivism rates to range from 30% to 60%, which are quite a bit lower than this 74.2% finding; however, these were initial re-offences. This indicates a change in re-offence patterns and is perhaps due to the fact that as the number of crimes increase, so does the chance of a new re-offence (Brown and Forth, 1997).

The breakdown of this second re-offence shows that 50.6% (N=116) were non-sexual crimes and 23.6% (N=54) were sexual crimes. The specific recidivism rate indicates some stability, as it was 23.3% in the first transition. However, the non-sexual recidivism rate has increased from 35.5% in the first transition to 50.6% in the second transition. There are more non-sexual offences, which also demonstrates uniformity across the two transitions. This indicates, as it did in the first transition, the importance of the non-sexual criminal activities of sexual offenders.

Table 3.6: Second to Third Offence

Offender Group	#	%
Sexual to sexual	22	9.6
Sexual to non sexual	22	9.6
Non-sexual to sexual	32	14
Non-sexual to non-sexual	94	41
Censored cases	59	25.8
Total	229	100

Table 3.6 indicates the five separate offence patterns for the transition from second to third offence. In the first transition the largest group was the censored cases; however, the largest group is now the non-sexual to non-sexual offenders which make up 41.0% (N=94) of the cases. These offenders make up a much larger proportion than in the previous transition where they accounted for only 28.4% of the cases. This again suggests that many sexual offenders commit numerous non-sexual offences in their criminal careers. The censored group makes up 25.8% (N=59) of the cases; this indicates that fewer offenders are dropping out of criminal activity as the number of crimes increase. This is evidence that perhaps these offenders have become more entrenched in aspects of criminal lifestyles.

The next largest group in this transitional stage is the non-sexual to sexual offender group which make up 14.0% (N=32) of the cases. This group makes up a similar proportion to the first transition where they made up 13.3% of the cases. It appears that the same proportion of offenders as in the previous transition are moving from non-sexual offences to sexual offences. This indicates a similar pattern of re-offending in both transitions. Both the sexual to sexual offender group and the sexual to non-sexual offender group each make up 9.6% (N=22) of the cases. The sexual to sexual offenders make up

approximately the same number as in the first transition, at 10.0%. The sexual to non-sexual offender group has only a slight increase in size, as they made up 6.9% in the first transition.

The descriptive analysis shows many similarities and few differences between the first two transitions. There is stability in the numbers within the offender subgroups over the offence transitions, however there is an increase in non-sexual offences. In moving into the event history analysis of the second transition, different types of patterns of timing and risk begin to emerge. The survival and hazard rates in Table 3.7 estimate transition probabilities in the subgroups as they continue beyond a second to a third offence. The first noticeable difference is for the sexual to non-sexual offender group, and it becomes evident that the pattern of re-offence is quite different. The median survival times again are the first statistic on timing. The smallest median survival time is for the non-sexual to non-sexual offenders at 5.88 months. This is shorter than in the first transition (9.00 months) and now shorter than the sexual to non-sexual offender group.

The sexual to non-sexual group have a median survival time of 7.50 months in this second transition which is longer than in the first transition (5.40 months). The sexual to sexual offender group have a median survival time of 13.98 months which is more than double that of the first transition (6.48 months). The non-sexual to sexual offender group still have the longest median survival time at 18.00 months. This is longer than in the previous transition where it was 16.80 months. These median survival times suggest that those who re-offend sexually take longer than those who re-offend non-sexually.

Table 3.7: Transition Rates from Second Offence to Third Offence for Sexual Offenders					
	Sexual Offence to Sexual Offence			Sexual to Non-Sexual Offence		
Interval (in months)	Number Entering Interval	Cumulative Proportion Surviving at End	Hazard Rate	Number Entering Interval	Cumulative Proportion Surviving at End	Hazard Rate
0	22	.591	.514	22	.546	.588
6	13	.545	.080	12	.364	.400
12	12	.409	.286	8	.136	.909
18	9	.409	.000	3	.091	.400
24	9	.364	.118	2	.091	.000
30	8	.273	.286	2	.091	.000
36	6	.273	.000	2	.091	.000
42	6	.227	.182	2	.091	.000
48	5	.227	.000	2	.091	.000
54	5	.227	.000	2	.091	.000
60	5	.091	.857	2	.045	.667
66	2	.091	.000	1	.045	.000
72	2	.091	.000	1	.045	.000
78	2	.091	.000	1	.045	.000
84	2	.091	.000	1	.045	.000
90	2	.091	.000	1	.000	2.000
96	2	.091	.000			
102	2	.045	.667			
108	1	.045	.000			
114	1	.045	.000			
120	1	.045	.000			
126	1	.045	.000			
132	1	.000	2.000			
138						
144						
150						
156						
162						
	Median Survival Time: 13.98 months			Median Survival Time: 7.50 months		

Table 3.7: Transition Rates from Second Offence to Third Offence for Sexual Offenders

Interval (in months)	Non-Sexual to Sexual Offence			Non-Sexual to Non-Sexual Offence		
	Number Entering Interval	Cumulative Proportion Surviving at End	Hazard Rate	Number Entering Interval	Cumulative Proportion Surviving at End	Hazard Rate
0	32	.750	.286	94	.489	.686
6	24	.563	.286	46	.277	.556
12	18	.500	.118	26	.213	.261
18	16	.469	.064	20	.160	.286
24	15	.344	.308	15	.117	.308
30	11	.313	.095	11	.085	.316
36	10	.281	.105	8	.085	.000
42	9	.281	.000	8	.075	.133
48	9	.250	.118	7	.075	.000
54	8	.250	.000	7	.053	.333
60	8	.219	.133	5	.053	.000
66	7	.219	.000	5	.032	.500
72	7	.219	.000	3	.011	1.000
78	7	.188	.154	1	.000	2.000
84	6	.156	.182			
90	5	.125	.222			
96	4	.094	.286			
102	3	.063	.400			
108	2	.063	.000			
114	2	.063	.000			
120	2	.031	.667			
126	1	.031	.000			
132	1	.031	.000			
138	1	.031	.000			
144	1	.031	.000			
150	1	.031	.000			
156	1	.031	.000			
162	1	.000	2.000			
	Median Survival Time: 18 months			Median Survival Time: 5.88 months		

In examining the length of time for all individuals to re-offend, there is evidence of differentiation between the transitions but the groups have become increasingly similar to each other in this respect. The non-sexual to non-sexual offenders take the least amount of time for all offenders to re-offend at 78 months (6.5 years), whereas in the first transition they took 126-months for all to commit a second offence. They now take less time than the first re-offence and less time than the sexual to non-sexual offender group. The sexual to non-sexual group take 90 months (7.5 years) for all to re-offend which is much longer than in the first transition where this group only took 24 months for all to re-offend. The sexual to sexual offenders take 132 months (11 years) for all to re-offend for a third time. It is noted that this group took the longest to re-offend in the previous transition (216-months). Now the non-sexual to sexual offenders take the longest for all to re-offend at 162 months (13.5 years). This is still shorter than in the first transition where they took 192 months. With the exception of the sexual to non-sexual offender group, all the groups take less time for the entire group to re-offend.

The hazard rates for the second transition remain high in the first 6-month interval for all offender groups as they did in the first transition. The non-sexual to non-sexual offenders have the highest $h(t)$ in the first interval at .686 with only 48.9% surviving, which is higher than in the first transition. The $h(t)$ remains high in the second interval at .556 with only 27.7% (N=26) remaining at the end of the interval. Where in the first transition the sexual to non-sexual offenders had the highest hazard rate in the first interval at .769, their $h(t)$ is now .588 with 54% (N=12) remaining at the end of the interval. The $h(t)$ for this group remains high at .400 in the second interval and increases to .909 in the third

interval; at the end of 12 months there are only 13.6 (N=3) surviving. Although the last cases take longer than a year to re-offend, the same direct drop that was seen in the first transition is evident in this offence transition.[26]

The hazard rate in the second transition in the first interval for the sexual to sexual offenders is .514 as the cases drop from 22 to 13. This is lower than in the first transition where the $h(t)$ was .644 in the first interval. The smallest hazard rate in this first interval remains the $h(t)$ for the non-sexual to sexual offender group at .286 with 75% still surviving at the end of the interval. Furthermore, this is smaller than in the first transition where it was .337. The non-sexual to sexual offender group hold the same $h(t)$ in the second interval at .286 and the largest $h(t)$ in the fifth interval at .308. The $h(t)$'s remain relatively low throughout the entire transition, represented by the gradual curve in Appendix C, Figure 3.2.

The high hazard rates in the first 6-month interval for all subgroups, except the sexual to non-sexual, indicate differentiation within subgroups. The pattern of re-offence shown in the length of time for all to re-offend indicates two important forms of diversity. The first is that all the subgroups have closer lengths of time for the entire group to re-offend than they did in the first transition indicating differentiation between transitions. Secondly, the rates of re-offence represented in these life tables seem to show a dependence on the type of re-offence rather than the initial offence. Those who re-offend non-sexually tend to take a shorter amount of time for the entire group to re-offend, and have shorter median survival times than those who re-offend sexually. This indicates diversity between

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[26] See Appendix C: Figure 3.2 for a view of the of the survival curves for the second transition.

the groups who re-offend sexually and those who re-offend non-sexually. This pattern also existed to a lesser degree in the first transition. The second transition shows a certain amount of stability, however, the subgroups show some variation from the previous transition.

Third Transition

The second transition, from the second to third offence, shows evidence that there was stability in the proportions for each of the groups as they moved from the second offence to the third offence. The only important difference in the group numbers was the decrease in the censored group and the subsequent increase in the non-sexual to non-sexual group. However, the life table in the second transition indicated some changes from the first transition as well as differences between and within the subgroups of criminals. For this third transition there is again no systematic sex offender research for comparison. This third transition is instead compared to the previous transition in order to look for stability and instability in and between the subgroups, as well as change and consistency between the transitions.

Table 3.8: Fourth Offence Type

Type of Offence	#	%
Sexual recidivists	42	24.7
Non-sexual recidivists	80	47.1
Censored cases	48	28.2
Total	170	100

Of the original sample (N=391), 31.2% (N=122) commit at least four offences. Table 3.8 shows the breakdown of the third re-offence or fourth offence. This is the

movement of the 170 third time offenders as they move to either a fourth offence or they desist from offending. In the previous transition the censored cases made up 25.8% of the total cases, similarly now make up 28.2% (N=48). In summing the sexual and non-sexual re-offences, 71.8% (N=122) are recidivists. This is very similar to the previous transition where the general recidivism rate was 74.2%. In this third re-offence 24.7% (N=42) commit a sexual offence, and 47.1% (N=80) commit a non-sexual offence. These numbers show stability between transitions. In the previous transition 25.8% were sexual recidivists and 50.6% were non-sexual recidivists. Again, there are more non-sexual offences than sexual offences. This aspect of re-offending has remained stable throughout the transitions.

Table 3.9:Third to Fourth Offence

Offender Group	#	%
Sexual to sexual	17	10
Sexual to non-sexual	10	5.9
Non-sexual to sexual	25	14.7
Non-sexual to non-sexual	70	41.2
Censored cases	48	28.2
Total	170	100

Table 3.9 shows the breakdown of the five separate offence patterns for the transition from third to fourth offence. The largest group remains the non-sexual to non-sexual subgroup who make up 41.2% (N=70) of the cases. This statistic is almost identical to the previous transition where they made up 41.0% of the cases. The censored cases are the next largest group making 28.2% of the cases (N=48). The same proportion of offenders are desisting from criminal activity as in the last transition.

The non-sexual to sexual offenders make up 14.7% (N=25) of the cases which is again almost identical to the previous transition where they made up 14% of the offenders. The sexual to sexual offender groups make up 10% (N=17) of the cases, the same as in the

second transition where they made up 9.6% of the cases. The smallest group is now the sexual to non-sexual offenders who only make up 5.9% (N=10) of the cases, which is smaller than in the previous transition where they made up 9.6% of the cases. The fact that these statistics are largely similar across these two transitions indicates stability between offence transitions. There are however, differences between offender groups.

Table 3.10 is the life table for the third transition, it further illustrates patterns of heterogeneity between and among the four subgroups of sexual offenders as they move from a third to a forth conviction. Certain patterns remain, but there are some notable differences. There seems to be a continued decrease in the median survival times for the subgroups of offenders. The shortest median survival time is now 4.26 months for the sexual to non-sexual offender group, which is shorter than in the previous transition where it was 7.50 months. It is also now shorter than the non-sexual to non-sexual offenders who had the shortest median survival time in the previous transition of 5.88 months. Their median survival time is now 4.86 months, which is still shorter than in the previous transition.

The sexual to sexual offender group have a median survival time of 5.10 months, which is also shorter than the shortest median survival time in the previous transition. In comparison, the median survival time is less than half for this group where it was a time of 13.98 months in the previous transition. The non-sexual to sexual offender group again have the longest median survival time at 9.78 months; however, it is much shorter than in the second transition where it was 18.00 months. There is indication of change between the transitions when examining the timing of re-offence.

Table 3.10: Transition Rates from Third Offence to Fourth Offence for Sexual Offenders

Interval (in months)	Sexual Offence to Sexual Offence			Sexual to Non-Sexual Offence		
	Number Entering Interval	Cumulative Proportion Surviving at End	Hazard Rate	Number Entering Interval	Cumulative Proportion Surviving at End	Hazard Rate
0	17	.412	.833	10	.300	1.077
6	7	.353	.154	3	.200	.400
12	6	.235	.400	2	.000	2.000
18	4	.118	.667			
24	2	.059	.667			
30	1	.000	2.000			
36						
42						
48						
54						
60						
66						
72						
78						
84						
90						
96						
102						
108						
114						
120						
126						
132						
138						
144						
150						
156						
162						
168						
174						
180						
186						
192						
198						
	Median Survival Time: 5.10 months			Median Survival Time: 4.26 months		

Table 3.10: Transition Rates from Third Offence to Fourth Offence for Sexual Offenders

Interval (in months)	Non-Sexual to Sexual Offence			Non-Sexual to Non-Sexual Offence		
	Number Entering Interval	Cumulative Proportion Surviving at End	Hazard Rate	Number Entering Interval	Cumulative Proportion Surviving at End	Hazard Rate
0	25	.600	.500	70	.386	.887
6	15	.440	.307	27	.214	.571
12	11	.360	.200	15	.143	.400
18	9	.200	.571	10	.114	.222
24	5	.120	.500	8	.086	.286
30	3	.120	.000	6	.071	.182
36	3	.120	.000	5	.071	.000
42	3	.080	.400	5	.057	.222
48	2	.040	.667	4	.057	.000
54	1	.040	.000	4	.057	.000
60	1	.040	.000	4	.057	.000
66	1	.040	.000	4	.057	.000
72	1	.040	.000	4	.057	.000
78	1	.040	.000	4	.029	.667
84	1	.040	.000	2	.029	.000
90	1	.040	.000	2	.029	.000
96	1	.040	.000	2	.014	.667
102	1	.040	.000	1	.014	.000
108	1	.040	.000	1	.000	2.000
114	1	.040	.000			
120	1	.040	.000			
126	1	.040	.000			
132	1	.040	.000			
138	1	.040	.000			
144	1	.040	.000			
150	1	.040	.000			
156	1	.040	.000			
162	1	.040	.000			
168	1	.040	.000			
174	1	.040	.000			
180	1	.040	.000			
186	1	.040	.000			
192	1	.040	.000			
198	1	.000	2.000			
	Median Survival Time: 9.78 months			Median Survival Time: 4.86 months		

In examining the length of time for all to re-offend the sexual to non-sexual offenders take the least amount of time to re-offend at 12 months (1 year). This is substantially shorter than in the previous transition where they took 90 months. The sexual to sexual offenders now take 30 months (2.5 years) for the entire group to commit a fourth offence. This too, is much shorter than in the second transition where they took 132 months. Where the non-sexual to non-sexual group took the least amount of time for all to re-offend in the previous transition (78 months), they now take 108 months (9 years) for all to re-offend. The non-sexual to sexual offender group take the greatest amount of time for all to re-offend at 198 months (16.5 years), a finding that was similar to the previous transition.[27]

In examining the hazard rates for these four time offenders, they are again high in the first 6-month interval. Consistently throughout these 3 transitions the $h(t)$'s are high in the first interval. This suggests that certain offenders re-offend almost immediately and others are spread out over the remainder of the intervals. The sexual to non-sexual offender group have an extremely high $h(t)$ in the first interval of 1.077. Only 30% remain after this interval, and the $h(t)$'s remain high until they all re-offend at the end of the third 6-month interval (18 months). There is a direct drop in survival rates for this offender subgroup.[28]

The non-sexual to non-sexual offenders now have a hazard rate of .887 in the first 6-month interval with only 38.6% surviving at the end. This is much higher than in the previous transition where it was .686. The $h(t)$ remains high in the second interval .571 and

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[27] However, after 48 months in this third transition there is only one case remaining for the next 150 months.
[28] In order to examine and compare the survival curves please see Appendix C Figure 3.3.

in the third interval at .400. At the end of the third interval (18 months) only 14.3% remain. The sexual to sexual offender group have a high $h(t)$ in the first interval of .833 with only 41.2% surviving at the end of 6-months. This is much higher than in the previous interval where it was only .514. The $h(t)$ remains high with a direct drop to the end. An exception is with the second 6-month interval, where the $h(t)$ is quite low at .154. The non-sexual to sexual offenders have the lowest $h(t)$ in the first interval at .500 with 60% surviving at the end. This hazard rate is higher than in the previous transition, but again, is still the lowest $h(t)$ in the first interval.

The proportion of recidivists has increased in this transition and the hazard rates indicate that a larger percentage of offenders are re-offending more quickly than in the previous transitions. The median survival time also suggests that offenders are re-offending much more quickly in this transition. This indicates an escalation of criminal activity. There are differences within the non-sexual to sexual and the non-sexual to non-sexual offender groups evidenced by high hazard rates in the first interval. The remainder of this subgroup recidivate over the rest of the transition, and there remains differences between the groups. There are also differences between this transition and the previous transition. The pattern that seemed to be present to some extent in the two previous transitions, where the timing of re-offence seemed to depend on the type of re-offence rather than the initial offence, does not seem to be present in this transition. In fact, the steepest survival curves are for the sexual to sexual and the sexual to non-sexual, which indicates substantial diversity amongst this heterogeneous group of offenders.

Fourth Transition

Up to this point this analysis has shown the diversity of sexual offenders. In this final transition I begin by examining the number of crimes these offenders have committed up to this point.[29] Table 3.11 outlines the number of offences these offenders have committed. Over a total of four transitions (five offences) these 391 offenders have committed 1010 offences. In examining the breakdown of these offences 43.9% (N= 443) of them were sexual offences and 56.1% (N=567) were non-sexual offences.[30] This indicates the extent to which these offenders are committing crimes. Furthermore, if it is considered that in the first transition[31] 162 offenders were censored, and if those censored cases are removed from the total in Table 3.11, then 229 offenders have committed a total of 848 crimes. The 162 censored cases were all sexual offences; therefore, proportionately there are even more non-sexual offences amongst the recidivists.

Table 3.11: Total Number of Offences

Type of Offence	#	%
Sexual Offences	443	43.9
Non-sexual Offences	567	56.1
Total Offences	1010	100

The third transition indicated stability in the proportions for each of the groups as they moved from third to fourth offence. In the examination of the life table the third transition also suggested that there is diversity amongst the subgroups of offenders as well as differentiation among the different transitions. I will now examine the forth offence

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[29] Up to and including the fifth offence will be examined, however this data set could be examined up to the thirty-eighth offences for certain offenders.

[30] This is not including other crimes they may have committed that fell under the same conviction.

[31] Refer back to Table 3.2.

transition in order to show the proportions of individuals re-offending, the censored cases, the subgroups of re-offenders and the patterns of re-offence. These results will again be compared to those in the previous transitions in order to determine if similarities and differences among the subgroups as well as between the transitions exist.

Table 3.12: Fifth Offence Type

Type of Offence	#	%
Sexual recidivists	28	22.9
Non-sexual recidivists	70	57.4
Censored cases	24	19.7
Total	**122**	**100**

Of the original sample (N=391), 25.1% (N=98) commit at least five offences. From the third transition there were 122 four-time offenders. By examining Table 3.12 and summing both the non-sexual and sexual recidivists, 80.3% (N=98) of these offenders are five-time offenders. This general recidivism rate is higher than all the previous transitions; 58.6% were recidivists in the first transition, 74.2% were recidivists in the second transition and 71.8% were recidivists in the third transition. Although there was a slight decrease in the proportion of recidivists between the second and third transition, the general pattern is that as the number of crimes increase the number withdrawing from criminal activity decreases. This suggests that criminals become more embedded in a criminal lifestyle as they commit more crimes.

Table 3.12 shows that 22.9% (N=28) of the offenders are sexual recidivists. This is slightly smaller than the third transition where they made up 24.7% of the cases, but there is basically no significant change. Non-sexual recidivists make up 57.4% (N=70) of the cases in this fourth transition. This is an increase from the previous transition of 10.3%.

These statistics represent some stability in proportions between transitions, but again the group that increases substantially is the non-sexual offenders.

Table 3.13: Fourth to Fifth Offence

Offender Group	#	%
Sexual to sexual	12	9.8
Sexual to non sexual	15	12.3
Non-sexual to sexual	16	13.1
Non-sexual to non sexual	55	45.1
Censored cases	24	19.7
Total	**122**	**100**

Table 3.13 shows the subgroups of re-offenders and the proportion they make up of the entire group. The largest group remains the non-sexual to non-sexual offender groups who make up 45.1% (N=55) of the cases. This is a slight increase from the previous transition where they made up 41.2% of the cases. The next largest group is again the censored group who make up 19.7% (N=24) of the cases; however, this is smaller than in the third transition where they made up 28.2% of the cases. This is again an empirical indication that as the number of offences increase, the perpetrators become more committed to a criminal lifestyle.

The other three subgroups are similar to each other in size. The non-sexual to sexual offenders are 13.1% (N=16) of the entire group. This is quite similar in comparison to the previous transition where they composed 14.7% of the entire group. The sexual to non-sexual group make up 12.3% (N=15) of the offenders, which is very similar to the non-sexual to sexual group and an increase from the previous transition where they made up only 5.9% of the entire group. The smallest group is now the sexual to sexual offenders who are 9.8% (N=12) of the group, which is similar to both the sexual to non-sexual offender group and the non-sexual to sexual offender group. It is almost identical to the

third transition where they made up 10% of the cases. There remains some stability across the third and fourth transitions in the proportions. The main difference in proportions between group sizes is the non-sexual to non-sexual offender group, although they have consistently been the largest subgroup throughout the transitions they have substantially increased in size in this fourth transition.

The cumulative survival and hazard rates for the four subgroups of sexual offenders as they move from a fourth to a possible fifth offence are modeled in Table 3.14. The median survival times, the length for entire subgroups to re-offend and the hazard rates will be examined and compared between groups and to the third transition in order to find similarities and differences. The shortest median survival is for the sexual to sexual offender group at 4.02 months. This is shorter than in the previous transition where it was 5.10 months. This is the first time throughout all transitions that the sexual to sexual offender group has had the shortest median survival time. The non-sexual to non-sexual offenders have a median survival time of 4.32 months. This is also shorter than in the previous transition where they had a median survival time of 4.86 months.

The sexual to non-sexual offenders have a median survival time of 9.00 months in this fourth transition. This is longer than the previous transition where they had the shortest median survival time of 4.26 months. The non-sexual to sexual offenders have the longest median survival time at 24.00 months. This is not only longer than in the previous transition where it was 9.78 months, but it is the longest median survival time for any subgroup in any transition. These median survival times indicate differences between the subgroups, and they suggest diversity between transitions as they have consistently changed throughout the four transitions.

Table 3.14: Transition Rates from Fourth Offence to Fifth Offence for Sexual Offenders

Interval (in months)	Sexual Offence to Sexual Offence			Sexual to Non-Sexual Offence		
	Number Entering Interval	Cumulative Proportion Surviving at End	Hazard Rate	Number Entering Interval	Cumulative Proportion Surviving at End	Hazard Rate
0	12	.250	1.200	15	.667	.400
6	3	.167	.400	10	.333	.667
12	2	.083	.667	5	.133	.857
18	1	.083	.000	2	.000	
24	1	.000				
30						
36						
42						
48						
54						
60						
66						
72						
78						
84						
90						
96						
102						
108						
114						
120						
126						
	Median Survival Time: 4.02 months			Median Survival Time: 9 months		

Table 3.14: Transition Rates from Fourth Offence to Fifth Offence for Sexual Offenders

Interval (in months)	Non-Sexual to Sexual Offence			Non-Sexual to Non-Sexual Offence		
	Number Entering Interval	Cumulative Proportion Surviving at End	Hazard Rate	Number Entering Interval	Cumulative Proportion Surviving at End	Hazard Rate
0	16	.875	.133	55	.309	1.056
6	14	.688	.240	17	.218	.345
12	11	.563	.200	12	.182	.182
18	9	.500	.118	10	.146	.222
24	8	.375	.286	8	.127	.133
30	6	.313	.182	7	.091	.333
36	5	.250	.222	5	.073	.222
42	4	.250	.000	4	.073	.000
48	4	.250	.000	4	.055	.286
54	4	.250	.000	3	.055	.000
60	4	.250	.000	3	.055	.000
66	4	.188	.286	3	.055	.000
72	3	.125	.400	3	.055	.000
78	2	.125	.000	3	.055	.000
84	2	.125	.000	3	.036	.400
90	2	.063	.667	2	.036	.000
96	1	.000		2	.036	.000
102				2	.036	.000
108				2	.036	.000
114				2	.036	.000
120				2	.018	.667
126				1	.000	
	Median Survival Time: 24 months			Median Survival Time: 4.32 months		

In this transition, the groups take the least amount of time for all to re-offend at 126 months (10.5 years). In the third transition the longest time for all to re-offend was 198 months, in the second transition it was 162 months and in the first transition it was 216 months. This suggests that as the offenders commit more crimes they re-offend faster.[32] In this fourth transition the sexual to non-sexual offender group again has the least amount of time for all to re-offend at 18 months. This is only one interval longer than in the previous transition where they took 12 months for all individuals to recidivate. The sexual to sexual offenders take slightly longer than the sexual to non-sexual offender group at 24 months for all to re-offend. This is slightly shorter than in the previous transition where they took 30 months for all to re-offend.

The non-sexual to sexual offenders take 96 months for all to re-offend, which is half the time of the previous transition where it took 198 months for all to re-offend and this subgroup took the longest. The non-sexual to non-sexual offenders take the longest at 198 months for all to re-offend, which is longer than in the previous transition where they took 108 months. This is the only transition where this subgroup had the longest time for all to re-offend in comparison to the other subgroups. These lengths of time for all to re-offend again demonstrate the diversity between the subgroups as well as the changes from one transition to the next.

In examining the hazard rates for this transition it can be seen that they remain high in the first 6-month interval as they have in the previous transitions; however, there are

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[32] Even though in the third transition it took 36 months longer than in the second transition for all offenders to re-offender, in examining the median survival times and the hazard rates in the third transition, the offenders seem to offend faster as the number of crimes committed increases.

multiple hazard rates that are high in other intervals. The $h(t)$ in the first interval is highest for the sexual to sexual offender group at 1.200 with only 25% remaining at the end of six-months (N=12). This is higher than the previous transition where it was .833 in the first interval. It is also the highest $h(t)$ in all intervals for all transitions. The $h(t)$ remains high throughout almost all of the intervals. The non-sexual to non-sexual offender group also have an extremely high $h(t)$ in the first interval of 1.056, with only 30.9% remaining at the end of 6 months.

Although the hazard rate is high in the interval for the sexual to non-sexual offender group (N=15) at .400 with 66.7% surviving at the end of six-months, the hazard rate increases to .667 in the second interval and .857 in the third interval. This subgroup had the highest $h(t)$ in previous transition's first 6-month interval at 1.077. The hazard rate is smallest for the non-sexual to sexual offender group in this transition at .133 in the first interval with 87.5% remaining. This $h(t)$ is much lower than in the previous transition where it was .500. This subgroup's $h(t)$'s remain low throughout the transition.[33]

These four transitions have demonstrated the heterogeneity of sexual offenders. This analysis has indicated that sexual offenders do not specialize in sexual crimes but rather that sexual offences are part of a larger pattern of criminal behaviour. There is also evidence that as individuals commit more crimes they are more likely to re-offend again. This analysis also seems to contradict the popular belief that sexual offenders commit only sexual offences, but they actually commit many more non-sexual crimes.

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[33] This gradual curve can be seen in Appendix C Figure 3.4.

Conclusion

This discussion originally began with the sociological interest in change and consistency of aggregate behaviour. This chapter empirically examined criminal behaviour within the context of social differentiation in order to understand the patterns and pathways of non-conventional activity. This chapter summarized statistical findings for recidivism rates and various forms of diversity among sexual offenders as they moved through the initial stages of their criminal careers. The heterogeneity found in the criminal behaviour of sexual offenders is clearly illustrated between and within the subgroups, and between the transitions.

It is difficult to uncover stability and diversity among sexual offenders. I attempt to give some general overviews of these concepts and how they relate to patterns of recidivism among sexual offenders. There is evidence of both stability and instability in offending patterns over the course of the four offence transitions. One of the most consistent forms of stability is that the proportion of non-sexual offences is consistently higher than that of sexual offences throughout the transitions. In examining the more complex descriptive statistics, the non-sexual to non-sexual subgroup are perpetually larger than the other offender groups throughout the transitions. By the second transition the non-sexual to non-sexual offenders begin to substantially stand out in size, exceeding the censored cases by 15.2%. In comparison, in the first transition, they were smaller than the censored cases by 13%. The non-sexual to non-sexual group steadily increases in proportion with the progression of transitions.

There is also continual evidence of escalation of criminal activity among certain offenders. This escalation is evident throughout the transitions. The escalation is

represented in the high hazard rates in the first 6-month intervals. In each transition there is more evidence of escalation among particular offenders, as the number of crimes increases the time between offences decreases. Another form of stability is the only group that does not escalate in criminal activity. The non-sexual to sexual offender group maintain long survival curves throughout the transitions. This perhaps indicates the reluctance for non-sexual offenders to commit a sexual offence after a prior conviction. Conversely, the sexual to non-sexual subgroup have a short survival curves in all four offence transitions, indicating a commitment to a criminal lifestyle.

Forms of diversity are also present throughout the four offence transitions. These forms of instability can be seen between groups, within groups and between the transitions. One form of diversity is the differentiation within offender groups, since certain offenders re-offend immediately while others either desist or take substantially longer to re-offend. The escalation by some offenders and the reluctance by others indicates different patterns of offending. Diversity is also evident in the first transition in the timing of re-offence among offender groups. The sexual to non-sexual offenders take 24 months for all to re-offend whereas the non-sexual to sexual take up to 216 months for all to re-offend. This indicates a substantial difference in timing of recidivism among offender groups. In addition, there is some evidence that indicates those who re-offend sexually have a longer survival time.

In the second transition there is further evidence of differentiation. The non-sexual to non-sexual offender group are the fastest to re-offend in the second transition. They have the highest hazard rate in the first interval, the shortest median survival time and the shortest length for all to re-offend, followed by the sexual to non-sexual offender group.

This indicates instability between the first and second transitions. Both the sexual to sexual and the non-sexual to sexual offender groups take substantially longer to re-offend with much larger median survival times. This again indicates that those who re-offend sexually are more reluctant to do so. The timing of re-offence in this transition seems to be dependent upon the type of offence the subgroups are moving into rather than the offence they previously committed. Those who re-offend non-sexually re-offend faster than those that re-offend sexually.

However, in the third transition, from the third to fourth offences, the timing of re-offence takes on a different pattern. The sexual to non-sexual offenders again have a survival curve with a direct drop, much like in the first transition; however, now the sexual to sexual offenders also have a direct drop in their survival curve.[34] These two offender groups only hold offenders that display escalation in criminal behaviour, all others have terminated their criminal activity. The non-sexual to sexual offender and the non-sexual to non-sexual offender groups now take the longest for all to re-offend and have the longest median survival times. Also, during this transition, offenders are re-offending at a faster rate, indicating an increase in escalation of criminal behaviour. It appears that many offenders are embedded in criminal lifestyles after three offences.

The fourth and final transition indicates that the timing of re-offence is faster than in previous offence transitions with the longest individual taking 126 months. This measure of timing is 90 months shorter than in the first transition. As in the third transition, the sexual to sexual offender group and the sexual to non-sexual offender group have a steep

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[34] See survival curves in Appendix C.

survival curve, with all offenders having re-offended within 24 months. Moreover, as in the third transitions, the non-sexual to sexual offender group and the non-sexual to non-sexual offender group take the longest. This indicates stability between the third and fourth transitions, and differentiation from the first and second transitions. The speed at which these offenders offend for a fifth time again lends support to the concept of escalation, and indicates that as the number of crimes increases, the timing between offences decreases.

The sexual offenders under study demonstrate diverse criminal activity and therefore lack specialization in sexual offences as a group. In fact there is a larger number of non-sexual offences committed by these offenders. Many of the offenders demonstrate escalation or an increase in intensity of offending. The descriptive tables in the previous section indicate that the frequency of offending is quite high for some, but not all, sexual offenders. These tables also suggest that sexual offences are part of a larger pattern of criminal behaviour. The life tables indicate forms of both instability and stability in timing of recidivism at different phases of criminal careers. The following chapter will attempt to locate these findings in the broader sociological model of criminal behaviour, relating to the research questions previously outlined in chapter one.

CHAPTER FOUR

DISCUSSION AND CONCLUSION

This research has investigated the offending patterns of sexual offenders in the initial stages of their criminal careers in order to examine their criminal behaviour over time. The previous chapter empirically outlined the descriptive statistics and event history of four subgroups of sexual offenders. This analysis demonstrated the patterns of recidivism over four offence transitions. The present chapter addresses the research questions outlined in chapter one. It begins with an examination of the general and specific recidivism rates of this group of sexual offenders and will explore the implications of follow-up periods for recidivism research. I look at the event history of the offenders in order to examine the stability and instability between and within subgroups of offenders as well as between offence transitions in order to understand the changing patterns of the criminal careers of sexual offenders. The analysis then examines the offending patterns of sexual offenders in the context of the life course and criminal careers perspectives. Finally, recommendations and possible implications for future research of recidivism among sexual offenders are offered.

Recidivism Rates over Four Offence Transitions

This discussion begins with an examination of recidivism rates throughout the four offence transitions. It shows the general (sexual and non-sexual recidivism) and specific recidivism (sexual recidivism) rates for this group of sexual offenders and how they change

over the transitions. There is no systematic sexual offender research to compare to after the discussion of the recidivism in the first transition. The remaining three transitions will be compared to one another to illustrate consistency and change in recidivism over time. I then examine the implications of these retrospective longitudinal data. This analysis suggests that certain prospective research, contingent upon follow-up periods, may not capture the recidivism rates of all sexual offenders.

The recidivism rates for these groups of sexual offenders change as the number of offences committed increases.[35] These data indicate a consistent increase in the proportion of criminals who re-offend throughout the four transitional periods. The first transition shows a 58.6% general recidivism rate and a 23.3% specific recidivism rate. Hanson and Bussière (1996) found a 49% general recidivism rate and a 13% specific recidivism rate, and Romero and Williams (1985) found a 57% general recidivism rate and an 11.3% sexual recidivism rate. Although the general recidivism rate found in this analysis is consistent with other research, the rates of sexual recidivism are much higher than most studies. The data are specific to the study of sexual offences, and all individuals in the data set have committed a sexual offence even if the sexual offence is not their first. This would potentially upwardly bias the sexual recidivism rate; however, Hanson and Bussière (1998) in their analysis of 61 sexual recidivism studies found that certain studies had a specific recidivism rate as high as 22.1%.

Offenders in the second transition show a substantial increase to a 74.2% general recidivism rate, but a steady specific recidivism rate of 23.6%. Recidivism rates in the

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[35] There are a certain number of *Type I* and *Type II Errors* in capturing recidivism among sexual offenders. These are outlined in chapter one.

third transition are similar to the second transition, with a 71.8% general recidivism rate and a 24.7% specific recidivism rate. The fourth transition shows an increase to an 80.3% general recidivism rate and a specific recidivism rate of 22.9%. Recidivism proportions for non-sexual offences increase as the number of re-offences increase. The sexual recidivism rates however, remain proportionately constant throughout the transitions. This indicates an increase in the proportion of non-sexual offences over the four offence transitions.

There are also some other important findings in these data in regards to the types of offences committed. Previous research has found that non-sexual recidivism is more prevalent than sexual recidivism among sexual offenders (Brannon and Troyer, 1991; McGrath, 1991; and Hanson and Bussière, 1998). This analysis shows a large proportion of non-sexual offences committed by sexual offenders. Overall, 56.1% (N=567) of the offences in all four transitions are non-sexual offences (see Table 3.11); in a data set where each offender is required to have committed at least one sexual offence in order to be part of the sampling frame.

Bonta and Hanson (1995 as cited in Hanson and Bussière, 1998) found that although many sexual offenders recidivate with a non-sexual offence, rarely do non-sexual offenders recidivate with a sexual offence. Yet in this analysis, 41.7% of the offenders begin with a non-sexual offence (see Table 3.1), and in examining the first transition 28.4% of the data sets' first two offences are non-sexual (see Table 3.3). Although sexual offenders seem to move back and forth between sexual and non-sexual offences, they commit more non-sexual offences. This indicates that non-sexual offenders are capable of committing sexual offences and 'becoming' sexual offenders. It also shows that sexual

offences are only a portion of a larger pattern of criminal behaviour (Kahn and Chambers, 1991).

The recidivism rates and the event histories of these sexual offenders over four transitions suggest the importance of the length of follow-up periods. These rates would not have been captured entirely in a shorter follow-up period of certain prospective studies. As previously stated, Hanson and Bussière (1998) found a general recidivism rate of 36.3% and sexual recidivism rates ranging from 9.9% to 22.1%. They predict that the specific recidivism rates of sexual offenders are higher than the 9.9% finding, but that certain studies do not have sufficient follow-up times in order to capture the true recidivism rate.

The cumulative survival and hazard rates for the four offence transitions illustrated in life tables in the previous chapter offer a glimpse into the time needed to capture recidivism rates of sexual offenders. A large proportion of re-offences will be captured in the first 6 months after the initial offence. Many offenders in all transitions re-offend immediately. The median survival times indicate that half of the recidivists would be captured in 2 years at most (see non-sexual to sexual offender group for the longest median survival time in Table 3.14). Furthermore, in examining the survival curves in Appendix C, there are only small proportions surviving at the end of the curves.

However, certain follow-up periods are shorter than two years (such as Motiuk and Brown, 1993; and Brannon and Troyer, 1991) and therefore would potentially miss over half of the recidivists in certain subgroups within this analysis. The longest time for an individual to re-offend is 18 years (see Table 3.4), which would not be captured in most recidivism research. Hanson and Bussière (1998) point out that the average follow-up period for sexual recidivism research is 5.5 years. Another implication for shorter follow-

up periods is the potential for biased results, because of a failure to capture certain re-offences. In the first two transitions a shorter follow-up period would capture the majority of non-sexual recidivism, but miss the sexual recidivism, lowering the specific recidivism rate. The non-sexual to sexual offender group consistently has a longer survival, which would decrease the visible sexual recidivism in studies with shorter follow-up periods. Also, with four separate offence transitions an extensive follow-up period is required in order to capture the recidivism in all transitions.

This overview of recidivism among sexual offenders and the importance of follow-up periods gives the basis for this examination. The issues surrounding sexual offenders outlined in chapter one are complex and far-reaching. This discussion will be unable to address this multitude of issues, but will examine the patterns of offending in order to investigate heterogeneity among sexual offenders. The remainder of this discussion will place sexual offenders in the context of differentiation. It then examines sexual offenders in the criminal careers and life course frameworks, and touches on possible theories for the timing of recidivism among these offenders.

Differentiation of Offender Subgroups and Transitions

The current research supports the notion that the actions of individuals who engage in conventional careers can be paralleled to actions of those who engage in non-conventional careers (Becker, 1963). This empirical analysis suggests certain trends of stability and instability in offender groups and offending patterns. There are differences within and between the four subgroups, in terms of size and patterns of re-offence. These patterns of timing also change throughout the transitions. The dissimilar proportion of

groups throughout the transitions indicates diversity between the groups, and stability between the transitions as the groups perpetually have the same proportionate differences. However, the non-sexual to non-sexual offender group is consistently larger than the other offender groups, and this subgroup increases in size throughout the transitions. This constant increase can also be seen as a form of stability.

Patterns of both *digging in* and *cutting back* (Kerckhoff, 1994) are evident within the criminal careers of these sexual offenders. There is evidence for sexual offenders digging in to criminal behaviour. Digging in is seen in the large proportion of offenders re-offending in the first 6-month interval throughout all of the transitions, illustrated by the high hazard rates. Also, many offenders increase their speed of offending, as they move through the transitions. Those that do persist do so at an accelerated rate. This escalation is an indication of commitment to a criminal career by specific offenders (Arnold and Hagan, 1992). Certain criminals may be so entrenched in the behaviour that it is an automatic response to commit another crime.

In contrast, there are also many offenders who cut back in their criminal activity throughout the offence transitions. In the first transition 41.4% (N=162) of the cases are censored indicating a large proportion cutting back from offending immediately after their first offence. In the second transition 25.8% of the cases are censored, indicating that although fewer offenders are cutting back, there are still many offenders desisting from criminal activity. In the third transition 28.2% of the cases are censored and in the fourth transition 19.7% of the cases are censored.[36] There are also offenders that are reluctant to

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[36] However, recall from chapter one, Blumstein et al (1988a) maintain that true desistance from crime can only be proven in death.

re-offend, which is also evidence of cutting back from criminal behaviour. These reluctant offenders are illustrated in the long survival curves in all four transitions.[37] These individuals are perhaps not as drawn into criminal behaviour. However, as the offences increase there are fewer reluctant offenders, as they either desist or increase the pace of offending. In fact, in both the sexual to sexual and the sexual to non-sexual offender groups there are no reluctant offenders in the last two transitions. The offenders either desist or increase the pace of re-offence. As the number of censored cases decreases the number of offences increases. Therefore, the further criminals commit themselves to criminal behaviour, the less chance there is of termination of criminal activity. This suggests that as offenders commit more crimes, they become more embedded in a criminal lifestyle and are more likely to re-offend (Nagin and Farrington, 1995).

The transitions show patterns of diversity illustrated by the timing of re-offences and change throughout the transitions. In examining the median survival times and the length of time for entire subgroups to re-offend, there seems to be some evidence that the timing of re-offence in the first two transitions is dictated by the type of re-offence rather than the initial offence. More specifically, those that re-offend non-sexually re-offend faster than those who re-offend sexually. This may indicate that sexual recidivists are perhaps less inclined to re-offend immediately as the type of crime is considered to be much more severe than the non-sexual offences. However, this pattern of re-offence is not within the third and fourth transitions. In both the third and fourth transitions the sexual to

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[37] The longest offender took 216 months (18 years) to re-offend, see Table 3.4 in the first transition.

sexual offender group and the sexual to non-sexual offender group accelerate the speed of recidivism.

The most consistent form of stability is the large size and continual increase of the non-sexual to non-sexual offender group. The pace of re-offence indicates stability across transitions but patterned differentiation between subgroups. The sexual to non-sexual offenders continually have a short survival, and conversely the non-sexual to sexual offender group have a long survival through all offence transitions. Differentiation is evident within subgroups of offenders as certain offenders desist immediately from criminal behaviour, as seen in the 162 censored cases in the first transition, and others take a large amount of time to re-offend, as seen in the long survival curves. Others still, increase the pace of recidivism, as seen in the high hazard rates within the first 6-month intervals throughout the transitions. These findings differentiate the subgroups of offenders from one another, as do the amount of crimes they commit, the patterns of re-offence and the way in which those patterns change over time.

Sexual Offenders and Developmental Theories

Persistent heterogeneity and state dependent approaches to crime differ on certain ontological and methodological issues.[38] Gottfredson and Hirschi (1986, 1988 and 1990) adhere to the persistent heterogeneity perspective and maintain that crime is a result of individual low self-control, and believe that determinants of offending are stable over time. The persistent heterogeneity approach does not support the pursuit of research of criminal

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[38] This analysis has concentrated on the differences these two perspectives bring to the discussion of the study of criminal behaviour; however, the two theories are not mutually exclusive (Nagin and Farrington, 1992).

behaviour over time or criminal subgroup comparisons. State dependent or developmental models of crime, such as criminal careers and life course perspectives, argue that criminal behaviour is a result of more than just low self-control. From the developmental perspectives, criminal behaviour is also affected by many other influencing factors and should be studied over time. Although the life course perspective concentrates on the role formal and informal social controls, they allow for a multitude of theories and factors to come together in order examine criminal activity.

Sexual offenders are a heterogeneous group of offenders.[39] The frequency of criminal offences does not decline over time for all sexual offenders. There are certain offenders in the previously examined subgroups that desist from criminal activity and others who either remain at the same level of offending, or increase the speed at which they re-offend. The criminal careers paradigm maintains that the "declining aggregate involvement" in criminal activity is a result of some offenders "abandoning crime altogether" while others continue to offend at the same rate (Greenberg, 1991:19). The frequency of offending is demonstrated in Table 3.11. This group of sexual offenders committed 1010 offences over four offence transitions. In the first transition 41.4% (N=162) of the offenders desist from criminal activity. In examining the final offence transition, 25.1% (N=98) of the offenders commit at least five offences, and these 98 offenders are responsible for 490 crimes (48.5%). This suggests that a certain offenders

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[39] The discussion of heterogeneity among sexual offenders is not in the same context as the persistent heterogeneity that Gottfredson and Hirschi support. Persistent heterogeneity implies that there is some enduring and stable criminal element that is different from the rest of the population. Heterogeneity here refers to differences within that criminal element (see Nagin and Farrington, 1992).

have a high incidence of offending, whereas others are not as inclined to commit multiple offences.

This analysis cannot definitively prove that those offenders who have not re-offended within the sampling frame will never re-offend. However, it can be stated that in each transition a proportion of offenders either desist, indicating a reversal of offending, or re-offend at a slow pace, indicating a reluctance to re-offend. This differentiation indicates dissimilar trajectories for sexual offenders. In addition, certain subgroups behave differently than others. The sexual to non-sexual offender group recidivate at a quicker pace than the other subgroups in the first two transitions. After the second transition, the sexual to sexual offender group increase their pace of offending to a speed similar to that of the sexual to non-sexual offender group. In both subgroups offenders desist from criminal behaviour in each transition. The offending behaviour of these two groups indicates that a portion of the group desists from criminal activity and the other portion increases the pace of offending, but there are none that re-offend at a low frequency. This differentiates the two subgroups from the non-sexual to sexual subgroup that have a long survival. The slow pace of recidivism for this subgroup is evident in all four offence transitions, and indicates a reluctance to re-offend. Perhaps it is the commission of a sexual offence that embeds offenders in criminal behaviour. In order for the pace to increase a sexual offence has to have existed in the sequence of offending. These findings lend support to the concept of subgroup differentiation in pace, sequence and reversibility in patterns of offending.

Cloward and Ohlin (1960) maintain that each progressive crime further immerses an individual into a criminal lifestyle. Prior crime directly or indirectly increases the potentiality of future criminal behaviour (Nagin and Farrington, 1992). The sexual

offenders under examination demonstrate that for certain offenders each successive conviction decreases internal inhibitions and external constraints while increasing the motivation to commit crime (Nagin and Farrington, 1992). As the number of offences committed increases, the speed of re-offence increases, and the likelihood of desistance decreases. This indicates that those who do persist tend to do so at an accelerated rate.

There are state dependent effects on criminal behaviour within developmental theories of crime. Farrington (1992) notes that state dependent effects may be either negative or positive and depend upon on both individual variations and social factors. Negative effects decrease the probability of re-offending (Nagin and Farrington, 1992). Deterrence from criminal activity, possibly as a result of contact with criminal justice agencies, is a negative state dependent effect. Rehabilitation of an offender through treatment programs is another negative effect. A positive state dependent effect increases the likelihood of re-offence, such as becoming embedded in a criminal lifestyle or a labeling effect. These would both positively affect the probability of participation in a criminal event (Nagin and Farrington, 1992).

Sipe et al. (1998) note that there is a severe negative reaction to sexual offenders; therefore perpetrators of sexual offences carry one of the most intense stigmas for their criminal activities. Labeling likely places sexual offenders outside conventional opportunity structures, which could potentially result in criminal relapses (Sipe, et al, 1998). Perhaps the blocking of sexual offenders from conventional lifestyles may be the reason for the high number of non-sexual offences in this analysis. Through the labeling process sexual offenders may not have access to legitimate means, resulting in the choice of

illegitimate means. Sexual offenders may simply react negatively to the stigma resulting in further criminal activity (Sipe et al, 1998).

Examining the risk of offender subgroups at different time periods can allow for possible classification of offenders (Visher et al, 1991). The concepts of high and low risk could potentially affect guidelines for supervision after release. As time goes on, the surviving offenders will "be changing through a differential loss of high-risk subjects" (Visher et al, 1991:359). Risk can then be considered time dependent among these sexual offenders. The highest risk period is in the first 6-months after the previous offence or release from custody in almost all instances for all subgroups. Risk then decreases over time in all transitions, as the high-risk offenders experience the event almost immediately. The exception to escalated risk in the first interval is in the non-sexual to sexual offender group as indicted by their long survivals throughout the transitions, which indicates some differential risk among subgroup.

Hanson et al. (1995) suggest that if there is any evidence of specialization, disproportionate escalation or differentiated patterns of recidivism in offending behaviour, then general theories of crime will be forced to increase in complexity to account for these differences. Thus, identification of subgroups and possible differentiation between them may prove to be important. Moreover, Loeber and LeBlanc (1990) believe that over time offenders will become more specific in the type of crimes they commit. They suggest that criminals tend to become more specialized in their criminal activity. There is no meaningful evidence of specialization for the group of sexual offenders under study. In fact, the sexual to sexual offender group remains relatively small over the course of the

transitions, and as previously stated, there are more non-sexual offences committed than sexual offences by the entire group.

However, there is evidence of patterned differentiation among the subgroups of offenders as seen in the proportions of each subgroup throughout the transitions as well as the timing of re-offence that varies across subgroups. The non-sexual to non-sexual offender group is the largest group and gets proportionately larger as the transitions progress. The sexual to non-sexual offender group continually has the shortest survival, whereas the non-sexual to sexual offender group consistently has the longest survival. This suggests that there is a reluctance for non-sexual offenders to re-offend sexually and that sexual offenders (as Sipe et al, 1998 stated) are blocked from conventional lifestyles, therefore they re-offend non-sexually immediately. There is also disproportionate escalation among offenders and between subgroups.

This analysis cannot completely assess continuity over the life course because it only examined a portion of the life span of sexual offenders and therefore cannot predict future transitions or the course of any one individual or group trajectory (Horney et al, 1996). Given that this analysis was of the initial stages of certain careers, the frequency of offending cannot truly be captured.[40] However, there was clear evidence of change in the short term in criminal involvement and dissimilar frequency in offending among sexual offenders. Horney et al. (1996) maintain that this differential criminal involvement is related to diversity in life circumstances between offenders. The life course and criminal

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[40] Offences went up to a possible 38. Therefore the frequency of offending would be underestimated for certain offenders and affect the overall frequency of offending.

careers approaches to crime can be used to understand the progression of criminal events over time.

Conclusion

Much like conventional careers, criminal careers can take many paths. There is a diversity of choices for criminals contingent on many factors. This analysis began to address the concept of differentiation in criminal career patterns among sexual offenders; however, it cannot offer any definitive theoretical conclusions. This research empirically explored the offending patterns of sexual offenders finding evidence of both stability and instability in criminal behaviour over time among the four subgroups offenders. This continuity and change can be considered two parts of a complex causal process (Horney et al, 1996).

Sexual offences have a serious psychological impact on the victims and create a problem for society as a whole (Corrections Canada, 1995a and 1995b). Although this research outlines the patterns of re-offence as sexual offenders moved from one crime to the next, there is a need for a better understanding of the factors that affect recidivism as well as differential risk. It is important to note that certain offenders not only recidivate, but the speeds at which they do so increases as the number of offences increases. This evidence of escalation in criminal behaviour was differentially distributed among and within the different subgroups of offenders. It appears that certain offenders become further embedded in criminality through the persistence of offending, whereas other offenders do not escalate, but rather have episodic or sporadic offending patterns.

This analysis provides evidence of time-related patterns of different levels of heterogeneity between and within the subgroups during the initial stages of their criminal careers. Heterogeneity of sexual offenders over the life course needs to be further examined, and finding definitive correlates for escalation could have implications for treatment programs, supervision, incapacitation and sentencing.

In order to understand sexual offenders and patterns of recidivism an extensive longitudinal analysis with a substantial follow-up period or a retrospective analysis is required. The low base rate of sexual offenders and the low sexual recidivism rate presents a difficulty in identifying risk factors for sexual recidivism. It would be important to include measures of formal and informal social control, as well as conventional factors such as marriage and employment. It would also be informative to include measures of deterrence and labeling theories in order to examine their interplay with life spans of offenders.

The life course perspective allows for a multiple theoretical analysis of criminal behaviour over time given that all required variables are present. This analysis reinforces the concept of patterned differentiation between and within the subgroups of sexual offenders in the initial stages of their criminal careers. These offending patterns change over time. With a larger data set of sexual offenders and a multitude of offender subgroups, many variants could be examined in relation to patterns of timing and pace of recidivism. There is a need to study the mechanisms that mediate stability and instability of criminal behaviour of sexual offenders over the life course.

APPENDIX A: ALL VCD CODES (base number only)

100000. TOTAL CRIMES AGAINST THE PERSON
110000. Total Violations Causing Death
120000. Total Attempted Capital Crimes
130000. Total Sexual Offences
140000. Total Assaults
150000. Total Violations Resulting In Deprivation of Freedom
160000. Total Violence or Threat of Violence

200000. TOTAL CRIMES AGAINST PROPERTY
210000. Total Property Crimes

300000. TOTAL OTHER CRIMINAL CODE VIOLATIONS
310000. Total Prostitution
320000. Total Gaming and Betting
330000. Total Offences Weapons
340000. Total Other Criminal Code (part A)
351000. Total Fail to Appear
370000. Total Other Criminal Code (part B)
381000. Total Willful and Forbidden Acts
283000. Total Attempts, Conspiracies and Accessories

400000. TOTAL DRUGS: NCA & CDSA DRUGS

500000. TOTAL FDA DRUGS

600000. TOTAL OTHER FEDERAL STATUTES

700000. TOTAL OTHER PROVINCIAL STATUTES
740000. Total Highway Traffic Act

810000. TOTAL MUNICIPAL BYLAWS
890000. Total Specialty Occurrences (NON-OFFENCES)

900000. TOTAL TRAFFIC VIOLATIONS
910000. Total Dangerous Operation of Vehicle
920000. Total Impaired Driving
930000. Other Traffic (to 933010)

999997: incomplete charging sections
999998: testing for expired cases
999999: invalid charging section

APPENDIX B: VCD CODES FOR SEXUAL OFFENCES
And Corresponding Criminal Codes

VCD CODES: Total Sexual Offences:

13. TOTAL SEXUAL OFFENCES

131. TOTAL AGGRAVATED SEXUAL ASSAULT
      131002. Aggravated Sexual Assault: *CC273.2**

132. TOTAL SEXUAL ASSAULT WITH A WEAPON
      132002. Sexual Assault With a Weapon: *CC272.A*
      132003. Sexual Assault With Threats to Cause Bodily Harm: *CC272.B*
      132004. Sexual Assault Causing Bodily Harm: *CC272.C*
      132005. Is Party to Sexual Assault With Any Other Person: *CC272.D*

133. TOTAL SEXUAL ASSAULT
      133002. Sexual Assault: CC246.1.1.A (exp. 1988) and *CC271*

134. TOTAL OTHER SEXUAL CRIMES
 1340. TOTAL RAPE
      134001. Rape: CC136 (exp. 1969) and CC144 (exp. 1983)
      134002. Attempt to Commit Rape: CC137 (exp. 1969) and CC145 (exp. 1983)
      134003. Sexual Intercourse With Female Under 14 Years: CC146.1 (exp.
          1988)
      134004. Sexual Intercourse With Female Between 14-16 Years: CC146.2
      (exp. 1988)
      134005. Sexual Intercourse With Feeble Minded Female: CC148 (exp. 1984)

 1341. TOTAL GROSS INDECENCY
      134101. Gross Indecency: CC157 (exp. 1988) and *CC173.1*

 1342. TOTAL BESTIALITY, BUGGERY AND ANAL INTERCOURSE
      134201. Buggery and Anal Intercourse: *CC159.1*
      134202. Bestiality: CC155 (exp. 1983) and *CC160.1*
      134203. Compel a Person to Commit Bestiality: *CC160.2*
      134204. Bestiality- Compel Youth to Commit, or In the Presence Of Youth:
          CC160.3

 1343. TOTAL INCEST
      134302. Incest: CC150.2 (exp. 1983) and *CC155*

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* Italics identify current criminal code violations

1344. **TOTAL SEDUCTION, SEXUAL CONDUCT AND TOUCHING**
134400. Seduction Offence Prior to 1995: CC151 (exp. 1994)
134401. Seduction of Female Between 16-18 Years: CC151 (exp. 1983)
134402. Sexual Contact With Female Under 14 Years: CC140 (exp. 1988)
134402. Sexual Interference With Child Under 14 Years: *CC151*
134403. Invitation to Sexual Touching With Child Under 14 Years: *CC152*
134404. Seduction Under Promise of Marriage: CC152 (exp. 1984)
134405. Sexual Intercourse With Stepdaughter, etc. or Female Employee: CC153 (exp. 1984)
134406. Seduction of Female Passenger on Vessel: CC154 (exp. 1984)

1345. **TOTAL SEXUAL EXPLOITATION**
134601. Sexual Contact Offence Prior to 1995: CC153.1 (exp. 1994)
134602. Sexual Contact With Youth By Person of Authority: *CC153.1.A*
134603. Incite Sexual Contact With Youth by Person In Authority: *CC153.1.B*

1347. **TOTAL INDECENT ASSAULT**
134701. Indecent Assault On Female: CC141.1 (exp. 1969) and CC149.1 (exp. 1983)
134702. Indecent Assault On Male: CC156 (exp. 1994)
134703. Indecent Assault- Sex Unknown Prior to 1995: CC156 (exp. 1994)

1348. **TOTAL REMOVING A CHILD FROM CANADA TO COMMIT SEX OFFENCE**
134801. Removing Child From Canada to Commit a Sex Offence: *CC273.3.2*

APPENDIX C: SURVIVAL CURVES FOR FOUR SUBGROUPS OF SEXUAL OFFENDERS OVER FOUR TRANSITIONAL PERIODS

Figures 3.1 through 3.4 are the four survival curves for the four subgroups throughout the four offence transitions. They indicate the speed at which the groups re-offend in each particular transition and they related directly to the life tables in chapter three. The X-axis is the time in 6-month intervals and the Y-axis indicates the proportion surviving at end of the interval. (1) s to s: sexual to sexual offender group, (2) s to ns: sexual to non-sexual offender group, (3) ns to s: non-sexual to sexual offender group, and (4) non-sexual to non-sexual offender group.

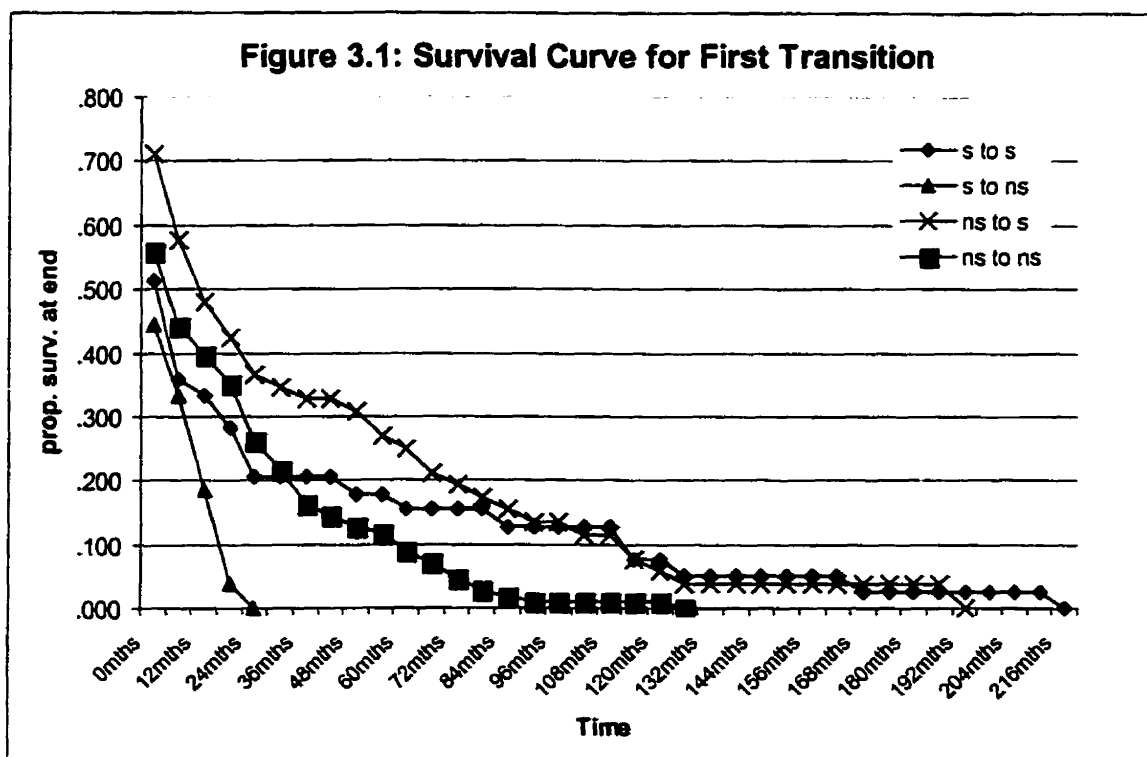Figure 3.1: Survival Curve for First Transition

Figure 3.1 illustrates the survival curve for all four subgroups of offenders for this first transition. These curves show the change in proportion of offenders as they re-offend.

It becomes evident that these curves are different for each group and they tend to have different patterns of re-offending. The curve for the sexual to non-sexual offenders has no plateau, but a direct drop, which represents a short survival time for this group. The remaining three groups have gradual curves. The sexual to sexual offender curve levels out at 18 months, where the numbers drop from 51.3% at the end of the first interval to 28.2% by the fourth interval (see Table 3.4). The non-sexual to non-sexual offender survival curve flattens out around 48 months, and the non-sexual to sexual offender survival curve plateaus at about 72 to 78 months. These last two groups represent a high survival rate or a longer survival (see Lee, 1992).

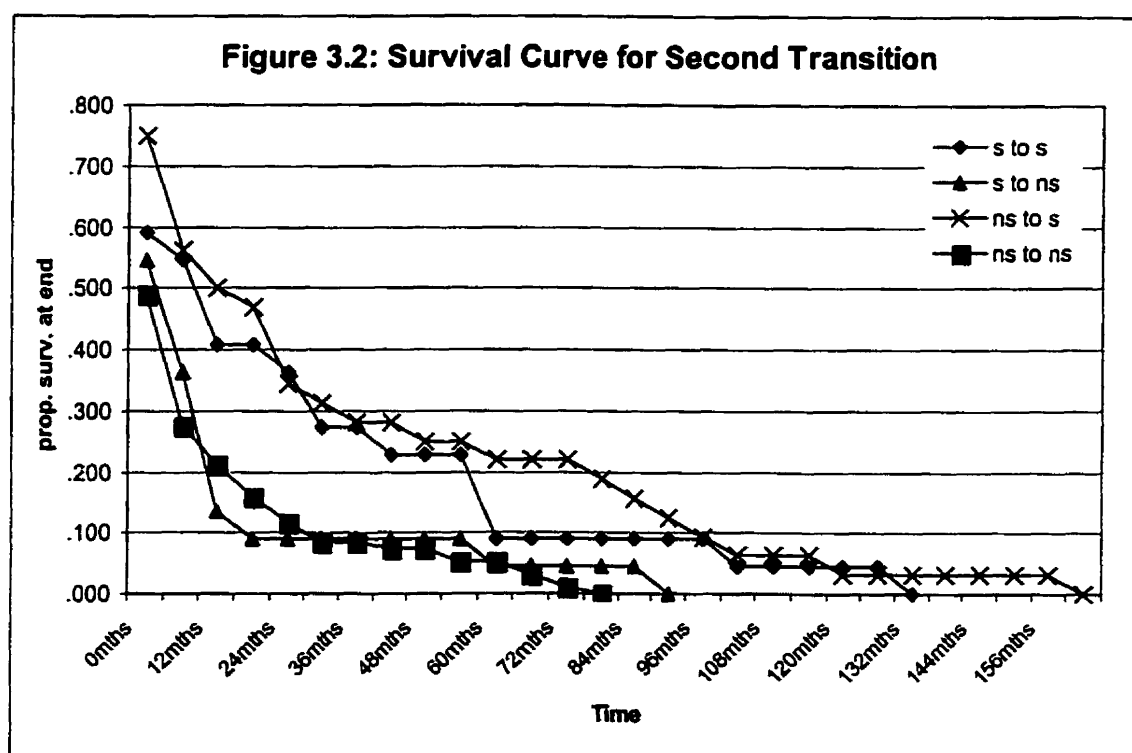Figure 3.2: Survival Curve for Second Transition

Figure 3.2 illustrates the survival curves for the second transition, which is the movement from second to third offences. It shows the four subgroups of offenders' survival rates over time. The sexual to non-sexual offender group has a curve that directly

drops up to 12 months and then the curve levels out with 13.6% remaining. This curve remains the shortest survival curve as it was in the first transition, even though in total the group takes longer than the non-sexual to non-sexual group the sexual to non-sexual have a steeper survival curve. The non-sexual to non-sexual offender group's survival curve levels out at 24 months, which is shorter than in the first transition. The sexual to sexual offender groups curve also levels out at approximately 24 months. The non-sexual to sexual again have the longest survival with a slow descent of the survival curve.

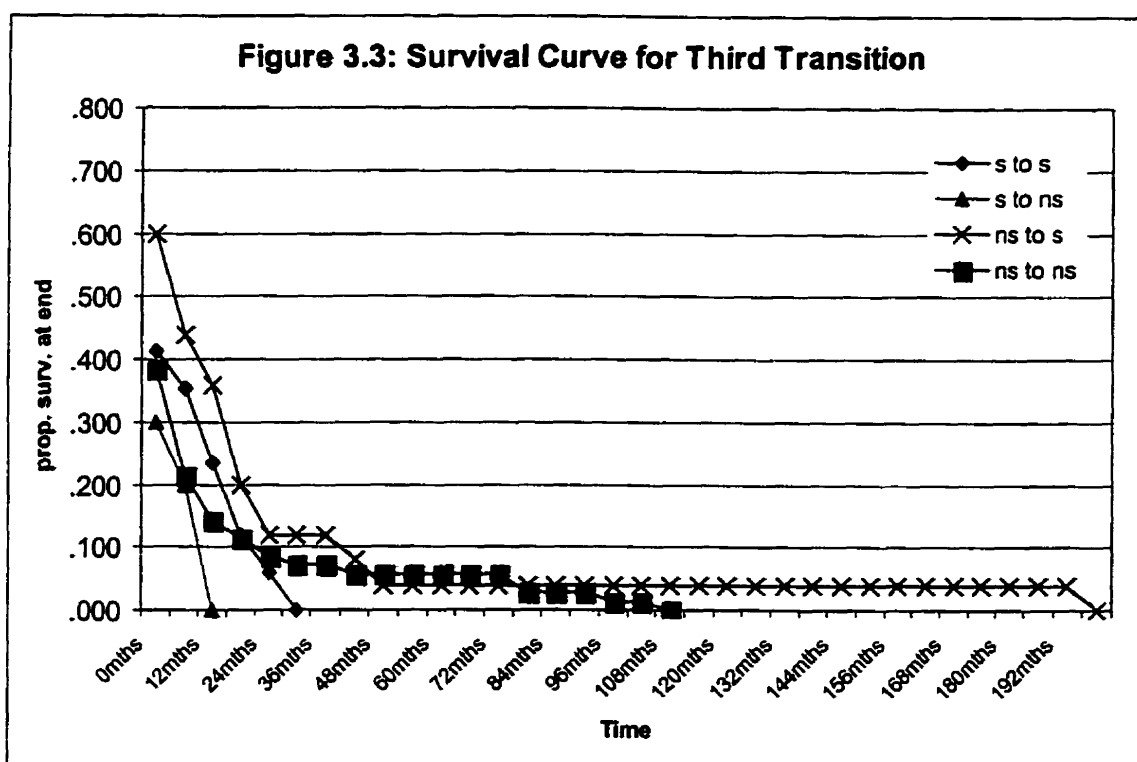Figure 3.3: Survival Curve for Third Transition

Figure 3.3 illustrates the survival curves for the third transition: the movement from third to fourth offences. Both the sexual to non-sexual and the sexual to sexual offender groups have a direct drop in their survival curves. They have a short survival and re-offend much faster than in the two previous transitions. The non-sexual to non-sexual offender group's curve levels out at close to 18 months. This is similar to the previous transition.

The non-sexual to sexual group shows stability in offence timing as they again have the longest survival. The survival curve for this subgroup levels out at approximately 24 months, which is much faster than in the previous transitions. All subgroups have steeper survival curves than in the previous transitions, which illustrates escalation in criminal activity.

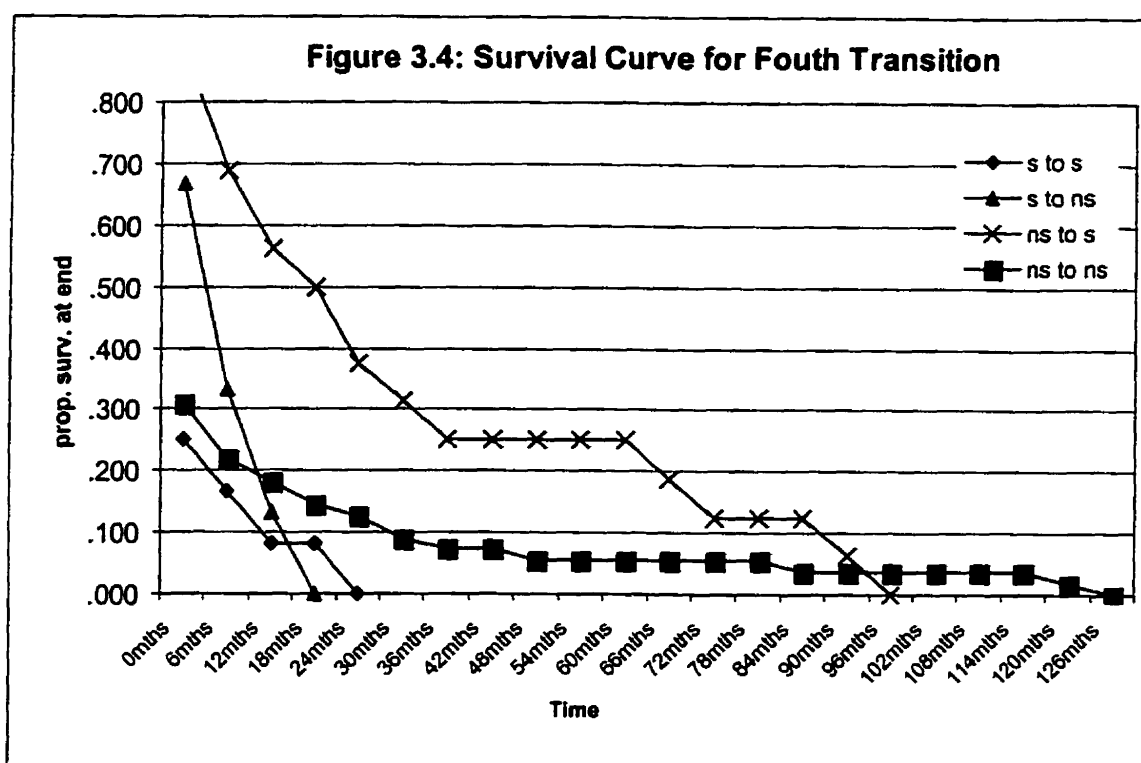Figure 3.4: Survival Curve for Fouth Transition

Figure 3.4 illustrates the survival curves for the four subgroups in the fourth transition, which is the movement from fourth to fifth offences. There is again a short survival for both the sexual to non-sexual and the sexual to sexual offender groups. The non-sexual to non-sexual curve levels out faster than the previous transition at 6 to 12 months. The non-sexual to sexual are consistently the group with the longest survival. Their curve levels out at 36 months. There again seems to be an increase in the speed of offences in this final transition.

The survival curves for the four subgroups of offenders throughout the four offence transitions outlined in the previous four figures indicate aspects of diversity as well as certain forms of consistency of offence timing throughout the five offences for the four offender groups. There are differences between the groups in terms of timing of re-offence throughout the four re-offences; however, in the third and fourth transitions the sexual to non-sexual and the sexual to sexual offender groups have short and similar survival curves. The non-sexual to sexual offender group consistently has the longest survival throughout all four transitions. Moving forward through the transitions, it can be seen that the subgroups have shorter survivals. These shorter survivals suggest escalation in criminal activity as the number of crimes committed increases.

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