

A contemporary life course approach to understanding recidivism: The impact of  
informal social control, agency and substance abuse on post-prison survival

by

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A thesis submitted to the graduate faculty  
in partial fulfillment of the requirements for the degree of  
MASTER OF SCIENCE

Major: Sociology

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2005

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## CHAPTER 1

### Introduction

Recently, a comprehensive study conducted by Langan and Levin (2002) indicated that 67 percent of 300,000 prisoners released in 1994, were rearrested for a new offense within three years and the majority during the first year. Overall, the released offender population of 1994 accounted for 4.7% of all violent crime from 1994 thru 1997, and almost 8 percent of the nation' murder arrests in 1995, consequently generating a homicide arrest rate 53 times greater than the rate for the general adult population. Such a high rate of recidivism, the term given for re-arrest after incarceration (Maltz 1984), is a familiar reality in the nation's criminal justice system, however scholars insist that an alarming trend has emerged: ex-convicts are currently recidivating at a greater rate than in the past (Petersilia 2003). Indeed, Langan and Levin (2002) revealed that the recidivism rate for the 1994 cohort is 5 percent higher in comparison to a population of offenders released in 1983. The evidence also suggests that offenders are returning to crime more quickly. In fact in the 1983 study, approximately 25 percent of offenders were rearrested in the first six months of release; by 1994 the number had climbed to 33 percent. Yet most disturbing, the analysis indicates that the population of recidivists among the 1994 prisoner release cohort committed roughly three times as many serious crimes as their 1983 counterparts. When analyzed per crime type, the data reveal that the 1994 cohort was responsible for 4.4 percent of rape arrests while those released in 1983 were charged with committing 1.8 percent. Equally troubling trends emanate

for the charge of murder. For instance, Langan and Levin (2002) noted that the 1994 cohort had been arrested for 7.7 percent of the nation's murders, approximately 5.5 percent more than the prisoners released in 1983. Inarguably, the present trends in recidivism demonstrate that "[ex convicts] represent a serious threat to public safety" (Petersilia 2003). Some speculate that the threat is even more ominous given the fact that the nation's correctional population has swelled to an all time high of 1.5 million inmates, some 93 percent of who will return home at a rate of roughly 1,560 per day.

As a result of the nation's incessant and ever mounting recidivism conundrum academics have, for decades, dedicated substantial amounts of energy to exploring factors which reduce the likelihood that offenders will return to crime. An established body of literature has resulted from their effort which has identified a number of factors in relation to offenders' criminal record, personal features and their post-prison environment that significantly determine the outcome of their release (Schmidt and Witte 1988; Visher, Lattimore and Linster 1991). In light of the rising trend toward modern "neighborhood based" prisoner reentry initiatives, as of recently there has been a renewed interest in expanding the body of recidivism literature beyond its predominant criminal justice orientation. Instead of concentrating on the mechanism by which formal control systems (i.e., police, prison, and parole) reduce ex-convict's rates of recidivism, innovative research is now driven by a more sociological agenda. Indeed, over the last ten years, several researchers have investigated the potential for social support factors within offenders' immediate environment, such as family and prosocial peers to offset

future offending. Additionally, scholars have just begun to examine the interplay between offenders' commitment to change and sources of social support in relationship to their patterns of criminal behavior (Laub and Sampson 2001).

Prevailing assumptions held by leading sociological criminologists suggest that even persistent offenders can experience positive behavioral change by way of their cognitive commitment to "going straight" and through proximal attachments to elements of conventional society. If pro-social relationships are established, scholars contend that in time offenders will accrue social capital (Sampson and Laub 1993), the by-product of positive social relationships and this in turn will "[substantially] increase the likelihood that they will fully make the transition from deviant careers to conventional lifestyles" (Bazemore and Erbe 2004:41). Up to this point, the empirical understanding with regard to the impact of informal social resources in the post-release context on release outcomes is rather limited to the social institutions of marriage, employment and school. Unfortunately, investigators have provided little information pertaining to the effectiveness of multiple "other" potentially beneficial informal resources such as family members, positive peer relations and situational factors.

It is imperative to point out that even with a multitude of resources in the release environment it can be a foreboding task for offender's to alter what is seemingly a life-long pattern of behavior, as Petersilia (2003:40-41) remarks: " [ex-offenders] become embedded in criminality, and they gradually weaken their bonds to conventional society. After years of engaging in a criminal lifestyle, reestablishing these bonds becomes very difficult". Undoubtedly, in the context of post-prison, an

offender's criminal past is a difficult barrier to overcome. For the majority will return back to their old communities wherein it is often the case that jobs are scarce, drugs are abundant, and former criminal acquaintances are all too welcoming (La Vigne, Visher and Castro 2004). However, despite the adversity research demonstrates that for a number of offenders positive behavior change is possible; especially for those "whose life circumstances reflect an effective coalescing or alignment of the various processes [required for achieving change]" (Giordano et al. 2003:320).

In all, based on the evidence, it is apparent that multiple factors intrinsic to the individual and to the post-release context place an extraordinary influence on offenders' odds of success following release from prison. While extant research has explored the utility of many of these factors to influence antisocial behavior, a large number of potential correlates have not been addressed empirically. To accomplish this, scholars contend that the age-graded theory of informal social control (Sampson and Laub 1993) is a solid theoretical framework to build an investigation upon. This theory does in fact allow one to assess the particular role of ex-convict's time stable characteristics, such as criminal history in relation to "subjective and objective contingencies" (Laub and Sampson 2001:53) that contribute a "significant conventionalizing influence" (Shover 1996:127) on offenders' likelihood of recidivism.

### **General Study Purpose**

In accordance with the current course of recidivism research, the overall objective of this paper is to examine the impact of time-stable covariates (e.g., criminal history, ascribed features), drug use and contemporary sources of social support (e.g. prosocial peers, education, family relationships, stable housing) on the

odds of recidivism among offenders in an ex-convict sample. This study will add additional theoretical and empirical insight to the criminological literature regarding potential resources for informal social controls that impact post-release offending. In doing so, multiple analytical models will be organized around the theoretical assumptions of Sampson and Laub's age-graded theory of informal social control. The predictive power of each model as well as the specific explanatory variables will be assessed via time-variant survival techniques. Implications of the study findings will be discussed in reference to both criminological theory and correctional policy.

## CHAPTER 2

### Literature Review: Risk

#### Risk and Recidivism

Scholarly studies consistently reveal that offenders exit prison and return to their communities beset by a constellation of adverse factors which place them at risk for a relapse into crime. A report recently completed by the U.S. Department of Justice revealed the sheer numbers of formerly incarcerated offenders who according to the recidivism literature, are considered at *risk* (Durose and Mumola 2004). According to the report, fewer than half of released inmates possessed a high school education, and the majority had a substandard pre-prison employment record, including 10 percent who had never held a job. In addition, at least 95 percent of releasees had a criminal record prior to their most recent commitment, which constituted on average nine arrests. On top of this, ex-convicts typically spent roughly 4.5 years incarcerated, and approximately 65 percent served at least two sentences prior to their current one. The report also indicated that almost 9 in 10 offenders discharged from prison were male, moreover most offenders were considered young, in fact 18 percent were under the age of 24 and 43 percent were between the ages of 24 and 34. Fewer than one in 10 were over the age of 45. Also, according to the BJS report, over two-thirds of released offenders were ethnic minorities, most of whom were either Hispanic or Black.

Considered unalterable across the life course, these risk factors are both ascribed characteristics and the result of earned actions and are commonly noted in

the recidivism literature as static *or time-stable* factors (Zamble and Quinsey 1997). Scholars contend that independent of the post-release environment, many time-stable factors potentially "increase the probability [of the] aggravation or persistence of problem behavior" (Losel and Bender 2003:132). This chapter reviews the body of literature that details the association between specific time-stable risk factors and offender's risk for recidivism.

## **Time-Stable Risk Factors**

### **Release Age**

Research studies focused on uncovering the correlates of recidivism often establish a significant inverse relationship between offender's age at the time of their release, and the likelihood that they will subsequently reoffend. This is apparent in an exhaustive meta-analysis of recidivism research wherein scholars confirmed that offender's age was significantly and inversely related to rearrest in well over the majority of 131 studies they analyzed. Moreover, the investigators concluded based on their review, that release age was one of the most potent predictors of recidivism among static factors (Gendreau, Little and Goggin 1996). The results of their meta-analysis are reflective of those uncovered in multiple empirical investigations. For example, to specifically investigate the role of ex-convict's age in relationship to recidivism, net of static factors, Hoffman and Beck (1984) conducted analysis on a sample of federal parolees. The researcher's results indicated that recidivism rates declined with increased age and that the association did not diminish when static factors, including arrest history, were statistically controlled. Likewise, employing two statistical models that exercised statistical control, Spohn and Holleran (2002) found

concordant results in a sample of released felons. Based on logistic regression analysis, among participants in their cohort, ex-convicts who were younger had a higher probability of being arrested and charged with a new crime, net of control measures. Furthermore, the researchers found that the age variable reflected a negative relationship with the number of months a person remained crime free, which indicated that older offenders were more likely to "survive" in the community longer. Joo, Olson and Kelly (1995) also utilized survival models in their analysis of Texas parolee's success, and consistent with prevailing literature, the researchers concluded that age was a significant predictor of recidivism. For their study the researchers estimated survival curves 36 months after release across four cohorts of offenders. Their series of models suggested that the youngest parolees, those aged 18 to 22, had the lowest and the oldest parolees, those 33 and older had the highest survival rates. Overall, these findings were congruent with the results from Benda's (2001) analysis of recidivism correlates in a sample of 480 boot camp graduates. In his study he employed discriminant analysis to uncover the factors that differentiated offenders between three release outcomes in a three year follow-up period, the outcomes were: nonrecidivists, recidivists, and parole violators. The results of his analysis suggested that offenders who were classified as recidivists were significantly younger in comparison to offenders in the remaining two groups.

The inverse statistical association between offender's age at release and recidivism has also been demonstrated in a number of studies that utilize international samples. For example, Christiansen (1983) studied five separate cohorts of offenders released from European prisons to determine the

characteristics specific to each cohort that were associated with recidivism. He found using cross tabulation methods that in every cohort, recidivism decreased with offender's increasing age. In addition, Burnett (2004) used a European sample of ex-convicts to investigate factors indicative of successful prisoner reentry. Through an in-depth survey the researcher discerned that 66 percent of ex-convicts age 29 and younger and 37 percent of those age 29 and older had indeed reoffended.

Several scholars have also investigated the factors associated with recidivism in samples of offenders released from community based residential correction programs. Commensurate with the prevailing recidivism literature, these studies have produced findings that indicate an offender's age at release from prison is a substantial determinant of post-commitment success. For instance, a team of researchers explored the post-release outcomes of roughly 33,000 offenders who participated in one of three different residential work programs. Their analysis indicated that independent of the program the offender was placed in, released offenders who were young had a substantially higher risk for being rearrested (Jones and Ross 1997). In a similar study, Wright and Mays (1998) researched the predictors of post-prison success in a sample of non-violent offenders sentenced to a three to six month residential "discipline program". Their analysis established that offenders' age at the time of release from the program was a significant predictor of recidivism.

Finally, qualitative researchers have provided a unique perspective into the rather conclusive results deduced in quantitative analysis regarding the strong association between age at release and rearrest. Qualitative research suggests that

older ex-convicts are less likely to reoffend because they become keenly aware that time is a "diminishing" resource, and given their lengthy criminal record, they realize that another crime and subsequent prison term could "expropriate their few remaining, potentially productive years" (Shover 1996:132-133). Moreover, this realization paired with the fact that their sentences will only increase with their criminal record leads many older ex-convicts to express a rational fear of potentially dying in prison of old age. On top of this, older ex-convicts begin to disassociate themselves with the criminal lifestyle since they realize the cycle of crime and incarceration is "time wasted" and "self defeating and foolish", a message many convicts attempt to communicate with their younger counterparts, however often with no avail (Shover 1996, 2003). Unlike older matured ex-convicts young men believe that they can withstand the punitive environment of incarceration, therefore they feel compelled to "still maintain to live their life their way", which resultantly involves crime and another prison sentence, a fact supported by the recidivism literature (1996:145).

In review, the corpus of empirical recidivism literature clearly demonstrates that offenders who are younger when released from institutional commitment are at an increased risk for future offending. In light of this it should come at no surprise that the most current BJS recidivism report indicated that in a nationally representative cohort of inmates released during 1994, nearly 75 percent of inmates between the ages of 18 and 24 were rearrested, compared to 58 percent between the ages of 40 and 44 (Langan and Levin 2002).

## **Race**

Many scholars assert that ex-convict's race is a very important static factor to consider in recidivism research; in fact the results overwhelmingly suggests that minority ex-convicts are at greater risk for reoffending than are White's. However, there are a small number of studies which disprove this contention; instead they conclude that racial status contributes no significant influence on ex-convicts risk for rearrest. The detailed evidence supporting both views is outlined in the subsequent paragraphs.

Coinciding with the recidivism literature that insists there is a "race effect", Harer (1995) inferred based on his analysis of approximately 1200 federal parolees that race was a significant predictor of future offending. He found that three years after release from prison approximately 40 percent of participants in his study had been rearrested or revoked while on parole. In fact, the failure rates were highest among Black and Hispanic parolees than among Whites and Non-Hispanics. Likewise, in a similar study of federal offender release outcomes, Minor, Wells and Sims (2003) discovered that race was a significant predictor of recidivism. To conduct their analysis the research team employed a sample of approximately 200 offenders sentenced to federal post-release supervision in Kentucky between 1996 and 1999. The results of their multivariate models indicated that 30 percent of the sample violated conditions of their release within two years; in addition minority offenders in comparison to Whites were much more likely to recidivate.

Scholars have revealed similar findings utilizing samples of state level offender samples. In one such study, Stinchcomb and Terry (2001) explored the

correlates of recidivism in a sample of offenders released from a shock incarceration facility. They found in their sample of 200 offenders that approximately 73 percent of participants were rearrested after release. Furthermore, results of logit analysis revealed that whites were less likely than their black counterparts to recidivate. In fact, of all the relationships examined in their statistical model, race was the best predictor of recidivism. Similarly, Wright and Mays (1998) examined a cohort of inmates released from a state imposed regimental discipline facility for the purpose of uncovering institutional specific predictors of post-release success. Among their bevy of findings the researchers discovered that black inmates were significantly more likely to recidivate than were whites, even while controlling for multiple intervention effects and static factors.

Scholars have also calculated arrest rates and survival probabilities for specific minority groups within ex-convict samples revealing very incisive information regarding the affect of race on recidivism. For instance, in one study a group of scholars followed the longitudinal offending patterns of two cohorts of offenders paroled from correctional facilities in the state of California. They determined that in reference to Whites, minority offenders had an increased risk of arrest once released. In particular, the results of multi-level binomial models revealed that White and Hispanic offenders had a substantially decreased expected likelihood of post-release arrests by 17 percent and 27 percent, respectively, compared to Black parolees (Lattimore et al. 2004). Similar results were uncovered by Joo et al. (1995) in a sample offenders paroled from a Southwestern prison. For their study the researchers utilized survival models to estimate the effects of a variety of factors on

ex-convict's time-to-failure. They discovered after a three year follow up period, that survival probabilities were substantially higher for Latino and White ex-convicts than they were for Blacks.

Recidivism research also suggests that minority status is a determinant of the type of crime an offender will commit after release from prison. Schwaner (2000; 2000b) found proof of this in a series of studies he conducted on a comprehensive data set consisting of inmates paroled in Ohio. Overall, he discovered that minority parolees had a significantly greater risk of general recidivism than did Whites. However based on logistic regression models he found that minority offenders were nearly twice as likely to be rearrested for a violent crime. Congruent with his results, Jones and Sims (1997) uncovered in a sample of offenders released from a North Carolina prison, that the strongest predictor of rearrest for violent sexual offense was race. Their analysis distinctly revealed that African American males were much more likely to commit a violent crime after incarceration. Furthermore Black males had increasingly higher odds of being rearrested for a drug crime than did Whites. Alarid, Burton and Cullen (2000) uncovered slightly different findings in their analysis of 1000 male and female offenders released from a south Texas boot camp facility. Based on ordinary least squares regression models, they found that minority offenders were at a significantly greater risk for being rearrested for drug and property crimes, yet there was no significant likelihood difference for violent crime.

Scholars have also uncovered that race is a substantial predictor of recidivism for released juvenile and adolescent offenders. For example, Rasmussen (2004) discovered in a sample of 634 young offenders released from an Illinois correctional

facility, that those who were black, were 2 ½ times more likely to fail in the community than were white offenders. Additionally, "other" non-white offenders had a time-to-failure rate that was 1 ½ times higher than whites. Similarly, Scanlon and Webb (1982) examined the predictive power of five "static" factors in a cohort of older juvenile offenders released from Georgia's institutions between the years 1975 and 1980. A total of 25 percent of the sample became recidivists. Within the group of static factors, inmates who were who were black and young had significantly higher recidivism rates than did the remaining members of the sample. In addition, just recently a team of researchers explored for correlates of post detention success in a sample of formerly incarcerated adolescents who had served a sentence in a correctional facility for problematic young offenders. Using multiple regression models, wherein they controlled for a variety of static factors, the researchers confirmed that Asian American and Hispanic offenders had a greater risk for recidivating than did Native American and Blacks (Brown, Killian and Evans 2003).

As mentioned previously, a number of researchers have produced evidence that contrasts the generally stable empirical relationship between minority status and recidivism. Their findings suggest that net of statistical controls, offender's race does not place them at increased risk for reoffending. This was demonstrated in Holtfreter, Reisig and Morash's (2004) investigation of recidivism correlates in a sample of 402 female parolee and probationers. In their study, logistic regression analysis indicated that net of several static factors, minority status was not significantly related to participant's likelihood of recidivism. In addition, a team of scholars reported analogous findings in their examination of the factors impacting recidivism in a

cohort of 2200 paroled felon and misdemeanor offenders. According to failure rate analysis the scholars learned that approximately 14 percent of offenders failed while on parole; in addition, among several static predictors, offender's race was not a significant determinant of parole outcome (Roundtree, Edwards and Parker 1984). Finally, using four cohorts of offenders from four separate states a pair of investigators explored the affect of several time-stable characteristics as well as supervisory conditions on offender's post-detention success. Interestingly, in all but one cohort, minority status was not a significant determinant of whether an offender would recidivate (MacKenzie and Brame 2001).

To summarize, scholarly investigations focused on discerning the correlates of recidivism suggest that race is a substantial static predictor of whether an offender will be rearrested. These investigations have revealed descriptive findings which establish that both adult and juvenile minority ex-convicts are at a heightened risk for rearrest. Furthermore, several studies suggest that race is a significant indicator of both the frequency for which a person will reoffend as well as an ex-convict's "survival" time. Although a few studies have found results that indicate there is no association between race and recidivism, they are in fact too few in number to counter the overwhelming evidence which points to race as a significant determinant.

### **Sex**

According to the recent report released by the BJS on national recidivism trends, out of the 1994 prisoner release cohort approximately 68 percent of males and 57 percent of females were rearrested after release from prison (Langan and

Levin 2002). These results are consistent with those generated from empirical recidivism studies, which suggest that males are at a greater risk to recidivate once released from prison than are females. In this section the conclusions of several of these investigations are outlined and so are the contradictory results found in a small cadre of studies.

Congruent with findings in the BJS report, Benda and Tollet (1999) produced evidence in their analysis of Arkansas boot camp graduates that indicated male offenders were at greater risk for rearrest. The research team followed up on a sample of young serious offenders approximately twelve months after they were released in order to determine the factors that contributed to either their success or failure. OLS models suggested that males remained in the community approximately 29 fewer days than did females. Benda and Tollet's findings correspond with those uncovered by a group of researchers who explored the correlates of recidivism in a large sample of released offenders from the Midwest. Using multiple statistical methods they discovered that males had substantially higher odds of recidivism than did females, in addition they spent fewer days crime-free while on release (Spohn and Holleran 2002). Likewise, employing proportional hazards models, another criminologist uncovered comparable results in a sample of 1230 male ex-convicts. Based on his estimates sample members who were male were 1.81 times more likely to be reconvicted of a crime at a conditional time interval in the follow up period (Baumer 1997). Finally, in a comprehensive investigation that utilized the entire cohort of offenders released from community sentences in Illinois during November of 2000, Olson, Lurigio and Alberden (2003) concluded that sex was a significant

predictor of recidivism. More specifically, the researchers discovered that despite several control measures, gender played an independent role in release outcomes, with females being less likely to be rearrested than males.

A few studies in the scholarly recidivism literature have also investigated the relationship between ex-convicts gender and the likelihood that they will commit certain types of crimes. The results of these studies are mixed, therefore inconclusive. For instance, recently a pair of researchers utilized a sample of 125 offenders to discern the interactions between static factors and post-release bonds on offender's success while on community supervision. The results of their logistic regression models implied that female offenders had greater odds of being involved in a non drug crime and males had a significantly higher likelihood of involvement in illegal drug dealing (MacKenzie and Li 2002). Jones and Sims (1997) also investigated the specific types of crimes committed by each gender in very large cohort of released offenders. After a three year follow up period, the researchers discovered in logistic regression models that, males in comparison to females were much more at risk for rearrest for violent and property crimes.

The apparent relationship between gender and recidivism is robust, nevertheless it is not entirely abiding in the recidivism literature; in fact a few scholars have actually found that gender elicits no statistical affect. For instance, Hepburn and Albonetti (1994) tracked 718 offenders from the state of Alabama to uncover characteristics that significantly determined success in the post release environment. Approximately 85 percent of the sample was male and offender's average age was 27. Results of proportional hazard models indicated that gender

elicited a non-significant yet negative relationship on time to failure, which indicated that females were at greater risk for recidivating. Likewise, using data collected from a department of corrections clearinghouse in Michigan, scholars examined the outcomes of a large sample of offenders who were serving intermediate community based sentences. Although several time-stable factors were significantly related to committing a new offense gender was not, moreover the estimations hinted towards a negative effect, indicating that females were more likely than males to recidivate (Gray et al. 2001).

In conclusion, while considering contrary evidence, the bulk of studies within the body of recidivism literature illustrate that an inmate's gender is a significant determinant of their success in the community. As demonstrated, several studies indicate that males rather than females are at a greater risk for recidivism. In addition, a small number of scholars contend that an inmate's gender is also a solid predictor of the type of crime they will commit, given that they do recidivate.

### **Employment History and Educational Attainment**

Offenders' employment record and educational attainment prior to incarceration endure with them long after they exit the confines of prison. The research outlined below indicates these two factors are very important predictors of their release success.

Utilizing a nationally representative sample consisting of approximately 13,000 felony parolees Benedict and Corzine (1999) examined the factors which correlated with "survival" in the post-prison environment. They found foremost that offenders who possessed less than a high school education were at a greater risk

for reoffending; in addition, the amount of time an inmate was employed prior to their sentence was predictive of whether they would reoffend within the follow up period. Eisenberg (1985) discovered similar results in his longitudinal study of roughly 2100 ex-convicts released between 1983 and 1984 from a southwestern prison. His analysis revealed that multiple static factors elicited significant relationships to recidivism; in particular, ex-convicts who possessed less than a high school education and those who had unstable employment histories prior to incarceration had a much higher risk of release failure. Comparatively, offenders in a rural Midwestern state were more likely to recidivate if they had a suboptimal pre-prison employment record, or if they did not obtain a high school diploma (Boudouris and Turnbull 1985). In another study, researchers employed Cox proportional hazard models to uncover factors that significantly impacted paroled offenders likelihood of failure (Benda and Toombs 2002). They found that ex-convicts with fewer than 12 years of formal education had a substantially increased hazard rate; therefore at a conditional time interval they had higher odds of recidivating than offenders with more than 12 years of education. In addition, several scholars used advanced Poisson frequency models to uncover factors that impacted a variety of domains of recidivism in a cohort of young parolees. Results from their tests inferred that dropping out of high school had a substantial affect on participant's success in the follow up period. Being a high school dropout, net of all predictor variables, increased a persons' expected chance of failure by approximately 5 percent (Lattimore, et al. 2004).

Qualitative studies provide rich insight into the negative effect of these risk factors on offender's post-release success. For instance, in Richie's (2001) in depth analysis of parolees' long term success nearly all of the participants in her study stressed that their lack of job skills and a formal education were significant barriers to securing good paying employment. The strain of financial hardship that came with joblessness inspired many to utilize illegal methods to earn money. Offenders released from a California prison conveyed to Irwin (2005) very similar concerns, prompting him to deem them "ill-prepared social cripples" whom he felt seemed fatalistically bound for crime (2004:173). It appears that inmates are well aware of the consequences being skill less has upon their release success. Recently British ex-convicts participating in a study of offender reintegration conveyed this in a survey conducted by Burnett (2004). In fact, he found that 80 percent of soon- to-be released offenders sought to lead a good life on the "outside". Yet, only 25 percent of the 80 percent believed that it was possible to avoid crime, since they perceived themselves as under prepared to enter the labor market. A situation the ex-convicts insisted was due in part to their lack of education and a shoddy history of employment.

Combined, qualitative and quantitative studies offer complimentary evidence indicating that an offender's educational attainment, as well as their pre-prison employment record potentially places them at risk for recidivism.

### **Criminal History**

Upon release from prison offenders carry with them the burden of their criminal history which they, as well as academics, contend has a trenchant effect on

their likelihood of success in the community. In the recidivism literature offenders' criminal history is considered a collective term and typically constitutes three dimensions: a continuous measure of offender's age at first arrest, their total number of prior adult arrests, and the crime for which they were most recently imprisoned - also known as their instant offense. Many leading scholars submit that certain dimensions of ex-convict's criminal record, in particular their arrest history, are the most reliable static determinants of their post-prison outcome. Outlined in the following section is the wealth of research findings regarding the relationship between the dimensions of criminal history and recidivism.

### **Age at First Arrest**

According to the recidivism literature, ex-convicts who return to criminal offending compared to those who do not, were more often actively involved in crime at a much younger age. For instance, in study employing a sample of paroled offenders' researchers discovered that nearly 58 percent of sample participants had recidivated within three years. Ex-convicts' with a juvenile arrest record had a higher hazard rate of parole failure, which incidentally increased their odds of failure by .40 at a conditional time interval (Benda and Toombs 2002). In a comparable study, Visher and her colleagues (1991) employed hazard models to investigate the affect of a wide variety of covariates on recidivism in a sample of approximately 2000 paroled youthful offenders. Their analysis indicated that offenders who were arrested at a younger age were 2.03 times more likely to be rearrested within the first 36 weeks following their release. Similarly, among a group of nearly 3500 ex-convicts paroled from a Midwestern prison, a researcher discovered in logistic regression

models that offenders who were younger than twenty at the time of their first arrest had a significant increased probability of rearrest (Schwaner 1998). Consistent with these findings a team of scholars explored the influences of several factors on release outcomes in a sample of 820 male offenders paroled from Iowa's prisons in the late 1970's and early 1980's. In their analysis, criminal history measures had the most robust relationship with time to failure in the community. Specifically, the estimations suggested that probationers with prior juvenile arrest records had a significantly higher probability of recidivism (Boudouris, and Turnbull 1985).

Scholars have also discovered that a person's age at first arrest is a significant determinant of recidivism in cohorts of offenders released from intermediate or intensive rehabilitative programs. As an example, a team of interdisciplinary researchers explored the correlates of recidivism in a group of 162 young offenders referred to an alternative training institution in on the East Coast between the years 1976 and 1995. Their analysis suggested that 91 percent of offenders who were arrested under the age of 13 committed a new offense while on release, whereas roughly 81 percent of those who were arrested after the age of 13 were rearrested. Chi-square test of independence indicated that these results were statistically significant (McMackin, Tansi and LaFratta 2004). Additionally, Benda, Corwyn and Toombs (2001) analyzed a sample of offenders released from residential treatment in a serious youthful offender program in order to determine whether a series of psychosocial factors predicted recidivism. Using independent t-tests, they discovered that differences in age at first arrest for recidivists (11.7) and

non-recidivists (12.8) was statistically significantly, therefore individuals who began crime earlier in the lives were more likely to be rearrested.

### **Prior Adult Arrests**

As with age at first arrest, there is strong relationship between ex-convicts' total number of prior arrests and their likelihood for rearrest. This association was recently highlighted in Langan and Levin's (2002) comprehensive study of recidivism in the 1994 National release cohort. The authors found that ex-convicts with one prior arrest had approximately a 40 percent arrest rate within three years, with three priors the percentage climbed to 55 percent, and if offenders had five arrests prior to prison, their recidivism rate within three years was roughly 64 percent. Langan and Levin's (2002) analysis provides evidence of a very distinct pattern: " the longer the prior record, the greater the likelihood that the recidivating prisoner will commit another crime soon after release" (2002:10). By and large, investigations that center on the correlates of recidivism conclude with findings that correspond to this assertion.

For example, in Christiansen's (1983) exploration of recidivism factors in a sample of Danish ex-convicts results from cross-tabulation analysis revealed that recidivism rates were highest for offenders classified as chronic, or those with multiple arrests, in contrast recidivism rates were lowest for ex-convicts with less than two offenses. Similar results were uncovered by a pair of researchers who explored determinants of recidivism in a sample of 1530 paroled drug offenders. Controlling for a variety of static factors including employment and drug history, the results of logit and survival models established that ex-convict's with multiple prior

convictions spent significantly less time crime free, and were ultimately more likely to recidivate than their counterparts (Spohn and Holleran 2002). In addition, Dejong (1997) utilized a log-normal survival technique to estimate the affects of several covariates on the timing and probability of recidivism in a sample of approximately 4800 offenders from the state of New York. After the one year follow up period, the results of her analysis indicated that offenders with a lengthy arrest record were more likely to recidivate, in addition they spent fewer days in the community upon release. Also, Schmidt and Witte (1988) found added support for the relationship between prior arrests and recidivism based on calculations derived from a number of survival models. In their study, the researchers examined the correlates of recidivism in two separate cohorts of prisoners who were released from North Carolina prisons approximately two years apart. They found that ex-convicts with an increased number of arrests had a significantly lower survival rate in the community.

An offender's prior adult arrest record has also been found to be significantly related to the frequency by which they reoffend, given that they do. For example, a group of scholars conducted multi-level Poisson regression analysis on a sample of paroled youthful offenders to uncover factors which influenced the rate they would reoffend. Their analysis indicated that prior arrests were a robust predictor of parolee's rate future criminal involvement. More clearly, they found that per every one unit increase in an offender's total prior arrests, their estimated "expected number of arrests increased by approximately one percent" (Lattimore, et al. 2004:46).

In review, an ex-convicts adult arrest history appears to predict the likelihood that they will eventually recidivate as well as the amount of time that passes until they do so. In addition researchers contend that ex-convicts' arrest record elicits a strong influence on the rate at which they will persist in offending.

### **Lead Offense**

Often, authors of recidivism studies include measures of ex-convict's lead offense in their statistical models. These offenses are usually lumped into three general groupings: violent, drug or property crimes. In the empirical literature the link between lead offense and recidivism appears to be reliable and strong for individuals incarcerated for a property offense. Baumer (1997) found this to be especially true in his study of 1230 ex-convicts from the island of Malta. Indeed, estimates derived from a series of proportional hazard models indicated that Maltese offenders who were incarcerated for property crime had a 1.50 times higher rate of recidivism and were 1.79 times more likely to be reimprisoned than were all other offenders. In fact, being incarcerated for a drug offense had no significant relationship on either recidivism or reimprisonment for Maltese ex-convicts. Likewise, Schmidt and Witte (1988) concluded based on a series of autoregressive models, that ex-convict's likelihood of recidivism was not significantly affected if they were incarcerated for a violent offense. On the other hand, participants in their study had a significantly heightened risk of recidivism if their lead offense was for a crime against property. Similarly, in a large-scale examination of paroled young males, scholars discovered based on time-to-failure estimates that offenders who were incarcerated for property crimes, in particular burglary and theft, were more likely to reoffend while on parole.

Their calculations also revealed that offenders who were locked up for a violent crime were not at a significantly greater risk for failure than were other parolees (Visher et al. 1991). In addition, in a detailed study of the failure rates of ex-convict released from Texas prisons, Eisenberg (1985) discovered that releasees who committed lead sex offenses, drug offenses or murder were the least likely to recidivate in the follow up period. Rather, ex-convicts who were incarcerated for theft and burglary had the highest probability of returning to crime. Finally, employing a sample of over 80,000 offenders released from penitentiaries in Florida, a group of researchers investigated the determinants of recidivism for inmates released from either a private or state run facility. The results of their analysis indicated that offenders incarcerated for burglary, a property crime, were significantly more likely to be rearrested in the 5 year follow up period. Moreover, in comparison, male and female offenders were significantly less likely to be rearrested if their instant offense was for certain violent crimes, including homicide and robbery (Bales et al. 2005).

A few studies, however, have concluded with results that are contrary to the predominant findings indicating that property offenders are not the most at-risk group of ex-convicts. For instance, a team of researchers analyzed a large sample of paroled offenders from four southern states and found that offenders who were incarcerated for violent crimes were more likely to recidivate than those who committed either property or drug related crimes (MacKenzie and Brame 2001). Additionally, using proportional hazard models a team of researchers discovered that ex-convicts survived fewer days in the community without re-offending if their instant offense was for a violent crime (Gray et al. 2001). They found no association

between drug or property instant offenses and participants' survival time. Along these lines, investigators discovered in a sample of offenders on community sentences in the southern United States, that lead offense characteristics had no significant association with the amount of time offenders went without rearrest (Helpburn and Albonetti 1994).

As outlined above, although there is contradictory evidence, the corpus of recidivism research tends to suggest that property offenders are at the greatest risk for failure once released into the community. This finding coincides with the percentage results drawn from the national prisoner release cohort, which indicates that offenders incarcerated for violent crimes such as rape, homicide and assault have the lowest rearrest rate - approximately 61 percent. In addition, ex-convicts who were incarcerated for property crimes such as burglary and theft have roughly a 74 percent arrest rate, the highest of all instant offenses (Langan and Levin 2002). Combined with the empirical research, the national study substantiates the general conclusions regarding lead offense type and its relationship with recidivism risk.

### **Confinement History**

Typically offenders' confinement history is also included in investigations of recidivism prediction. It is quantified as two separate factors, first as the length of time offenders spent incarcerated during their most recent sentence and second, the number of sentences the offender served in their lifetime. Apart from recidivism studies, much of the scholarly findings on the affects of confinement history are taken from the body of deterrence literature. For the most part, the focus of deterrence studies is to investigate the impact of official sanctions on offender's

likelihood of rearrest. Fortunately, recidivism and deterrence studies have analogous objectives; therefore both bodies of work provide key evidence into the multifaceted relationship between imprisonment and future offending. Presented separately below are the established findings on the affects of sentence length and number of sentences served on offender's odds of recidivism.

### **Sentence Length**

Research is mixed and inconclusive in reference to the affects of sentence length on offenders' likelihood for recidivism. Weinrath and Gartrell (2001) found comparable results in their study of paroled habitual drunk drivers. The researchers utilized a sample of 514 paroled drunk drivers to explore the affect of sentence length on recidivism for drunk driving. For their analysis the researchers grouped offenders into four categories based on the length of their prison sentence. Results revealed that sentence length exerted a consistent deterrent effect on repeat drunk driving, while shorter sentences were less effective in discouraging recidivism. In other words the longer offenders were incarcerated the less likely they were to be rearrested upon release. DeJong (1997) concluded with concordant results in her examination of the deterrence affects of punitive sanctions in a large sample of released offenders. Estimations based on log-normal survival models indicated that the number of days an offender spent incarcerated significantly affected future recidivism. In fact, the survival curves suggested that inmates incarcerated for longer periods actually delayed their time until recidivism versus those with shorter sentences. These findings are consistent with those uncovered in Bales et al.'s (2005) large scale recidivism investigation. Using survival analysis, their estimates

indicated that ex-convicts who were imprisoned longer spent more time crime free in the post-release environment.

Researchers have also found that sentence length elicits a positive affect on ex-convicts odds of recidivism. For instance, a team of scholars employed hazard models to deduce the effects of several sociodemographic characteristics on recidivism and supervision technical violations. Their results indicated that offenders who spent more days incarcerated had a significantly greater chance to be rearrested once released (Sims and Jones 1997). Similarly, in a sample of offenders released from a prison in the South, Scanlon and Webb (1982) discovered that those who served longer sentences recidivated at a faster rate.

Even more, some scholars contend that ex-convicts' sentence length has no statistical impact on their risk for recidivism. For instance, Schmidt and Witte (1988) utilized survival models and found that offenders' sentence length was a negative and insignificant determinant of recidivism. Consistent with their findings, in a more recent study Gray and his colleagues (2001) analyzed a large sample of released offenders utilizing survival techniques and discovered that an ex-convict's "hazard" of recidivism was not affected by the amount of time they served in prison. Likewise, Smith, Smith and Zupko (1986) explored for predictors of recidivism in a cohort of 870 felons released from a number of correctional facilities in New Jersey in 1977. They determined that independent of statistical controls, the amount of time an offender was incarcerated had no main effect on recidivism.

### **Number of Sentences Served**

The results of multiple investigations have indicated that the more prison sentences an offender has served, the greater the risk they are for falling back into crime on the streets. Indeed Tollet and Benda (1999) discovered in their sample of youthful male offenders that those who were committed to penal institutions multiple times served fewer days in the community and were consequently more likely to return to crime. Moreover, in the results of their logistic regression models the odds ratio for "prior prison commitments" elicited the strongest predictive power in relationship to the remaining time-stable risk factors. Anderson, Shumacker and Anderson (1991) analyzed a sizeable sample of ex-convicts for 12 months and discovered based on Chi-Square models that recidivists were more likely to be considered a "repeat prisoner", or one who had been incarcerated at least twice before. Correspondingly, in a sample of 130 ex-convicts released from an English prison, 39 percent of individuals with only one previous sentence recidivated, in comparison to 52 percent of ex-convicts who had been incarcerated at least twice before (Burnett 2004). Finally, based on analysis of paroled youthful offenders a team of criminologists established that measures of prior commitments increased the omnibus predictive accuracy of each of the survival models in their analysis. They offered that amongst criminal history measures, "prior commitments" elicit stronger explanatory power than the bulk of the static factors in their models, including arrest history and category of instant offense (Visher et al. 1991).

To summarize, notwithstanding contrasting evidence, the corpus of recidivism and deterrence literature indicates that offenders who have been repeatedly

incarcerated or who have served lengthy terms in prison are at a greater risk for committing crime once they are released into the community. Qualitative research provides very useful and unique perspectives into the rationale for this relationship. Consistent with the conclusions of quantitative analysis, qualitative work recognizes that, even prior to incarceration, offender's future chances of success in conventional society is essentially inhibited by adversity, brought on by time-stable risk factors. And of course, because they are time-stable, incarceration does not make any of these risk factors "go away; instead it probably makes the person's situation much worse" (Maruna 2003:69). Accordingly, research suggests that prison leads offenders to become even more withdrawn from "conventional others" while at the same time it forces them to become more "polarized", thus more adapted to handling punitive sanctions and less deterred by punishment (Shover 1996). Upon release from prison many offenders who are already burdened by a lack of social resources and plagued by adverse static factors are also "hardened" by the deleterious effects of confinement. Consequently, many return to their community and enter into a situation that is "just as bad [if not worse], as the one that prompted their initial offending" (Maruna 2003: 70).

### **Ameliorating Risk Factors**

From the review of the risk factor and recidivism literature it is quite evident that ex-convicts' success or failure in the post-release environment is compelled by not only their ascribed characteristics, but by the injurious actions and missteps they engaged in prior to their sentence. Even more, the literature suggests that the deleterious experience of incarceration essentially magnifies the level of risk posed

by these factors. Taking all this evidence into account, coupled with the sheer numbers of at-risk inmates exiting the nation's prisons, it is not surprising that the majority of ex-convicts are eventually rearrested. Noting the near inevitability of persistence in offending in such dire circumstances Maruna (2001) wrote, "The situation facing recidivist offenders is something like a brick wall. It surmountable, but is enough of an obstacle to make most turn around and head back...back refers to crime...to the lives they are familiar with" (2001:55).

Although ex-convicts success on the outside is greatly inhibited by contemporaneous time-stable risk factors, researchers insist that these are not the most important determinants of their release outcome. Rather, despite their marred past, they contend that ex-convicts can overcome such overwhelming risk by attaching to elements of legitimate social institutions found in the post-prison environment. Examples of these institutions include work, school, personal relationships and support groups. Through these, ex-convicts build personal as well as financial investments both with individual others as well as the institution for which they are member. As a result they avoid crime out of fear of the negative consequences that it may induce from those institutions and individuals with whom they have established relationships. In effect, through post-prison prosocial attachments, offenders obtain incentives and legitimate rewards for not falling back into their old routine. As Shover wrote (1996:127), for persistent offenders, "[conventional attachments] provide a reason to change and social capital for doing so." Additionally, researchers proffer that success in positive social relationships and conventional pursuits encourages offenders to develop a non-criminal identity

wherein they reorient their long standing negative behaviors and realize the personal benefit of responsibility and obligations (Bazemore and Erbe: 2004). This process both "enables offenders to avoid criminal forces" and to begin to establish the foundation of a legitimate existence (Shover 1996:128).

Criminologists have evidenced that inmates are also quite conscious of the benefits inherent to securing relationships with conventional social institutions. Cognizant of the strong lure of the criminal lifestyle, inmates too realize that these links are imperative to their success as an ex-convict. This is evident in Burnett's (2004) longitudinal analysis of recidivism and desistance in a sample of incarcerated, yet soon-to-be-released property offenders. The purpose of his study was to investigate the relationship between inmate's expectations of future offending and actual subsequent offending. Participants were asked a series of questions, two of which were: (1) Do you want to go straight? (2) Are you able to go straight? Roughly 80 percent of inmates responded that they wanted to avoid crime, but only 25 percent of those 80 percent soundly believed that they had the resources to do so. For the most part, inmates who expressed uncertainty about their ability to go straight, expressed a desire to avoid recidivating, nevertheless they believed that in light of their futile past, their success was fundamentally contingent on "circumstances" and opportunities such as "obtaining employment" or being "reconciled with a girlfriend" (Burnett 2004:157). Reflecting this belief one inmate in the study commented, "I'd like to [avoid crime] if I get the chance. You don't go out intending to carry on, but... if you lack things, you seem to fall back into it. (Burnett 2004:157). Likewise, another remarked, "I'd have to have the opportunities that

would enable me to build the lifestyle I want without resorting to [criminal] activity" (2004:157). The offenders' pre-release expectations accurately mirrored their eventual parole outcomes. Follow up surveys revealed that in comparison to non-recidivists, inmates who recidivated were less likely to be employed and less likely to have indicated involvement in satisfactory personal relationships. Overall, the results of this study emphasize that offenders also recognize that in the absence of conventional links they will likely rescind into their former criminal patterns.

In conclusion, offenders who do not recidivate effectively alter a long-term pattern of negative behavior and overcome a substantial amount of deeply imbued risk. This is accomplished by way of secured meaningful attachments to legitimate social institutions retained in the post-prison environment. For those who continue to offend it seems that their criminal pasts are either too influential in their decision to go straight or they simply fail to maintain conventionalizing attachments. Whatever the eventual outcomes of ex-convicts release, scholars assert that it is heavily affected, however, not purely determined by "life long" adverse factors. Considering this, the life course perspective of criminal offending is the most compelling framework on which to organize a study of recidivism

## **CHAPTER 3**

### **Literature Review: Theoretical Context**

#### **Life Course Perspective**

Scholars of the social sciences have adopted the life course perspective to investigate the complexity of human behavior as it progresses through time. The life course, according to Elder (1994:5), "typically refers to the interweave of age-graded trajectories such as careers and family pathways, that are subject to changing conditions and future options, and to short-term transitions ranging from leaving school and retirement."

The concepts of trajectory and transition are fundamental themes in the analysis of life course dynamics (Elder 1985:31). Trajectories are a stable component of a "pathway of development over the lifespan" in such structural realms as work and marriage, as well as more emotional affects such as self-esteem. Trajectories represent a tendency in persistence of life course patterns, but are not necessarily defined as an unchanging probability of outcome (Wheaton and Gotlib 1997). Life transitions are nested within trajectories and occur as either age-graded or non-normative abrupt occurrences such as puberty, early pregnancy and college attendance. Scholars note that there is a powerful interdependency, or interlocking nature between transitions and trajectories, that "is played out over time and in relation to others" (Elder 1985: 32). In addition, the adaptation by the individual to transitions and the time in the life span in which they occur is crucial to the strengthening, or change of a developmental trajectory. Indeed, certain transitions

may invoke turning points that transpire either incrementally or suddenly, which for some people can produce radical turnarounds in life history that separate past from future, therefore represent a significant change in the life course, given an established baseline trajectory (Piquero and Mazzerolle 2001; Wheaton and Gotlib 1997). To summarize, because of its "socially" dynamic assumptions, the life course perspective is well suited to analyze both the stability and change of long term behaviors in reference to exposure to social occurrences (Elder 1994; Sampson and Laub 1990).

## **The Life Course Perspective and Criminology**

### **Criminal Career Paradigm**

The criminal career is succinctly defined as the "longitudinal sequence of crimes committed by an individual offender" (Piquero, Farrington and Blumstein 2003:361). Scholars of the criminal career paradigm recognize that individuals initiate their criminal activity at a specific age, continue offending at a given rate and commit mixed types of crime and that they will ultimately stop. Thus, criminal career scholars seek to understand the underlying reasons why certain people begin to offend, why some people persist in offending at a greater frequency and commit more serious crimes than others, and finally researchers are interested in the factors that influence an individual's decision to de-escalate their offending frequency, or altogether desist from crime (Piquero et al. 2003).

### **Continuity and Change**

Since the inception of the criminal career paradigm, one of the most reliable findings resulting from research efforts has been the consistent relationship between

past and future offending. Tracy and Kemp-Leonard (1996) found evidence of this in their longitudinal analysis of approximately 27,000 boys and girls in the 1958 Philadelphia Birth Cohort. The researchers collected criminal history and behavioral information up to age twenty-six on the cohort members. Results of their analysis indicated that individuals who were involved in juvenile delinquency were more likely to become criminal adults, while those who were non-delinquents were less likely.

Criminal career scholars as well as developmental psychologists, however, point out that delinquency is only one qualification of adult offending. Many suggest that delinquency is merely a manifestation of an underlying constitutional factor such as aggression; therefore scholars insist that childhood aggression (independent of juvenile delinquency) is also related to adult criminal behavior. For instance Olewus (1979) reviewed 16 studies that concentrated on longitudinal trends in antisocial behavior and found the correlation between childhood aggression and later criminality was on average .68. Concordantly, Huesman (1984) conducted a 22-year longitudinal analysis of personality and emotional patterns of 600 subjects and concluded that individuals who were aggressive as young children, tended to be aggressive and engage in crime in adolescence, and likewise in adulthood. Research also designates the tendency to engage in risky behaviors and the proclivity for sensation seeking as strong underlying traits correlated with antisocial and criminal outcomes in adulthood (Farrington 2002).

Scholars have termed the stability of both antisocial traits and behaviors as homotypic continuity, "which refers to the continuity of similar behaviors or phenotypic attributes over time" (Sampson and Laub 1993:10). Proponents of

homotypic continuity contend that sociological variables do little to modify the apparent trajectories of criminal individuals; therefore a persons' propensity to offend is stable and relatively impervious to any "sociological" interventions experienced at any point during the life-course. Even though a large body of evidence supports these assumptions, an opposing group of scholars reject both the strict deterministic view of homotypic continuity as well as the notion that social factors bear no influence on individual behavior. Diverging from the "homotypic approach", this separate group of researchers point out that "most antisocial children do not become antisocial adults" (Gove 1985:152). Results gathered from longitudinal studies support the assertions of scholars who reject the purely "static" view of behavior. For instance, Joan McCord (1980) found in her longitudinal analysis of participants in the Cambridge-Somerville Project, that the majority of adult offenders had no history of crime or antisocial behavior as youth. Most importantly, McCord's findings demonstrated that most antisocial and deviant adolescents did not move on to commit adult crime. Prospectively, McCord's analysis would have identified an extremely high number of "false positives" (Gove 1985). She as well as a number of other researchers insist that such findings are proof indeed of a "sociological intervention" on behavior, whereby social experiences across the life course positively modify trajectories of antisocial propensity (Rutter, Giller and Hagell 1998).

Several life course theories of criminal offending arose to explore through a theoretical lens the significance of various dimensions of the criminal career, particularly that of persistence as well as the complex relationship between past and future offending. Life course theories of criminal behavior are particularly useful to

explain these dimensions since as already mentioned; the life course recognizes a broader view of criminality over time. Furthermore, within criminology the life course perspective "recognizes the multitude of factors that shape offending across different time periods and contexts" (Piquero et al. 2003:396). Following the assumptions of sociological criminology Sampson and Laub (1993) have developed a theory of age-graded informal social control in order to theoretically understand the considerable role of social institutions in relationship to offending patterns in the criminal career paradigm.

## **Age-Graded Theory of Informal Social Control**

### **Introduction**

Noting the high number of false positives that result from prediction studies in the criminal career paradigm, Sampson and Laub (1993) remarked, "The conclusions about the inevitability of antisocial continuities have either been overstated or misinterpreted" (1993:15). For they contend that the high false positive rate precludes the use of stability of antisocial tendencies in early life as sole determinants of crime later in life. Sampson and Laub assert that a person's propensity for criminal behavior established early in the life course is likely stable, as Gottfredson and Hirschi (1990) state. Although they assume that propensity is stable over time, Sampson and Laub also insist that across the life course "the commission of a criminal act depends on a host of social factors that vary with key life course transitions" (Sampson and Laub: 1993:16). Therefore, adult criminal or non-criminal behavior, in their view, is influenced by early experiences (i.e. propensity), but also by "modifying life events and socialization" in adulthood. Since

Sampson and Laub speculate that transitions in the adult life course account for variation in adult crime not predicted from childhood, "change is a central part of [their] explanatory framework" (1993:17).

### **Informal Control and Social Capital Across the Life Course: Assumptions of Sampson and Laub's Theory**

As a control theory, the age-graded theory of informal social control fundamentally assumes that all people are naturally driven to commit deviant and antisocial behaviors (Benson 2002). Control theorists proffer that social controls operate to inhibit or prevent individuals from following their natural inclinations. Hirschi (1969), for instance, developed his renowned social bonding theory based on the idea of social control. He suggested that juveniles abstain from delinquent behavior by way of four types of social bonds: attachment to conventional others, commitment to conventional lines of behavior, involvement in conventional activities and beliefs that conform to societal values.

Drawing from the overarching sociological concept of social control, the theory of age-graded informal social control holds that the "most important sources of social control, are the informal bonds between people" (Benson 2002: 89). Sampson and Laub (1993) offer that informal social controls emerge from "role reciprocities" between members of society and social institutions such as family, school and work. They insist that at each stage in the life course, beginning in childhood, antisocial behavior is more likely to occur when an "individuals bond to society is weak or broken" (Sampson and Laub 1990). Indeed, corresponding to the techniques of life course researchers (Elder 1985), Sampson and Laub theoretically

differentiate the individual life course according to age, and argue that the important institutions of informal as well as formal social control fluctuate across the life course. For instance, in childhood and adolescence, the family, school and peer groups are dominant sources of informal social control. In young adulthood these sources are higher education, work and marriage; in adulthood institutions of social control are work, family, marriage and parenthood (Sampson and Laub 1990)

Age-graded experiences have long reaching effects, therefore Sampson and Laub (1993) view childhood and adulthood as interdependent trajectories. From their viewpoint, delinquency early in the life course leads to the development of weak adult social bonds, which subsequently predict concomitant and later adult crime and deviance. Thus, the process is one in which "childhood antisocial behavior and adolescent delinquency" are connected to adult crime through weak social bonds (Sampson and Laub 2004:4). However, their theory also assumes that salient informal controls experienced in adulthood can offset the social consequences of a criminal trajectory. Hence, employing such a broad theoretical context, Sampson and Laub contend that across the life course, both "crime and conformity are mediated by social bonds" to informal institutions of control (Sampson and Laub 1993:18). Using this theoretical "strategy", Sampson and Laub (1993) explore the relationship between crime and informal social control at all ages, explicitly focusing on within individual change in adulthood.

In their age graded theory, the scholars also stress that the quality and strength of attachment between the individual and the source of informal social control that matters, not simply the occurrence of such an event. Moreover, they

suggest that quality relationships to institutions and individuals fosters social capital, which, whether "as a child in a family, adolescent in a school, or as an adult in a job, dictates the salience" of such relationships at the individual level (Sampson and Laub 1993:18). Social capital is not a default byproduct of participation in social institutions; instead it grows through mutual dependence between individuals. Moreover, Sampson and Laub (1993) emphasize that social capital is reciprocal in nature in that the institution invests in the individual, which in return may trigger an investment by the individual in the institution. The implications of social capital as a personal investment are especially pertinent both in the transition from early life to young adult crime, as well as the change from adult crime to non-crime.

### **Specific Theoretical Suppositions**

Acknowledging the role of salient informal social controls in regards to behavioral stability and change, Sampson and Laub (1993; 2004) organized their theoretical framework around three primary topical assumptions: First, in explaining the origins of delinquency, they assert that structural factors such as poverty and broken homes are mediated by informal social control including monitoring and discipline. Moreover, they postulated that structural factors affect family and social control processes, thereby indirectly affecting delinquency. Second, Sampson and Laub (1993; 2004) make note of the fact that sociological criminologists often ignore the childhood years and they too often focus on later-stage juvenile delinquency as its impacts the likelihood for criminal activity in adulthood. In their model, they propose that there is strong continuity across the life course between childhood and adult antisocial behavior that is present in multiple criminal and non-criminal

domains. The third assumption is that regardless of prior differences in propensity, strong interdependent informal social bonds in adulthood will lead to individual changes in adult antisocial trajectories.

### **Crime in the Making**

In their book *Crime in the Making*, Sampson and Laub (1993) tested the assumptions of their age-graded theory of informal social control. To do so they analyzed longitudinal data from Sheldon and Eleanor Glueck's (1950) *Unraveling Juvenile Delinquency* study. The data consisted of a sample of 500 delinquent and 500 non-delinquent boys who were born between 1924 and 1935 in Boston Massachusetts. Delinquent status was determined via official school and arrest records, as well as interviews with parents, schoolteachers and family members. Sample members were followed on average for 18 years, and were interviewed by the Gluecks in three waves beginning at age 14 then at age 25 and finally at age 32. During the first interview the Gluecks gathered data on a range of biological, psychological and developmental characteristics that concerned each boys' life from birth until age 14. In the second wave of interviews, conducted at age 25, the Gluecks gathered information concerning social events in the participants' life that occurred between the ages of 17 and 25. During the third and last interview conducted when the participant was 32, information was collected pertaining to social events that transpired between ages 25 and 32. Unlike the first interview, the second and third wave of interviews were primarily concentrated on sociological factors and life transitions including criminal histories, employment, relationships, living arrangements and education. Sampson and Laub also utilized a fourth wave

of data collected by a research associate of the Gluecks that contains only information regarding officially recorded criminal involvement between the ages of 32 and 45. Unlike the first three, this wave of data did not include any criminal self-report information or sociological measures.

Sampson and Laub operationalized measures of antisocial behavior in childhood and adolescence in three ways: first, it was measured via officially recorded delinquency; second through self, parent or teacher reports of misconduct which included delinquency; and third a participant's proclivity for temper tantrums was also deemed as antisocial behavior.

Measures of adult crime were drawn from officially recorded as well as self-report surveys collected by the Gluecks in waves 2 and 3. Sampson and Laub (1993) reconfigured adult criminal involvement as a dichotomous term which indicated that a participant committed an act of crime in the follow up period, in addition they created a variable that measured participants' frequency of offending.

### **Origins of Delinquency**

For the first part of their study Sampson and Laub (1993) explored the factors that differentiated delinquent from non-delinquent boys who were raised in relatively similar economically disadvantaged neighborhoods. Their results suggested that family process variables including parental attachment, low levels of supervision and erratic discipline were significantly related to both delinquency and antisocial behavior in childhood and adolescence. Also, structural factors such as family socioeconomic status and residential mobility elicited an indirect effect on delinquency. According to OLS models informal social controls mediated 75 percent

of the statistical effects of structural measures on delinquency (1993:96). In addition, Sampson and Laub (1993) discovered in separate models, that net of family process social controls, participants who were attached to school had a reduced chance for engaging in antisocial or delinquent behavior. Regarding childhood and adolescent antisocial behavior they concluded, "When the bonds linking a youth to society - whether through family or school - are weakened, the probability of delinquency is increased" (Sampson and Laub 1993:122).

### **Behavioral Continuity**

Also, the results of Sampson and Laub's analysis revealed a robust relationship between childhood antisocial behavior and adult crime. In fact, arrests during the age periods of 17-25 and 25-32 were four times higher for individuals who had a history of delinquency in early childhood. Likewise, over 50 percent of the participants who were delinquent were arrested in the age period of 32-45, in contrast to only 16 percent of individuals in the control group.

In addition to finding continuity in criminal behavior, Sampson and Laub also discovered that official and unofficial delinquency in childhood and adolescence also adversely affected a wide variety of non-criminal adult domains. Labeling this set of findings the "most-intriguing", their analysis conveyed that delinquent boys were more than three times as likely to have unstable employment as an adult and more likely to be considered economically dependent (on welfare) (1993:133). Moreover, delinquents were much more likely than individuals in the control sample to get divorced or to be involved in a tumultuous intimate relationship. Similarly, compared

to 25 percent of control group members, 50 percent of participants who engaged in delinquency were also characterized as having weak attachments to their spouse.

**Explaining Continuity:** The processes underlying the continuity of antisocial behavior from childhood to adulthood has been a continual source of much academic debate, indeed many scholars speculate whether "antisocial continuity" is due to the process of state dependence or its counterpart, heterotypic continuity. Both concepts had been widely explored in the developmental literature. The state dependence process asserts that past offending is causally related to future offending, in that criminal acts negatively alter individual's life circumstances to such an extent that future acts of criminal involvement are much more probable (Rutter, Giller and Hagell 1998). State dependence explanations suggest that criminal behavior therefore has a two-pronged effect, on one hand it weakens inhibitions and on the other hand it strengthens inducements to commit crime (Nagin and Paternoster 2000). Also, there is another side to state dependence where in fact prosocial behavior such as conventional employment can improve an individual's life circumstances and recast them into a prosocial trajectory.

Antithetical to the state dependence argument, a population heterogeneity explanation of continuity contributes the stability of antisocial behavior to an underlying time-stable characteristic that exists across persons, which manifests in multiple behaviors that are not necessarily criminal. However, according to the "heterogeneity" explanation these behaviors are analogous to crime and include risky sexual escapades, alcoholism, and martial conflict. Whether crime or an analogous behavior, according to the population heterogeneity argument, time-

stable factors are impervious to the influence of "conventionalizing events" (Nagin and Paternoster 2000). Gottfredson and Hirschi (1990) employ the notion of population heterogeneity in developing their concept of low self-control. In their book *A General Theory of Crime*, the two scholars hypothesize that low self-control is an individual characteristic formed around age 8 and is relatively stable across the life span. Individuals with low self-control are less likely to resist the temptation to engage in acts that bring immediate gratification, including crime and analogous behaviors. Echoing the main tenet of the population heterogeneity argument, Gottfredson and Hirschi (1990) theorize that low self-control is unalterable; consequently later life events have no effect on one's level of self-control. Hence, any "observed correlation between later life events and adult criminality is spurious and due to self-selection" (Nagin and Paternoster 2000:122).

**Cumulative Disadvantage:** Based on the results of their analysis of the Glueck data, Sampson and Laub (1993) conceded that they could not dismiss either state dependence or population heterogeneity as a valid explanation for continuity. For instance, they found that "individuals with an early propensity to commit crime...sort themselves throughout adulthood into states consistent with [the] trait" (1993:137). This they asserted provided support for the existence of a stable tendency "towards antisocial behavior", hence for population heterogeneity. Notwithstanding this evidence, Sampson and Laub's analysis also indicated that "continuity may be fueled by more than just early differences in propensity", therefore they proposed that continuity was also in part explained by state dependence (1993:136). They found additional support for the partial role of state

dependence in continuity by exploring the work of several leading scholars. For example, Hagan (1988) proposed that the connection between early antisocial behavior and later life outcomes is likely due to a combination of structural disadvantage and diminished life chances. Sampson and Laub (1993) extended Hagan's (1988) suppositions and went on to conclude that delinquency incurs structural disadvantage which may consequently lead to the attenuation of adult social bonds that potentially prevent future negative adult behavior. According to Sampson and Laub this process implies a causal role of "delinquency in the facilitation of adult crime" which is a crucial argument of state dependence theory.

Considering the results of prior studies in addition to their own, Sampson and Laub (1993; 1997) maintained that behavioral continuity across the life course was attributed to a multipart process consisting mutually of population heterogeneity and state dependence, a process they deemed *cumulative disadvantage*. According to their assumptions, adolescents and children with an underlying propensity sort themselves into antisocial trajectories early on (population heterogeneity) in life. Involvement in delinquency by these individuals brings forth a "cascade of secondary problems" including negative labels and prosocial peer rejection - adverse reactions that consequently "knife off" or attenuate social bonds to legitimate institutions (Caspi and Moffitt, 1992; Sampson and Laub 1997). Eventually, restraints on crime in the form of social bonds such as employment or prosocial peer involvement are entirely diminished; thereby crime is more likely to be committed.

In addition to providing a theoretical explanation for continuity, the notion of cumulative disadvantage also explains why certain individuals diverge from their antisocial trajectory in adulthood. Sampson and Laub (1993; 1997) argue that some people despite their propensity can become involved in legitimate societal institutions and develop social capital that offers incentive to abstain from crime. The relevance of cumulative disadvantage in regards to adult trajectory change is detailed in the following sections

### **Social Bonds and Change in Adult Antisocial Behavior**

As outlined previously, the final step in Sampson and Laub's (1993) three-stage analysis was to test the affects of informal adult transitions on variation in adult offending, while controlling for juvenile delinquency. Their key independent measures of adult informal controls were job stability, commitment, and attachment to spouse. Job stability was a composite measure comprised of three employment variables, which were employment status, stability of most recent employment and work habits (Sampson and Laub 1990; 1993). The commitment measure reflected a participant's desire to improve their lives in the realm of education, work and family life. Finally, the independent variable of attachment to spouse quantified the emotional bond and conjugal cooperation between the subject and their marital partner. Data for each independent variable was gathered in the second and third wave of interviews.

**Delinquent Group:** Employing OLS regression models, Sampson and Laub (1993) first estimated the predictive power of informal bonds on adult crime for the delinquent group. Consistent with their hypothesis, they found that the transition into

a stable job in wave one was inversely related to young adult (age 17-25) criminal activity in wave one, thereby functioning as a turning point. Furthermore, delinquents assessed as having high job stability in the 17-25 age period were significantly less likely to be subsequently involved in offending between the ages of 25 and 32. In fact, participants with low job stability at ages 17-25 were four times more likely to engage in criminal activity in later adulthood than were those with high job stability. Sampson and Laub (1990; 1993) also discovered that during periods of later adulthood (25-32 and 32-45), the transition into a stable job consistently reduced participants' probability for criminal involvement. In wave three, the age period of 25-32, delinquent participants who indicated increased job stability were more likely to be uninvolved in criminal activity; moreover they were less likely to be arrested during the age period of 32-45.

Concordantly, the informal bond of marital attachment acted as a turning point in delinquent trajectories by eliciting the same inverse relationship to adult criminality as did job stability. Across all adult age groups, participants who had strong emotional interdependent attachments to their spouse were less involved in criminal behaviors than their counterparts. For instance, 17 to 25 year old delinquent sample participants who had increased attachment with their spouses were less likely to be arrested during the 17 to 25, and 25 to 32 adult age periods. The substantial inverse predictive power of marital attachment was also evident in older adult sample participants who were in the 25 -32 and 32 - 45 age groups, net of prior adult crime. A noteworthy feature emerged regarding marital attachment across the life course. Indeed, the researcher's analysis suggested that the beta weights for marital

attachment were much stronger for older age groups. According to their conjecture, this statistical effect reflected that as individuals age they learn to more fully appreciate the social capital that results from the transition of a good marriage.

Although the measure of commitment at age 17-25 significantly predicted reduced probabilities of offending in all adult ages, the estimates were not statistically apparent when social commitment was considered concomitantly in the period of 25-32 and sequentially in 32-45. When marriage and job stability were included in the multivariate model, the effect of commitment was considerably reduced in predictive power.

**Control Group:** On the whole, adult crime was lower for the control group than for the delinquents. Nevertheless, similar to delinquents, among the control group institutional social controls in adulthood reduced participants' probability of adult criminality. Parallel to what was demonstrated with delinquent sample members, high levels of job stability in the age period of 17-25, reduced the likelihood that "controls" would engage in crime during the age period of 17-25, and 25-32. Their results made evident that participants with low job stability at age group 17-25 were four times more likely to be arrested at ages 25-32 than were sample members with high job stability. Controlling for prior adult criminal involvement, job stability at age 25-32 was also inversely related to criminal involvement during the age period of 32-45.

Moreover, according to Sampson and Laub's estimations, conventional commitment and the transition into a "good" marriage during the age period of 17-25 reduced criminal involvement in wave one as well as subsequent adult age periods.

However when the informal bonds of commitment and marriage were considered as an event occurring only in the two older adult age periods, that is 25-32 and 32-45, conventional attachment and marriage emerged as statistically insignificant. The results indicated that for control group members, marriage and commitment appeared to be turning points in criminal trajectories, primarily in young adulthood; nevertheless job stability remained a significant informal restrictive force of criminal behavior throughout the life course, despite prior adult criminal involvement.

### **Incarceration and Adult Behavioral Variation**

Due to the longitudinal time frame of their sample, Sampson and Laub (1993) were also able to assess the relationships between the life course transitions of juvenile and adult incarceration on adult criminal involvement. To do so they used OLS regression models to estimate the direct effect of incarceration during age periods in wave one on outcomes in wave two, and likewise the effect of incarceration in waves two on outcomes in waves three. Their models indicated that juvenile incarceration placed no significant direct effects on adult criminal behavior during the age period of 17-25, and subsequent adult periods. Additionally, Sampson and Laub (1993:164-165) uncovered in their analysis that contrary to the deterrence literature, incarceration in young adulthood in the age group of 17-25 had no consequent impact on adult criminal behavior during the 17-25 age period, nor during the period of 25-32. Finally, consistent with their established findings, state sanctions in the time frame of age 25-32 were insignificantly related to crime when participants were 32-45, net of control variables.

The results of Sampson and Laub's (1993) initial analysis clearly specified an inconsequential relationship between incarceration and adult criminal behavior. However, corresponding to the basic principles of their concept of cumulative continuity, in particular that of state dependence, they insist that official sanctions indirectly affect criminal behavior through informal social controls. More specifically, Sampson and Laub (1993:165) put forth theoretically that the social stigma of incarceration attenuates ones chances of obtaining a meaningful and stable job in the transitions throughout adulthood. In the absence of a "decent" job, they contend, that offenders are not only financially stressed but also less likely to establish "social ties to conventional lines of behavior...regardless of their behavioral predispositions" (1993:165). Of course the consequence is recurring involvement in crime.

They tested their first hypothesis by investigating the role of stable employment at ages 17-25 and 25-32 as a mediating link between juvenile incarceration and adult crime. OLS models revealed that net of controls including criminal history; juvenile confinement had the most substantial statistical effect on job stability in both the 17-25 and 25-32 adult time periods. Results also disclosed that institutional confinement as a young adult, ages 17-25, significantly lowered levels of job stability for formerly incarcerated sample participants. Sampson and Laub (1993) concluded from their analysis that their conception of cumulative disadvantage explained the injurious link between incarceration, job instability and consequent crime. This led them to assert, "...even if the direct effect of incarceration is zero...its indirect effect may well be criminogenic (positive)..." (1993:168).

In review, Sampson and Laub's (1993) age-graded theory of informal social control stresses that informal bonds to conventional institutions account for the origin of delinquency in early life, the continuity of antisocial behavior across the life course and the change in trajectories in adulthood. Their theory stresses that informal bonds bear the greatest influence when they are strong and incur bidirectional relationships over the life course.

Indeed, it is Sampson and Laub's (1993) view that crime emerges when these bonds linking a youth to society are weakened independent of structural factors (1993:247). Delinquency transpires into adult criminality through a process they term cumulative disadvantage, an amalgam of state dependence, population heterogeneity and societal labeling. Through the progression of cumulative disadvantage the opportunities for attachment to conventional society in late adolescence and young adulthood are attenuated by prior delinquency, and as a result crime occurs in their absence. According to Sampson and Laub's conjectures the consequences of confinement to state institutions (the outcome of delinquency and crime) effectively demonstrate the process of cumulative disadvantage and continuity. Periods of confinement indirectly erode bonds to legitimate socializing institutions such as employment as a result formerly incarcerated offenders are more prone to return to their prior criminal ways. Thus, incarceration seems to pile disadvantage onto criminal propensity.

The focal point of the age-graded theory is the potentiality for change despite one's antisocial and criminal trajectory. Without question, distal antisocial factors such as established propensity and weak pre-adult informal bonds have significant

deterministic power on adult behavioral outcomes. However despite this, "salient life events and socialization in adulthood can counteract, at least to some extent the influence of early life experiences (Sampson and Laub 1993:246)." Therefore the modification of an established antisocial path is possible and is initiated by reciprocal investments in adult role transitions such as marriage and employment. As demonstrated in *Crime in the Making*, an individual's social ties to adult roles explain adult behavioral variation not wholly accounted for by distal propensity (Sampson and Laub 1993:249). Therein lies the "dual concern with [the concepts of] continuity and change in the life course", both of which are discreetly explicated in the age-graded theory of informal social control (Sampson and Laub 1993:249).

### **Advances in Informal Social Control Theory: Expounding on Correlates of Adult Offending**

By and large Sampson and Laub's (1993) age graded theory of informal social control has been met with strong empirical support in the fields of criminology and sociology. Nonetheless, several significant research developments have emerged in life-course criminology that has forced scholars to reconfigure their understanding of the correlates underlying patterns of adult offending behavior. In recent years, researchers have integrated measures of peer relations into their analysis of adult offending while expanding on the influential processes inherent to marriage and more generally, romantic relationships. In addition, using high-risk samples consisting of ex-convicts, scholars have further built on the putative research conclusions regarding the informal bond of employment and its impact on

offending patterns. High-risk samples have also been utilized to study the impact of "local life circumstances", a revised conceptualization of adult informal controls, on short-term change in adult criminal behavior. In addition to the advancements already mentioned, life course criminologists have also exerted research efforts in to revealing the important informal control mechanisms forged by "situational contexts". Finally, criminologists along with psychologists have just recently begun to dedicate significant research attention to uncovering the interrelated dynamic between human agency and informal social control.

### **Marriage and Peer Influence**

As already mentioned in the preceding section, one of the most salient findings reported by Sampson and Laub (1993) is that strong marital attachment in adulthood modifies adult behavioral trajectories, even for the most chronic offenders. Once again, using the Glueck data, this finding was affirmed with greater analytical precision by Laub, Nagin, and Sampson (1998). In their analysis they implemented multiple trajectory based Poisson models to differentiate offender propensity and to test for the effects of marital quality and the timing of marriage on each propensity group. Laub et al.'s (1998) results supported Sampson and Laub' (1993) conclusions that marital attachment could deter future offending, in addition they found that the preventative effect of marriage took substantial time in the life course to fully materialize. However most relevant to the focus of this thesis, the research team discerned that offenders within all propensity groups, including those classified as "high rate" and "high rate chronics", entered good marriages. Moreover, they found that entry into "good" marriages subsequently and cumulatively reduces offender's

participation in crime. For example, Laub and his colleagues (1998:235) discovered in their models that chronic offenders who defy the odds and enter good marriages commit crime at a rate that is 61 percent less than their non-married chronic counterparts. To reiterate, overall Laub, Nagin and Sampson's (1998) findings supported Sampson and Laub's (1993) results which indicated that entry into a quality marriage can deter involvement in future offending.

There is clear evidence supporting the conventionalizing effect of marriage on adult offending patterns, still, in light of the evidence Warr (1998:184) insists that Sampson and Laub's analysis "suffers from a serious flaw." In partial support of the tenets of the age-graded theory, he contends that marriage operates as an overarching mechanism to discourage adult offending. However, Warr (1998) departs from Sampson and Laub's theoretical position and maintains that marriage is an effective informal control largely because it reduces time spent with like-minded peers; individuals whom he asserts accelerate and compliment an individual's criminal propensity.

Warr (1998) tested his hypothesis using primarily waves 5 and 6 of the National Youth Survey (NYS). The NYS is a longitudinal study of delinquent activities among a nationally representative sample of roughly 1700 individuals that began when participants were 11 to 17. Waves 5 and 6 are comprised of respondents who were ages 15 thru 21 and 18 thru 24, respectively. Preliminary OLS analysis of time spent with friends on marital status and age indicated that marital status is a strong and significant inhibitor of the amount of evening, weekend and afternoon time one spends with their peer group. In an additional model, Warr

(1998) regressed measures of delinquent friends on marital status and age. This test was done to assess the ability of marriage to curb associations with specific types of high risk friends, in particular those whom engage in criminal activities. Controlling for age of the participant, his estimates suggested once again that entry into marriage reduced the amount of time an individual spent with antisocial friends.

Comparisons between waves 5 and 6 in Warr's (1998:196) analysis displayed the most telling findings. He discovered that respondents who reported being unmarried in both waves indicated no significant decline in the amount of time they spent with friends. In contrast, those who married by wave 6 indicated large drops in the amount of time they spent with friends. Similarly, Warr (1998) compared waves 5 and 6 to assess the effects of marriage on changes in exposure to delinquent friends. Although exposure levels drop for both married and unmarried individuals between the two waves, he found that "among those who were married, 78% with delinquent friends at wave 5 had lost those friends by wave 6" (1998:199). To further support the theoretical significance of his study, Warr (1998) also controlled for the presence of children in the home as a potential confounding effect. Even with controls for "household composition" the results of the analysis remained conclusive.

In his study, Warr (1998) concluded concordant with Sampson and Laub that the transition into marriage is indeed a source of informal control, however his research suggested that marriage also has a substantial immediate effect on the amount of time one spends with friends as well as the type of friends one associates with. Therefore based on Warr's (1998) findings it appears that peer relations are too

very important informal controls, given that they mediate the link between marriage and future adult criminal offending.

Simons et al. (2002) provided an alternative explanation for the relationship between marriage, peers and adult offending patterns. Their point of contention with Sampson and Laub's (1993) as well as Warrs (1998) analysis concerns the failure by both groups of scholars to take into account the influence of an antisocial romantic partner on adult criminal behavior. Simons et al. (2002:404) note that Warr (1998) "emphasizes the fact that adult friends can either discourage or encourage criminal behavior, but [he] fails to recognize the same is true for romantic partners". Instead, it is their belief that antisocial partners are likely to promote involvement in situations that are antisocial in nature; whereas conventional romantic partners are "more apt to promote socially acceptable activities". Moreover, they proffer that the relationship between romantic relationships and delinquent networks needs to be reevaluated considering that it is possible that only conventional partners will discourage associations with antisocial friends. Thus, they hypothesize that romantic partners have an indirect effect to crime through peer relations; in addition romantic partners exert a direct effect that also increases the likelihood of criminal behavior.

The data used in their study was a longitudinal sample comprised of 236 young adults and their romantic partners from the Midwest. Initially only the original participant in the study was interviewed when in 9th grade, then 6 years later original members in ongoing heterosexual relationships were asked to be interviewed along with their partners. Data for the sample was drawn both from surveys administered to participants and through videotaped interviews in which administrators recorded

interactions to problem solving tasks between the original participant and their romantic partner. Controlling for individual propensity, structural equation models indicated that individuals involved with an antisocial romantic partner, as well as those with relationships to antisocial friends, were significantly more involved in criminal behavior. Specifically, results of the SEM estimations suggested that adult antisocial romantic partners were indirectly related to adult offending, in that they "[undermined] the quality of the [romantic] relationship" which as result "[increased] the chances of affiliations with deviant friends" (Simons et al. 2002:417). OLS regression models also supported the findings resulting from the SEM estimations as well as those concluded in Warr's analysis. Indeed, the results from the regression models indicated that adult men with deviant friends were more involved in adult crime than were men who have fewer friendships with deviant others. In contrast, conventional friends appeared to attenuate adult male crime. Converse to Sampson and Laub's (1993) conclusions, Simons and his team (2002) found no evidence to support the finding that quality romantic relationship directly impacted adult criminal behavior.

Consistent with their original hypotheses, the results of Simons et al.'s (2002) study evidenced that romantic relationships both directly and indirectly influenced adult antisocial behavior. They found that controlling for antisocial propensity; conventional relationships with romantic partners guide an individual to associate with conventional peers which leads to reductions in criminal behavior. Adults who are affiliated with criminal partners are more likely to associate with criminal friends; hence they are at an increased risk for engaging in crime in adulthood. The quality of

attachment to romantic partners was not statistically associated with adult offending outcomes.

In conclusion, Laub, Nagin, and Sampson's (1998) analysis of the impact of marriage on various propensity groups, using the Glueck data, provided added support to Sampson and Laub's original affirmation that in fact marriage leads to reductions in adult criminal behavior, even for the most involved criminals.

Corresponding to Sampson and Laub's findings, Warr also discovered in his analysis of the National Youth Survey data that marriage functioned as an informal social control. Warr (1998) asserted, however, that the transition of marriage indirectly impacted criminal behavior by decreasing the amount of time an individual spent with friends. In addition, marriage led individuals to cut former ties with delinquent friends, which Warr postulated ultimately reduced married adults' opportunity to commit crime. Citing theoretical oversights in Sampson and Laub's as well as Warr's assumptions, Simons et al. (2002) proposed an alternative explanation for the effects of romantic relationships and peer relationships on adult crime. They concluded that romantic relationships were important determinants of criminal behavior in the adult life course in that the antisocial tendencies of the romantic partner predicted attachments to antisocial friends, which then impacted an individual's likelihood for offending. Conventional partners elicited the opposite effect; guiding individuals to develop attachments with conformist friends therefore propelling them to lead seemingly conventional lives.

## Reanalyzing Work

Sampson and Laub's (1993) examination of the Glueck data quite clearly demonstrated the benefit of employment in the lives of delinquent individuals. As already mentioned, participants in their study who obtained stable and meaningful employment in adulthood were significantly less likely to persist in offending than those without such employment, an effect which was evidenced net of prior criminal behavior. In fact, their measure of work elicited strong direct effects on adult criminal behavior that in turn drastically reduced the statistical power of several other independent variables. Also, to reiterate, Sampson and Laub (1993: 304) specified most importantly, that it was an individual's level of attachment and social investment in their work that was important, "not work per se" or "employment in itself". Therefore they contended in large part, that the subjective bond between the offender and work were the most substantive components of employment as an informal social control.

Building on Sampson and Laub's findings, Uggen (1999) further theorized that the objective quality of a job was also an important factor steering individuals off of criminal trajectories. Uggen (1999) based his assertions in part on the findings of previous empirical examinations which showed that low quality jobs failed to reform released offenders (see Piliavin and Gartner, 1981). Drawing on these studies, he postulated specifically that, "persons of jobs with better quality should have greater legitimate opportunity, stronger informal social controls, and, hence, lower rates of law violation" (Uggen 1999:135). Furthermore, Uggen (1999) hypothesized that those who were employed in low quality jobs did not have access to the same

opportunities. Also, he insisted that employment in high quality jobs would be a significant factor despite measures of prior criminality and human capital.

Uggen tested his hypothesis using data from the National Supported Work Demonstration (NSWD), the Quality of Employment Survey (QSE) as well as the Dictionary of Occupational Titles (DOT). The NSWD consisted of roughly 1500 released offenders and was an experimental project that assigned one group of offenders to minimum wage jobs and the other was designated as a control sample. Offender's criminal history and demographic characteristics were documented at the onset of the study. Both samples were interviewed at the baseline, the nine month and eighteen month follow up periods. The quality of an offenders' job was assessed via a combined construct method in which Uggen analyzed national responses on the QSE then cross-referenced them with information from the DOT.

Consistent with Uggen's hypotheses probit estimations revealed (1999:144) that in all three waves of data high quality jobs "decrease the likelihood of criminal behavior net of prior criminality and substance use." To demonstrate this finding, Uggen documented that offenders who moved from a job in the food service industry to work in a skilled trade had a decreased probability of recidivism by approximately 11 percent, when all other variables were held at their mean value. Moreover he also discovered in his analysis that job quality negatively affected the likelihood that an ex-convict would commit economic as well as non-economic crime.

In a separate study Uggen (2000) once more explored the association between adult employment and adult crime. This time he was interested in discerning whether the impact of entry into employment on adult offending was

dependent on the age of the offender. Uggen's (2000) speculations were rooted in the notion put forth by Sampson and Laub (1993) that informal controls were age-graded, and that certain adult transitions decreased probabilities of offending in adulthood. Although Sampson and Laub found that job stability reduced offending in the overall population, they failed to specify in their analysis whether these effects were contingent on the specific age of the adult sample participant. Citing their shortcoming, Uggen (2002) proposed that investigation into the impact of social controls at certain ages would lead to a better conceptualization of the age-graded circumstance of informal controls in the life course.

For the purpose of exploring his hypothesis Uggen (2000) utilized the Nation Supported Work Demonstration sample. For his analysis he first tested the influence of work on criminal activity, net of criminal history and demographic controls. Next, he divided his sample into two groups according to participant's age, those who were aged 18 to 26 were categorized into one group and those ages 27 and older were placed in another group. Age 27 was designated as the age graded cut off point largely because empirical evidence indicates that most criminal involvement declines by age 27; in addition Uggen (2000) referenced the scholarly evidence that suggested age 27 was the period in the life course when individuals begin to assume more adult roles.

Results from proportional hazard analysis indicated, consistent with Sampson and Laub's findings that employment led to a 24 percent reduction in recidivism rates. In addition, his analysis suggested that work was a more meaningful turning point in the life course for older offenders, those over 27, but not for those who are

younger. Supported work failed to reduce the rate of criminal involvement for younger offenders even when they were actively employed (Uggen 2000).

To review, overall Uggen's (1999; 2000) studies added general support to Sampson and Laub's (1993) empirically grounded assertion that the transition into work as an adult reduces the likelihood of adult offending. Moreover, extending Sampson and Laub's findings, employing an experimental data set consisting of a control group, Uggen (1999) discovered that the objective quality of a job was also an important indicator of the effectiveness of work as an informal social control. In a separate study utilizing the same data set, Uggen (2000) tested the specific age-graded nature of work in the life course. He concluded that work was in fact a turning point in the lives of offenders however mostly for older offenders, those ages 27 and older.

### **Local Life Circumstances**

Sampson and Laub's (1993) findings highlighted the impact of informal controls on *long-term* individual trajectory change in the adult life course. Specifically, in their long term view, they conceptualized change as an enduring behavioral modification that was realized retrospectively through a series of rather infrequent measurements of life events, or informal social controls.

Drawing from the corpus of developmental literature, Horney, Osgood and Marshall (1995) suggest that life course transitions do not always provide incentives for long-term modifications of behavior, as Sampson and Laub contend. Instead they insisted that certain rapidly changing transitions which they termed "local life circumstances" may lead to short term reductions in offending that may or may not

birth eventual long term behavioral modifications. According to Horney and her team (1995) local life circumstances (e.g. community based sanctions, employment, romantic relationships, school, and drug and alcohol use) are transitions particularly in the adult life course individuals can move in and out of relatively quickly. They contend that patterns of adult offending, both between and within individuals, reflect the sporadic nature of local life circumstances. On this notion they remarked, "The same circumstances that lead one person to an altered life trajectory because the circumstances endure, may produce only transient change in another individual if the circumstances are fleeting" (Horney, Osgood and Marshall 1995:658). The authors emphasized that immediate life circumstances were not futile and meaningless engagements, rather they suggested that short term variations in adult offending patterns could result eventually in the buildup of social capital that resultantly inspired long term change.

Horney and her colleagues (1995) tested their hypotheses using a sample of roughly 650 recently convicted adult male offenders who were institutionalized in Nebraska prisons. Sample participants were administered a life-history survey that consisted of two parts, a "life event" calendar and a "crime" calendar. Respondents were asked to recall a reference period that pertained to the date of arrest for their instant offense and to consider "life events" and "crime" that occurred on a monthly basis during the two years leading up to that date. The months that an offender was incarcerated during the consideration time frame were crossed off the calendars and the remaining months were characterized as "street months" (1995:660). On the "life event" calendar respondents were instructed to identify the street months in

which they had been employed, in school, living with a wife or girlfriend, using drugs or abusing alcohol. Similarly, respondents were asked to indicate on the crime calendar any months that they had committed a property crime, assault or drug crime. The results of hierarchical linear models revealed, in general, that the odds of committing crime in a given month were dependent on changes in local life circumstances. Overall, the use of illegal drugs significantly amplified offender's chances of involvement in all crimes by roughly six fold. In particular, during months of illegal drug use, offenders were 54 percent more likely to commit a property crime and 100 percent more likely to assault someone. Similar results were revealed for heavy drinking. In fact, offenders were nearly 1.5 times more likely to commit crime when in the months that they were abuse alcohol.

Horney et al. (1995) analysis also suggested that being on probation or parole elicited no significant impact on offenders' likelihood of criminal involvement. However, attending school and working was associated with variations in offending at any given month. In fact their models suggested that offenders who attended school were nearly 52 percent less likely to offend and their odds of involvement in drug crimes were roughly 61 percent lower as well. Contrary to Sampson and Laub's (1993) findings regarding long-term change, offenders who were employed were significantly more likely to commit property crimes, and in general offenders' overall odds of committing any crime increased if they worked. Horney et al. (1995) speculated that the increase in odds for commission of property crime reflected the opportunities for theft and fraud that are available in the workplace.

Finally, their statistical models suggested that offenders who lived with a spouse had lower levels of involvement in criminal activities. For instance, estimates conveyed a 57 percent decrease in the odds of committing an assault when one lived with a wife. In contrast, those who resided with a girlfriend had 64 percent higher odds of committing any crime. These results correspond to Sampson and Laub's (1993) findings that marital attachment reduced criminal activity, even after criminal propensity was controlled. Unfortunately, unlike Sampson and Laub, Horney et al. (1995) did not control for the subjective quality of the marital relationship. Nevertheless they differentiated between the type of romantic partner one resided with, a measure which Sampson and Laub (1993) did not consider.

In conclusion, Horney et al.'s (1995) shift in focus to short term change provided a different perspective on turning points in the life course in comparison to Sampson and Laub's (1995) long-term assessment. Horney and her colleagues (1995) provided evidenced that alterations in local life circumstances led to immediate variation in adult offending patterns, despite individual criminal propensity. Their results, in part, paralleled those of Sampson and Laub's in that the "life events" that incited turning points in the short term also produced behavioral change in Sampson and Laub's analysis of long term patterns. Although Horney et al. (1995) could not provide statistical proof of the implications of short term change on long term outcomes in their analysis, they conjectured that the "underlying processes involved in producing short term change may be the same processes that produce... the alteration in a life trajectory" (Horney et al. 1995:670).

### **Further Tests of Local Life Circumstances**

Several scholars have also analyzed the effects of local life circumstances on offending patterns across various types of offending populations. For instance, Griffin and Armstrong (2003) investigated whether local life circumstances contributed to behavior change in a sample made up entirely of female offenders. Noting the dearth in the literature of studies that focus on the impact of informal control using female samples, they sought to investigate if discrepancies existed in reactions to local life circumstances amongst the sexes. Moreover, adding to the list of local life circumstances documented by Horney et al. (1995) they included in their analysis independent measures of family composition and a variable that assessed whether an individual had stable living conditions. Also they incorporated time stable measures such as release age, race, age at first offense and child abuse.

Griffin and Armstrong's (2003) sample consisted of 195 women who were either residing in a jail facility or on community sanctions in the Arizona. Using the same life history recording technique employed by Horney et al. the research team asked the women to record the life events they experienced, as well as the type of crime (e.g. drug dealing and non-drug crime) they committed during the 36 months preceding their reference date. The results of hierarchical linear models indicated that each time stable variable significantly affected the likelihood that the women would engage in criminal activity. In regards to local life circumstances, consistent with Horney et al.'s (1995) findings, drug use was associated with substantially higher probabilities of both types of crime. In particular, drug use increased the chances of drug dealing by 50 percent and non-drug crime by 45 percent. Also,

employment inhibited drug dealing by roughly 30 percent, however it did not significantly reduce one's likelihood of non-drug crime. Likewise, participants who were engaged in a romantic relationship were nearly 20 percent less likely to deal drugs yet they were no less likely than those not in a romantic relationship to commit non-drug crimes. Finally, the results suggested that in the months female participants maintained stable living conditions they were much more likely to abstain from engaging in non-drug crime but not drug dealing (Griffin and Armstrong 2003). Referencing the conclusions deduced in Horney et al's (1995) similar study of males, Griffin and Armstrong (2003) concluded that the specific influence of local life circumstances could not be generalized to both sexes, instead their effects were "gendered", and moreover their impact differed depending on the type of crime an offender committed.

Neither Horney et al. (1995) nor Griffin and Armstrong (2003) explicitly tested for the possibility that local life circumstances elicited a differential impact on outcomes, contingent on the race of the offender. Citing the overall lack of inquiry into race specific effects, Piquero, MacDonald and Parker (2002) analyzed the role of racial status in relation to local life circumstances and criminal offending. In particular they investigated whether variations in local life circumstances accounted for the disproportionate involvement of minorities in crime. Also, the research team was interested in exploring if the relationship between changes in local life circumstances and changes in criminal activity were invariant across offenders race.

The sample for Piquero et al.'s (2002) analysis was comprised of 524 parolees from the California Youth Authority (CYA) who were followed for seven

consecutive years after their release. For their analysis three dependent variables were employed which included violent arrests, non-violent arrests, and total arrests, which was the sum of violent and nonviolent arrests. Their key measures of local life circumstances were employment, marriage and substance abuse (alcohol and heroin). Also, the estimations of the independent measures on crime types were stratified by race of the offender. Unlike Horney et al. (1995) whom utilized life event calendars, Piquero and his colleagues (2003) employed data on his respondents that was gathered recurrently by the CYA officials. Offenders in the study were coded at each interview in terms of change in their life status, therefore if no change in life events had occurred since a previous interview than the change factor was coded zero and they were coded one if an event had took place. Controls were included for street time, or the amount of months an offender was not under supervision by the CYA, as well as criminal history (total arrests). Results of negative binomial regression models suggested that changes in local life circumstances accounted for changes in criminal activity, but local life circumstances did not eliminate the race-by-crime relationship for violent offenses. However, certain local life circumstances operated differently across race. Specifically, Piquero and his team (2003) found that while heroin dependence and street time increased the odds both black and white offenders would be arrested in a given time period, changes in marriage on the other hand was negatively related to changes in total arrests for nonwhites but not for whites. Heroin dependence and street time demonstrated a similar positive result for involvement in violent arrests for both blacks and whites; however among whites but not blacks, changes in alcohol

dependence and marriage were both positively and significantly related to changes in violent arrests. Piquero et al. (2003) concluded that the crime inhibiting power of certain local life circumstances on specific crimes varied according to the race of the offender.

### **The Impact of Community Sanctions on Local Life Circumstances**

As previously mentioned, Horney et al. (1995) found that the formal community sanctions of probation and parole were not significantly linked to changes in criminal behavior patterns in their sample. In their study Horney et al. (1995) measured the direct effects of community sanctions on offenders' behaviors, but did not address how such sanctions influenced local life circumstances which impact variations in levels criminal offending. Citing a wealth of deterrence and social literature, MacKenzie and Li (2002) addressed Horney et al's (1995) shortcoming and insisted that sanctions could potentially have indirect effects on adult criminal activity. They remarked, "Possibly, sanctions act as "presses" to increase social bonds to conventional, social institutions" (2002:250). From their perspective, probation and parole are ostensibly "supervising agents" wherein offenders are strongly encouraged to get jobs and maintain legitimate social relationships. Because of the pressures of community sanctions MacKenzie and Li (2002) hypothesized that the bonds formed during the sanctions sentence, (given they did in fact form) would perhaps thrive beyond the duration of the supervision period. In effect, the scholars were assuming that short term change in local life circumstances, brought on by coerced control, would lead to long term behavioral change that survived independent of formal control mechanisms. To summarize,

they sought to explore first the impact of probation on the criminal activities of probation second, whether changes in local life circumstances were associated with associated with changes in criminal behavior and third, whether levels of local life circumstances changed as a result of probation or parole.

To address their research questions, MacKenzie and Li (2002) utilized a sample of 125 offenders on either probation or parole in Virginia. Using a life history calendar technique similar to Horney et al's (1995) MacKenzie and Li (2002) interviewed participants during the beginning weeks of their community sentence regarding their life events and self reported criminal behavior during the year before their arrest and the time between their arrest and probation sentence. Then the participants were interviewed a second time, roughly eight to ten months into their community sentence regarding life events that they experienced and crime they committed since the onset of their sentence. During each interview, the researchers gathered information reported on a monthly basis by the participant pertaining to the participant's substance abuse, employment, romantic relationships as well as gun ownership. Drug dealing and non-drug crime were designated as the two dependent variables in their study. Estimations resulting from their series of hierarchal analysis indicated that community sanctions had a strong negative effect on involvement in criminal activities. In addition, offenders were less likely to engage in risky behaviors such as drinking and gun ownership while under community sanctions. Once offenders' sentence was completed, they engaged in an increased amount of crime and were more apt to use alcohol and drugs and to own firearms. Moreover risky

behaviors, particularly drug and alcohol use, were also associated with increased odds of both drug dealing and non-drug crime.

MacKenzie and Li's (2002) analysis also showed that compared to the timeframe prior to receiving sanctions, social bonds or variations of local life circumstances did not increase while offenders were under community supervision. Thus, there was no difference in levels of local life circumstances in the pre-arrest versus the post-arrest time period. Finally, their analysis indicated consistent with prior studies, that local life circumstances reduced offenders' involvement in crime. Offenders who lived with their spouses or maintained employment were less likely to commit non-drug crimes. However they did not uncover the same results for drug dealing. Instead the researchers discovered that school attendance was the local life circumstance significantly related to drug dealing, and that actually elicited a reverse effect, suggesting that offenders were more likely to deal drugs when they were in school.

Converse to Horney et al. (1995), MacKenzie and Li (2002) concluded that community sanctions directly reduced the likelihood that offenders would engage in further crime. In addition, MacKenzi and Li (2002) found that this was outcome was due to the deterrent force of the imposed sanctions rather than the indirect, coerced buildup of local life circumstances. Furthermore, the researchers discovered that independent of community supervision, changes in levels of local life circumstances were associated with changes in participants' involvement in criminal acts. For the most part, an increase in local life circumstances led to decrease in criminal behavior.

### **Local Life Circumstance: Summary**

Horney et al. (1995) contributed to Sampson and Laub's (1993) original long term investigation on informal social control and the life course by demonstrating that short-term changes in rapidly shifting life events, deemed local life circumstances, were also associated with alterations in criminal activity. Horney et al's (1995) sample consisted of crime prone individuals, thus their study exemplified that even persons with high propensity " may sometimes go to go school...sometimes work...and sometimes live with a wife... and at these times they are less likely to commit crimes" (Horney et al. 1995:671).

Griffin and Armstrong (2003) as well as Piquero et al. (2002) found that women and minorities, respectively, responded differently to local life circumstances depending on the type of crime, than did sample participants in Horney et al's (1995) study. Nevertheless, both females and minorities typically reduced their levels of involvement in criminal activities after experiencing change in a life event. Finally, MacKenzie and Li (2003) showed that local life circumstances were also related to reductions in criminal activity in their sample, but most importantly they discovered that a buildup of local life circumstances could not be coerced via community sanctions.

In all, studies focused on local life circumstances do not offer information beyond calculated speculation that provides evidence of the implications of short-term change on ultimate trajectory modification. Nonetheless, it is assumed that positive short term change is advantageous for crime prone individuals even if it does not lead to long term outcomes. On this notion, the optimistic conjecture put

forth by Horney and her team (1995:671) is that "lives are built one day at a time, [and] overarching life span trajectories can only revolve from responses from daily realities."

### **Situational Contingencies**

Laub and Sampson (2003) recently called for an integration of situational contingencies into the theoretical matrix of their theory of informal social control. According to their reasoning, individuals' actions and routines are shaped by the contexts in which they often find themselves a part of. For example, they noted in a recent study of the Glueck men, (who were at the present time were aged well into their 60's), that persistent offenders led typically "unstructured and chaotic lives" in comparison to those who had desisted. Shaped by the situational context, the routine activities the persisters engaged in were "loaded with opportunities" for crime and extensive associations with like-minded offenders. For instance, a persistent offender conveyed to the research team that he found himself in bars nightly where he fostered a drinking habit and was exposed to a wealth of criminal opportunity. He remarked, "Every time I drank I got into trouble. If I didn't drink I would never have gotten into trouble". The offender insisted that the bars were the primary reason for his deviant behavior, and went on to reminisce that it was in the bars where "[people] get to drinking, starting fighting [sic]. Yeah, that's what it was...people - they drank and got into fights" (Laub and Sampson 2003:232).

A constant flux in housing arrangements also characterizes the chaotic picture of most persistent offenders' lives. Laub and Sampson (2003) commented based on their qualitative analysis with the Glueck men, that the "persistent offender

seems devoid of structure.... generally the persistent offender...experienced residential instability" (2003:280). The nomadic tendencies of persistent offenders, often brings with it a lack of structure that leads to "even more situations conducive to crime." In the case of the previously discussed study participant, the nights he spent in the taverns that were wrought with drunkenness, fighting and contact with antisocial others may very well be according to Laub and Sampson (2003), a consequence of the unstructured routine of residential instability. Thus, due largely to the evidenced obtained from qualitative interviews, Laub and Sampson have concluded that "situational contingencies and activities need to be systematically incorporated into our understanding of criminal trajectories over the life course (2003:38)."

Concordant with Laub and Sampson's (2003) assertion, Bradley et al. (2001) have found evidence based on their analysis of released inmates, that stable housing deters criminal behavior. Their research suggests that established living arrangements may be one of the most important elements binding an offender to conventional society. Bradley et al. (2001:7) commented, "Without a stable residence, continuity in substance abuse...is compromised", furthermore they noted that "employment is often contingent upon a fixed living arrangement".

### **Family Relationships**

Several researchers have added components of tangential family relationships into their measures of adult social control variables, in the vein of sociology (Eve 1978; Rosenbaum 1987), Family relationships have long been viewed as a form of private social support, which for many seasoned criminals is the

only conventional link to legitimate society (Bazemore and Erbe 2004). Considering offenders' dismal past and the stigma brought on by years of criminality, family relationships "can provide people with legitimate identities and increases self esteem, contentment, and emotional social support" (Farrall 2004:64). On this point a released inmate commented to interviewers in a recent study, "I have been shot at, I have been in prison...so that where my mind was set...[Having a family] changes a lot of things...my opinions...views...my belief system" (Uggen, Manza and Behrens 2004:274).

In addition to contributing emotional support, Farrall (2004) also proffered that familial relationships provide a resource for persistent criminals who are in desperate need of advice on predicaments such as residential accommodations, financial troubles and avenues for legitimate employment. This notion is evidenced in a statement made by a female offender in Uggen et al's (2004:275) study in which she acknowledged in regards to her family, "those are the resources that I can lean on when- you know [you] go to a nursing home, there's people that have no one. I have my family". Support for these statements is also found in a recent investigation conducted by researchers affiliated with the Urban Institute, whom concluded that family members were a primary support network for formerly incarcerated offenders (Visher, Kachnowski, La Vigne and Travis 2004). Nearly 42 percent of ex-cons in their study returned to a family member's home after release from prison, furthermore the research team discovered that offenders more often resided with their family than with anyone else.

Several other scholars have identified that families are especially important resources for adult offenders, in particular those whom are exiting prison. For instance, Alarid et al. (2000) surveyed roughly 1300 adult prisoners confined to a state boot camp regarding several indicators of social support including prisoners' level of attachment to their parents, peers, and the quality of their romantic relationships. The researchers found that parental attachment significantly reduces the sample participants' involvement in drug, property, and violent crime. On their findings Alarid and his colleagues remarked (2000:189), "It appears therefore that bonds to parents have continuing effects on serious felons into adulthood". Similarly, recently a team of researchers examined the effects of several informal social controls on offenders' successful adjustment to probation. In particular, they concentrated on the quality of social relationships the probationers had with their family, as well as with friends (Hepburn and Griffin 2004). The study sample consisted of 258 adult males who entered probation in a thirty-month period between 1997 and 1999. Participants were followed for the duration of their probation. Results of event history analysis indicated that probationers spent a longer time free of crime if they had substantive support from family members.

Although the qualitative as well as quantitative research clearly demonstrates that family attachments can alter criminal trajectories even for individuals with strong propensities such as ex-convicts; scholars suggest that family relationships can also be a catalyst for further criminal behavior. For instance, Visher et al (2004) discovered in their study that 60 percent of soon to be released inmates indicated that at least one person in their family had been convicted of a crime, and over 25

percent responded had at least three family members who had a criminal record. The influence of criminal family members has not been entirely established in the literature, nevertheless Visher et al. (2004) speculates that family members may influence the occurrence of negative behavioral outcomes.

Summing up, variations of measurements of family bonds have been included in models that test for the power of informal social controls to change adult criminal behavior. Sampson and Laub never implicitly addressed the role of family relationships in adulthood as agents of change, or continuity, however they along with several of their colleagues affirmed recently that, "Strong social relations...represent social and psychological resources that individuals can draw on (Laub et al. 1995: 93-94)." Empirical studies have provided evidence that much like marriage and employment, social dynamics inherent to the family can sway individuals with a high propensity for crime off antisocial trajectories.

### **Human Agency and Informal Control**

Objective contingencies manifested in social institutions such as work, marriage, and the family place a considerable influence on the type of trajectory an individual will travel on throughout their life course. While scholars recognize this, in recent years life course theorists including Sampson and Laub (2004) have suggested that along with social process and structural factors, human agency should be considered as a significant determinant of persistence or desistance in offending. In their view, contrary to deterministic as well as purely structural theory individuals are active participants in shaping their own lives; however their choices are not independent of the circumstances of their existence. On this point they

commented, "...choices are always embedded in social structures" and they insisted, "the interaction of choice and structure produces behavior that cannot be predicted from a focus on one or the other" (2003:282). Therefore they affirm that both objective and subjective contingencies are interrelated processes that rely on the affective response of one another, an idea they termed "situated choice."

### **Agency and Desistance**

A burgeoning body of literature conveys that human agency is a vital component of the desistance process. According to this literature, among offenders classified as "desisters", many outwardly express that they are redeveloping or reconsidering their "self"; hence these individuals appear to essentially restructure their own identity. Sampson and Laub (2004:19) labeled this shift in core self as "transformative action", a methodical "action-oriented agency" which is "informed by the past" but driven towards the future. In this sense, offenders who are involved in the desistance process are considered active participants in the outcome of their own destinies; therefore via "situated choice" they attach their straight expectations to legitimate informal social controls. Combined, positive oriented agency and avenues of conventional structure facilitate the desistance process (Farrall and Bowling 1999). Scholars concur that change from a criminal trajectory to a non-criminal trajectory in adulthood rarely occurs successfully in either the absence of subjective commitment to go straight or without concrete social opportunity (Farrall 2004; Laub and Sampson 2003).

Maruna (2001) built on the body of "cognitive" literature using evidence gathered from an in-depth qualitative study of a sample of criminals in Great Britain.

Along with simply choosing to go straight, he noted that offenders, who were desisting, seemed to take responsibility both for their past actions and of their future pursuits and that "successfully desisting people seem to internalize complete responsibility for overcoming [past] obstacles" (Maruna 2001:149). Complete desisters in his study fit into the compensatory model of redemption, a classification drawn from the mental health field whereby "people do not blame themselves for their problems but hold themselves responsible for finding the solution to their own problems." (Maruna 2001:148). The "solution", in the compensatory model outlined by Maruna (2001:150) can be the change in environment or the development of an informal bond. Whatever the solution may be, the goal of the desisting offender is to own up to past failings and to make good, "by taking control over one's life and using that life to contribute, accomplish something, and leave a positive legacy (Maruna 2001:150).

Extending the assumptions regarding agency, in particular those put forth by Maruna (2001); Giordano, Cerncovich and Rudolph (2002) suggested that offenders who are committed to change, to seeking the solution to their problem behavior, move towards and engage in concrete "hooks for change", which are the formal and informal prosocial environmental resources available to the offender. On this notion the researchers remarked, "more successful [ex-convicts] could be described as going off the deep end or at least throwing themselves wholeheartedly into a new direction" (2002:1036). Unique to their supposition is their belief that an offenders' commitment to conformity precedes and is nurtured by their active participation in conventionalizing *formal controls* including mandated treatment programs and

community sanctions. Noting this, the researchers remarked, "Actors themselves must recognize the need to start saving and develop a high level of commitment to the plan...they may call on help from others...professionals...who have a stronger portfolio of prosocial behavior (Giordano et al. 2002:1056:1057)." A desisting offender in Giordano et al.'s (2002) study reflected the author's theoretical argument, she stated, "I prayed. I went to church. I went to drug treatment. I went into detox. I got a social worker. I got a counselor and I ran and got me some help...I wanted my life together (2002:1034)."

An offender's commitment to behavioral change, according to Giordano et al.'s (2002), is assessed through their "volitional or agentic aspects of movement towards...potentially helpful affiliations (hooks for change)", especially those that are incongruent with previously held criminal identities, most notably formal control mechanisms (Giordano et al. 2002:1056). Concordantly, Maruna (2001:124-128) maintained that an offenders willingness to engage in formal programs is likely a substantive indicator of positive change, as well as "generativity", a phase in the process of redemption.

### **Agency and Persistence**

Choice and free will are also significant components in the array of complexities inherent to understanding an individual's persistence in criminal trajectories. Unlike those who desist, persistent offenders feel that the locus of control is outside of their self - they are the pawn of pressing forces. With this mindset, persistent offenders believe that they have no choice in their future actions, consequently they build up "willful resistance to perceived domination" (2002:19). In

addition, due in part to their perceived "victimization" and the feeling of total loss, persisters avoid responsibility of past mishaps. Sampson and Laub (2004) note that many offenders eschew opportunities, especially those from the formal system, the authors remarked, "in many life history narratives, calculated and articulated resistance to authority is a recurrent theme in lives of persistent offenders" (Sampson and Laub 2004:19). Exemplifying this point, a persistent offender in Gadd and Farrall's (2004:138) study of subjectivity and offending remarked, "I just thought 'fuck it, fuck everything'. Move away from the area...just forget everything, forget the anger management, forget probation...I don't think I need it anymore." It appears then, based on the evidence, that persistent offenders often maintain an "antisocial logic" (Maruna 2001:4) that precludes their willingness to capitalize on, or pursue prosocial avenues of reform.

To summarize, recently scholars have begun to seriously consider human agency along side informal social control as joint mechanisms influencing trajectories of offending behavior. Extant literature suggests that in general, offenders who desist are often committed to behavioral change and are active participants in both formal and informal social controls. On the other hand, the research suggests that persistent offenders hold antagonistic views towards change altogether, as well as the conventional opportunities that would help them do so, especially those opportunities offered to them by the formal system.

Indeed, a further review of the criminal justice literature suggests that apart from criminologists, administrators of treatment programs and probationary services seemed to have long understood the pragmatic importance of an offender's will to

change in their eventual abstention from crime (Cullen 2002). Studies of reformed drug addicts indicate that the main factors that lead one to go clean are often "compulsory supervision" combined with a "discovery of a sustained source of hope and inspiration" (Laub and Sampson 2001:52). It appears then according to leading academics, that commitment to behavioral change can be assessed through both the actions and attitudes an offender demonstrates when confronted with an entirely exogenous formal factor, marked as a "hook for change".

### **Advances in Informal Social Control Theory: Review**

To review, the previous section outlined the theoretical and empirical advances in Sampson and Laub's (1993) original theory of informal social control, specifically in the sphere of adult behavioral variation. Several scholars have since augmented the original propositions documented in *Crime in the Making*. For instance, researchers discovered that marriage did elicit an influence on adult offending patterns as originally suggested by Sampson and Laub (1993), nevertheless indirectly through peer relationships (Warr 1998). Furthermore, a team of researchers found in a longitudinal study that the influence of an antisocial romantic partner was a substantial factor, consequently encouraging antisocial peer relationships and ultimately criminal behavior (Simons et al. 2000). A number of scholars have advanced our understanding of the "work effect", noting that employment seems to matter in the life course of older offenders versus those who are younger (Uggen 2000).

A large body of research has emerged that focuses on local life circumstances, the immediate rapidly changing contingencies in the life course that

induce incremental behavioral change (Horney et al. 1995). Also, advancing Sampson and Laub's theory, there has been a renewed interest in investigating the role of family relationships as resource which instigates continuity or desistance in criminal behavior. Likewise, scholars have begun exploring what have been termed situational contingencies, the proximal features embedded in an offender's environment that dictate their exposure to others as well as their daily routine. Finally, human agency paired with informal social control is now being treated in contemporary theory as a requisite feature of the process of "going straight".

The culmination of theoretical advances since *Crime in the Making* forced Sampson and Laub (2004:24) to recently acknowledge, "[patterns of offending] can be understood through a common theoretical lens, namely, a revised age-graded theory of informal social control that emphasizes social ties, routine activities, and human agency".

### **Chapter Summary**

Borrowing from the framework of the life course perspective (Elder 1985), the age-graded theory of informal social control developed by Sampson and Laub (1993) considers the dynamic nature of lives over time. Similar to static theories (Gottfredson and Hirschi 1990), the theory of informal social control assumes that antisocial tendencies emerge in early adulthood and are relatively stable across the life course. However, unlike deterministic approaches the age-graded theory of informal social control insists that change in adulthood is possible, despite a lifetime of antisocial behavior. This assumption is indeed an important strength; since a sizeable amount of qualitative evidence derived from offenders own words suggests

that even the most criminal of individuals can positively redirect their lives (Cromwell 2003). Currently the focus of life-course criminologists has been to reveal added sociological and cognitive factors in the adult life course that contributes to patterns of adult antisocial behavior.

## **Hypotheses**

The focus of the current study is to examine the factors that contribute to release outcomes in a high-risk sample of female and male offenders paroled from prison. In doing so, this study will incorporate into a series of hazard analyses several time-stable variables which the literature suggests increase offender's risk for recidivism. Also, drawing on evidence provided by the scholarly literature, variables deemed informal social controls as well measures of substance abuse and agency will be included in the hazard models to assess their impact on offender's time until recidivism. Listed below are the hypotheses that will be tested in the current investigation.

### **Time Stable Factors**

#### **Ascribed Characteristics**

**H1:** Minorities, males and younger offenders will be at increased likelihood for recidivism.

#### **Criminal History**

**H2:** Offenders who were arrested at an earlier age and those who have at least five prior arrests will be more likely to recidivate, net of ascribed characteristics.

**H3:** Controlling for ascribed characteristics and remaining criminal history measures, offenders incarcerated for property offenses will be at a heightened risk for recidivism.

### **Informal Social Controls**

**H4:** Informal social controls including employment, marriage, conventional peers, stable living conditions and family relationships will be directly related to reductions in recidivism rates.

**H5:** Informal social controls will mediate the risk posed by time stable factors (e.g., ascribed characteristics and criminal history measures).

### **Substance Abuse**

**H6:** Controlling for time stable factors as well as informal social controls, both alcohol and drug abuse will independently increase offender's chances of recidivism.

### **Agency**

**H7:** Offenders level of motivation to change (measured by observed compliance with supervision requirements) will exert a negative influence on recidivism net of time stable factors, informal social controls and substance abuse measures.

## **CHAPTER 4**

### **Methodology**

#### **Sample**

The sample for this study is comprised of 475 adult female and male offenders paroled from prisons in Iowa during fiscal years 1999 and 2000. Offenders in both release cohorts were part of an approximately 39 month longitudinal study conducted by the Iowa Department of Corrections (IDOC) that examined the average length of time, in days, that transpired until recidivism. A variety of information regarding each individual offender was compiled onto two separate file lists, one for the 1999 cohort and another for those released in 2000. Both lists were maintained by the IDOC.

After the follow-up period, the lists were updated to account for whether or not a parolee had been rearrested. If they had, the arrest date was subtracted from their release date and the result was the offender's known "survival time", or the number of days they remained on the streets until re-arrest. On the other hand, if an offender had not recidivated during the follow-up period, the total number of days they were tracked was noted as their assumed survival time. Completed, the lists contained information regarding offender's personal identifiers, demographic characteristics, instant offense, and their survival time.

For this study I was granted access from IDOC officials to both release cohort lists. However, before I obtained them IDOC officials stripped away the personal identifiers from each, leaving only offenders' demographic and relevant criminal

history information, as well as their individual Adult Corrections Data System Number (ACDS). An ACDS is an exclusive number granted to all offenders under supervision or custody of the IDOC that is used as a system identifier in a statewide offender classification database.

Drawing from the original combined cohort lists, I manually sorted out offenders who were paroled to supervision into a separate list of roughly 1900 "supervised" offenders. Next using a random sampling method, I selected every fifth ACDS number from the newly compiled "supervised" list until I obtained a sample of 475 individuals. Ex-convicts paroled to supervision exclusively comprised the sample of the current study because their lives, are in most cases, closely monitored and documented by IDOC officials compared to their non-supervised counterparts. For instance, while on parole most offenders are required to regularly report to corrections officials their whereabouts, place of employment, and the character of their social relationships (Petersilia 2003). On top of that, parole officers themselves also acquire information regarding the circumstances of their client's daily activities through interviews with parolee's employers, spouses, as well as acquaintances. Also, ex-convicts patterns of substance abuse are frequently revealed to parole officers via mandated urine analysis and other laboratory based methods (Petersilia 2003). In most jurisdictions the culmination of this information, reported by both parolees and parole officers, is then utilized to complete scheduled risk assessments that determine offender's future supervision classification. The itemized responses on the risk assessments provide a wealth of information on parolee's post-prison experience that is highly relevant to the focus of this investigation.

To gain necessary information pertaining to each parolee's level of involvement in informal social controls and illegal substance abuse, I accessed their electronically filed parole jacket and risk assessments via the Iowa Corrections Information Network (ICON). ICON is an online offender classification database that is comprised of data for each offender formerly or currently under the supervision of IDOC. Records are cataloged in ICON under offender's unique ACDS number.

### **Offender Risk Instruments**

Using ICON I accessed each sample participants' individual Level of Service Inventory Revised (LSI-R) and Iowa Risk Reassessment results, both the primary risk assessment instruments utilized by the IDOC. Generally, risk assessment instruments employed by the IDOC consider offenders ascribed characteristics and prior antisocial behavior in reference to their current levels of social support, substance abuse, as well as a number of other dynamic factors. A total risk score is calculated from itemized responses on the assessments that ultimately dictate an individual's supervision status.

Upon committal to the IDOC, all adult offenders are initially administered the Iowa Risk Assessment to determine the potential they pose for re-offending or simply not complying with supervision requirements. Offenders are then subsequently administered the Iowa Risk Reassessment - a modified version of the Iowa Risk Assessment - in six month intervals or whenever circumstances warrant. Furthermore, if offenders score a 12 or higher on their initial Iowa Risk Assessment they are also administered the LSI-R which is a comprehensive and dynamic risk assessment instrument (Simourd 2004). The LSI-R is completed annually for each

offender if they continue to score a 12 or higher, or if the offender is manually overridden by IDOC personnel to a high-risk category.

A total LSI-R score is calculated from the 54 individual response scores that make up the LSI-R. Of the fifty four questions, 41 of the responses are dichotomous, and the remaining thirteen question responses consist of an ordinal weighted scale ranging from 0 thru 3. Depending on the content of the item, subjective and objective judgments are employed by the IDOC officials to determine scores to each question, however for the most part the LSI-R employs items requiring straight forward reasoning (Sims and Jones 1997:315-316). A score of 0 on an item indicates that offenders are involved in a very unsatisfactory situation that needs improvement, a score of 1 is a relatively unsatisfactory situation with need for improvement, a score of 2 is assigned to a relatively satisfactory situation with some room for improvement, and finally a score of 3 indicates a satisfactory situation with no need for improvement. Responses which are dichotomized on the LSI-R indicate that a condition is either present (scored positive) or absent (given a negative score) in the offender's life.

The Iowa Reassessment implements binary as well as weighted scaled responses for its 15 questions. Commensurate with the LSI-R, objective and subjective procedures are required to score itemized responses on the Iowa Reassessment. Responses to certain questions are scored as a dichotomy, hence a 0 is assigned if a condition is not present and, depending on the weight of the question, a score of either a 2 or a 3 is applied if a condition is present. In addition, there are roughly five trichotomized scaled questions and one question wherein the

response scale consists of four levels. The total score on the Iowa Reassessment is derived from the sum of the responses on the 15 questions.

For every ex-convict in the sample, I documented itemized responses on the LSI-R and Iowa Risk Reassessments that were administered to them within the immediate time frame following their release from prison.

Within the online parole files, far more offenders had complete Iowa Risk Reassessments versus Iowa Assessments; therefore to ensure data continuity I purposely gathered the question responses from the Iowa Reassessment instead. In addition, the Iowa Reassessment included a number of additional risk related questions not found on the Iowa Assessment that were significant to this study. All combined, the paroled offender cohort list, the parole files, including the Iowa Reassessment and the LSI-R provided the data necessary to address the current hypotheses.

## **Measures**

The following is a list of the covariates and outcome measure used in the statistical analysis. Additional descriptive statistics for each variable detailed below are presented in Table 1.

### **Explanatory Variables**

#### **Ascribed Characteristics**

**Age at Release:** Sample members' age at release from prison was obtained from the supervised parole list and is included as a continuous measure. The average at release was 32 and the youngest and oldest were 18 and 62, respectively.

**Race:** Offenders race was derived from demographic information found on the parole lists. Race was quantified as a dichotomized term in which whites were coded as 0 and all other minority statuses were truncated and coded as 1. According to the recoding scheme, 27 percent of individuals in the sample were classified as minorities and the remaining 72 percent were non-minorities.

**Sex:** Information regarding the sex of sample participants was taken from a previously dichotomized measure found on the parole lists. Male offenders are coded as 1 and females as 0. Eighty-five percent of offenders were male and the remaining 15 percent were female.

### **Criminal History**

**Juvenile Arrest:** The measure of juvenile arrest is based on question number 5 of the LSI-R which specifically assesses whether an offender had been arrested under the age of 16. On the LSI-R, a response of "yes" or "no" is assigned to question 5 depending on the presence of a juvenile record. For this investigation question 5 is recoded as a dichotomous term whereby a "yes" response is coded as 1 and "no" is coded as a 0. Approximately 44 percent of offenders had been arrested while under the age of 16 and approximately 55 percent had not been.

**Lead Offenses:** Derived from information found on the parole lists, the most serious offense for which a sample member was incarcerated is quantified as a binary variable. For example, offenders imprisoned for drug charges are coded as 1 and those imprisoned for other offenses are coded a 0. The same coding scheme is utilized for drug and property lead offenses. Within the offender sample 34 percent of individuals were incarcerated for a drug charge, 14 percent of sample participants

**Table 1**                      **Descriptive Statistics**

Variable Name	N	Min	Max	Mean	Std Dev
<b>Explanatory Variables*</b>					
Ascribed Characteristics					
Age	463	18	62	32.95	8.5
Race	471	1	2	1.72	.44
Sex	471	1	2	1.84	.36
Criminal History					
Juvenile Arrest	385	1	2	1.55	.49
Lead Drug	470	1	2	1.67	.46
Lead Property	470	1	2	1.53	.49
Lead Violent	471	1	2	1.86	.34
Five Priors	471	1	2	1.34	.47
Informal Control					
Family Relate	365	1	3	1.93	.84
Living Arrange	382	1	2	1.53	.49
Conv. Peers	389	1	2	1.56	.49
Employment	399	1	2	1.52	.50
Marriage	404	1	2	1.49	.50
Education	365	1	2	1.70	.45
Substance Abuse					
Drug Use	395	1	2	1.49	.50
Alcohol Use	393	1	2	1.61	.48
Human Agency					
Supervision	377	1	3	2.22	.78
<b>Outcome Measure</b>					
Recidivism	475	0	1	.644	.47

\* For undetermined reasons, SPSS automatically reverse coded all binary explanatory covariates in the statistical analysis, consequently zero codings were read as one and variables coded as one were read as zero. In order to achieve correct computations of the data, I had to change the coding of the binary explanatory covariates; therefore a code of one remained a one, however I changed a code of zero to a two. Oddly enough, SPSS recognized the new codes as zero and one after I made the changes. In the above chart, with regards to explanatory variables, binary codes of one are to be interpreted as a one and codes of two represent a zero.

were imprisoned for a violent crime and constituting the largest category of the lead offenses, 49 percent of individuals were imprisoned for a property crime.

**Five Priors:** Prior substantial involvement in the adult criminal justice system was assumed if a parolee had at least five arrests prior to the one for which they were most recently imprisoned. Indeed, leading criminal career scholars have concluded based on longitudinal research that individuals with a record of at least five prior arrests are considered chronic offenders (Wolfgang, Figlio, and Sellin 1972). Data for this variable was obtained by scanning through offenders parole jackets cataloged on ICON. Sample members who had five or more prior arrests, roughly 42 percent of the sample, were coded as one. The remaining 58 percent of sample members with fewer than five arrests were coded as zero.

### **Informal Social Controls and Substance Abuse**

**Family Relationship:** A composite term was developed to measure the quality of social relationship offenders had with their relatives, which included their parents as well as "other relatives" (i.e., aunts/uncles, siblings, and grandparents). Data for this variable was drawn from questions 24 and 25 of the LSI-R. Question 24 utilizes a four tiered scaled response ranging from 0 thru 3 that investigates if an offender has a "non-rewarding parental relationship". Similarly, question 25 is also scaled as three levels and considers whether an offender is involved in non-rewarding relationships with other relatives. For the family relationship variable, responses on questions 24 and 25 were recoded into a three level scale. Response levels 2 and 3 from question number 24 were recoded as a 1 and responses 0 and 1 were recoded as a zero. Then, responses 2 and 3 from question 25 were recoded as

1 and 2, respectively, and responses 1 and 0 were truncated and recoded as 0. Both recoded question responses were then combined, consequently the new composite measure ranged from 1 thru 3; with level 3 indicating that a parolee has a robust pro-social relationship with family member(s) and 1 suggested they did not. Of the sample, 39 percent of members have an entirely negative relationship with members of their family, 27 percent could be characterized as having a good relationship, and finally 32 percent have a high quality relationship with members of their family.

**Living Arrangements:** Residential instability is assessed using question number 12 of the Iowa Reassessment. This question specifically addressed whether an offender was having "problems with their current living situation". Responses to this question on the Reassessment are coded on an ascending three level ordinal scale that ranges from 0 thru 2. According to the scoring criterion of the Iowa Reassessment, a problem in a living arrangement would constitute either frequent address changes, poor quality relationships with roommates or if an offender resides with antisocial individuals.

For this study, due to the strong grouping of responses at the scores of 0 and 3, responses to question 12 were recoded into a dichotomous variable whereby responses 1 and 2 were truncated into a composite indicator and scored 1. Scores of 0 remained in their original coding scheme. Thus a score of 1 suggests that an offender is living in a relatively stable living arrangement, which in fact 46 percent of the sample was, and a score of 0 which was given to 54 percent of the sample, indicates that a person was experiencing moderate to major problems in their current living situation.

**Conventional Peers:** The quality of sample participants' peer affiliations is assessed in question number 11 of the Iowa Reassessment according to a three level scoring arrangement. Under the original scoring method, offenders who were not involved in negative relationships and who associated primarily with pro-social friends were scored a 0. Scores of 2 are given to those who occasionally associated with negative individuals and finally parolees who commonly associated themselves with others involved in crime were scored a 3. For purposes of interpretability of the current statistical analysis, parolees responses were reverse coded so that a score of 0 equaled 2, 1 remained as 1, and 2 was coded as 0. Next the scores were truncated - once again do to clustering on the extremes - therefore scores of 2 and 1 were recoded as 1; and scores of 0 remained in its previous coding scheme. Approximately 43 percent of participants had primarily positive peer relationships, and 57 percent were involved in mostly negative peer groups.

**Employment:** Sample member's current employment situation was determined based on their response to question number 11 of the LSI-R. This question addressed whether an offender was unemployed at the time of the risk assessment. Offenders were deemed currently unemployed if they were involved in spot jobs, also if their place of employment was "vague and could not be verified". Scores for question 11 on the LSI-R were measured on a dichotomy so that a response of "yes" indicated that a parolee was currently unemployed and "no" inferred that one was working. To assess the effects of employment in the current study, scores were recoded so that a "no" equals 0 and "yes" is coded as 1. Within

the study sample, approximately 47 percent of offenders were currently employed and 53 percent were not.

**Marriage:** Data used to assess parolees relationship with their intimate partner was drawn from question number 23 found on the LSI-R. According to the LSI-R's scoring scheme for question 23, individuals involved in a hostile or unpleasant relationship are scored a 0, and offenders were scored a 1 if they were in relationships characterized by significant stressors and conflicts. Scores of 2 were given to individuals whose intimate relationships were "mostly rewarding and caring" and a score of 3 is given to those in "highly satisfying relationships". In the current coding format, parolees who scored either a 0 or a 1 on their original LSI-R were recoded as a 0 and those that scored either a 2 or 3 were recoded as a 1. Hence the revised variable utilized for the present analysis addresses whether an offender is in a "good marriage", which in fact 51 percent of sample members were and 49 percent were not.

**Education:** The covariate measuring parolees' educational attainment was quantified and coded according to whether or not they possessed a high school education. Data for this variable is drawn from question 16 of the LSI-R which investigates if an offender has less than a grade 12 education. Responses to this question are recorded on the LSI-R as either "yes" or "no". The coding of the education variable for the present study is similar to the binary response method employed on the LSI-R. A code of 1 signifies that an offender has a high school education, which in fact 71 percent of sample members did, and a 0 - given to 30 percent of sample members - indicates that individuals lack a high school diploma.

**Substance Abuse:** Alcohol and drug dependence were measured as separate predictors within the overarching category of substance abuse. Information for both variables was derived from questions 39 and 40 of the LSI-R; each question is a scaled measure of an offender's level of involvement in either alcohol or illegal drug use, respectively. Similar to many of the scaled variables already discussed, responses to both questions under the original ordinal coding scheme range from 0 thru 3. A score of 3 on either question indicates that an offender has no problems with alcohol or drugs. In contrast, a score of 0 suggests that an offender is in fact adversely impacted by their use of either alcohol or drugs.

Separate variables were constructed to assess an offender's level of involvement in both alcohol and drugs. To do so, responses from questions 39 and 40 were individually recoded into two new binary variables. Scores 0 and 1 were truncated and coded 0 and scores 2 and 3 were truncated and coded as 1. According to the recodes a score of 1 indicates that an offender is addicted to a specific substance and 0 indicates that they are not addicted. Approximately 50 percent of sample participants had a drug problem and 38 percent had an alcohol problem.

### **Commitment to Change**

The extent to which parolees' complied with conditions of their supervision was also incorporated as an explanatory variable. This variable was included in order to quantify sample participant's level of subjective commitment to persist or cease from offending. Beyond simply attending scheduled parole/probation meetings, requirements of supervision often entail mandated substance abuse

treatment, behavioral therapy and continued involvement in pro-social activities (Petersilia 2003). As detailed in the literature review, offenders who are strongly committed to leading the straight life will often attach to conventional "hooks for change" in the form of formal interventions - even those offered by the criminal justice system (Giordano et al. 2001; Maruna 2001).

Question 13 of the Iowa Reassessment gauges offenders' overall degree of cooperation with the various treatment and program requirements of supervised parole. Responses to this question are assessed on a weighted scale in which a score of 0 indicates that offenders are cooperating, a score of 1 suggests moderate compliance, and a score of 3 indicates that an offender is frequently unwilling to comply. For reasons of analyses interpretability, in the present study scores were recoded so that an original score of 0 on the Iowa Reassessment was recoded as a 3, a score of 1 was recoded as a 2 and an original score of 3 was recoded as a 1. Based on the current recodes, higher scores equaled greater levels of individual compliance therefore higher levels of commitment to "going straight". Approximately 22 percent of parolees failed to adequately meet the terms of supervision, 33 percent engaged in moderate compliance and 45 percent fully met the terms of their supervised parole.

### **Outcome Variable**

The outcome measure was the time lapse between an offender's parole date and recidivism. There are multiple indicators of recidivism employed by researchers in the context of a parolee sample. These often include the amount of time from release until reconviction, felony arrest, reimprisonment or parole revocation

(Baumer 1997; Schmidt and Witte 1988; Weisburg and Waring 2001). However, Maltz (1984) suggests that the time until re-arrest, regardless of prosecution or type of charge, is the "recidivism definition of choice" and the best conceptualization of the occurrence of the arrest event.

Following Maltz's (1984) insistence, the outcome measure of recidivism in this study was defined as the time (in days) until an officially recorded arrest following release from prison. Recidivism was coded as a dichotomous term with one designated as the indicator code. Data for this measure was derived from the "survival" term calculated on the parole list. Over 64 percent of the 475 offenders in the sample had been rearrested by the time the study period expired. Sample members remained "crime free" in the community on an average 638 days.

Inarguably, in comparison to official records, self reported criminal activity is a much more reliable indicator of actual offending (Horney et al. 1995); however such data is not available for the current study. It is important to note though that officially recorded arrest data have been shown to offer a relatively accurate depiction of the amount of criminal activity committed by parolees on supervised release (see Petersilia 2003).

## **Analytic Procedure**

### **Independent Samples T-Test**

An independent samples t-test was conducted initially in order to uncover if significant differences existed in covariate mean values between the recidivists and non-recidivists in the sample. Independent samples t-tests are employed in this case rather than paired samples tests, because the probability of an offender being

selected into the current sample (recidivists or vice-versa) is independent of the probability of being selected into different sample (non recidivists or vice-versa) (Bachman and Patternoster 1997). This assumption is violated when a sample member is purposely selected into a sample based on either a real or contrived characteristic. To calculate the t-statistic, the difference between two sample means must be divided by the standard deviation (estimated) of the sampling distribution. T-values that fall within the critical region, dependent on the alpha level, suggest that differences in means between two factors are statistically significant.

### **Survival Analysis: Proportional Hazard Model**

Survival techniques in the form of hazard analysis were utilized to investigate the covariates in the current study that were significantly related to ex-convicts odds of recidivism. Survival models, in general, are a widely used procedure for data analyses that are employed particularly when the outcome variable in question is the *time until an event occurs*. An *event* in survival analysis is often referred to as a *failure*, largely because they are commonly negative experiences including death, addiction relapse, or crime. The amount of time a subject remains in a study until the termination of the study or the occurrence of an event is deemed their *survival time*. In simple terms, explanatory variables are included in survival models in order to assess their ability to influence or curb the occurrence of a terminal event.

Based on the common statistical properties of survival models, parametric and non-parametric hazard techniques have been developed to specifically compute the hazard function, which is an individual's instantaneous potential for failure. More accurately, survival models estimate a survival function  $S(t)$ , which gives the

probability that a person *survives* longer than some specified time  $t$ . Thus the focus of survival models is the likelihood of an individual's survival under certain conditions. In contrast because hazard models compute a hazard function, their implicit focus is the likelihood of *failure* or an event occurring. Since the hazard and survivor function are "in essence opposed concepts" (Kleinbaum 1997:14), knowing the hazard function, one can estimate the survival function and vice-versa using a very complex calculus formula. Fortunately, most statistical programs automatically calculate the formula and can plot both functions in graphical form (Kleinbaum 1997:13-14).

Indeed, as already mentioned the aim of hazard models is to compute a hazard rate (or function), which can be envisioned as the likelihood that a person will fail at a time interval given that they have survived prior to that point (Chung et al. 1991). In other words, the hazard function is an estimate of the relative risk (i.e., potential) of a terminal event occurring, per unit in time, for a case that has survived up until that point. Rather uniquely, the Cox proportional hazard model estimates the impact of covariates on the hazard function  $h(t)$ , without making assumptions on the specific shape of the overall distribution of the hazard function. Moreover, the Cox model maintains a proportionality assumption which specifies that changes in levels of the explanatory variables will produce proportionate changes in the hazard function, independent of time. In fact, for each person, the model calculates an undetermined baseline hazard function, noted as  $h(t,)$  according to their ordained characteristics. Hence, a person's baseline hazard function will flex up or down proportionate to the effect of a covariate and not of time; moreover, in reference to

others, the proportionality of the baseline hazard function will maintain its original pattern throughout time (Kleinbaum 1997). As with most hazard models, the Cox model computes a beta coefficient and an estimate of sampling error for each predictor which indicates the extent of flexing a predictor places on the baseline hazard function.

The key benefit of using hazard models to explore recidivism, in comparison to static (i.e., logistic regression) techniques, is that the model measures both the occurrence and timing of recidivism (Allison 1984; Kleinbaum 1997). In addition, unlike static methods, hazard models (as well as survival techniques) effectively manipulate the bias that arises with estimating equations based on censored data, or the cases who do not fail within the study time-frame.

## CHAPTER 5

### Results

#### Independent Samples T-Tests

As depicted in table 2, independent samples t-test revealed that recidivists and non-recidivists significantly differed on mean values of ascribed characteristics including age ( $t = 2.74$ ) and race ( $t=2.18$ ). Likewise, the results point out that recidivists and non-recidivists significantly differed in the types of crimes they committed and their degree of involvement in past criminal offending. Within the group of criminal history measures, the greatest disparities in mean scores were evident for five prior arrests ( $t=5.51$ ) and incarceration for a violent offense ( $t=4.72$ ). Significant differences were also uncovered across all mean values of informal social controls, with the exception of educational attainment. In addition, recidivists and non-recidivists diverged significantly in their mean scores of drug ( $t=7.07$ ) and alcohol ( $t=5.50$ ) use, as well commitment to change ( $t=9.53$ ).

#### Correlation Matrix

Prior to the hazard analysis, a correlation matrix was constructed for the study variables that demonstrated (see Table 3 in Appendix) that there was no evidence of significant multicollinearity. Interestingly, the commitment covariate had the highest correlation (negative) with the outcome measure of recidivism. Furthermore, Table 3 indicates that the collinearity between the lead offenses was the strongest among the study variables; yet the relationship was not powerful enough to impact the estimates in the Cox models (Hosmer and Lemeshow 1996).

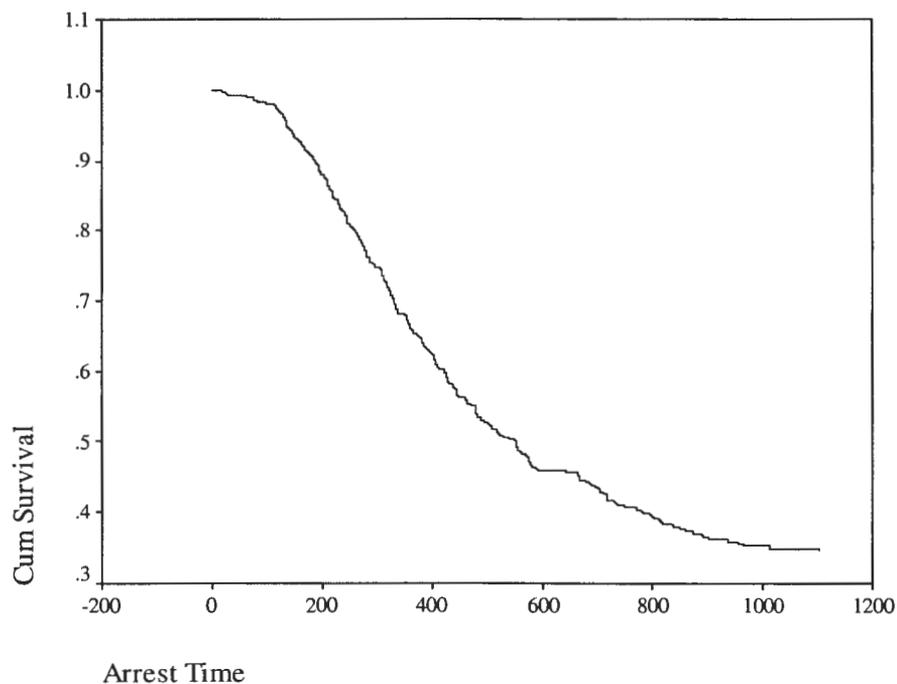
**Table 2** Independent Samples t-Test

Variable Name	Reoffend	Mean	t	Sig.
<b>Ascribed Characteristics</b>				
Age	0	33.4	2.74	.006*
	1	31.1		
Race	0	1.76	2.18	.029*
	1	1.69		
Sex	0	1.80	-1.83	.067
	1	1.86		
<b>Criminal History</b>				
Juvenile Arrest	0	1.67	2.93	.004*
	1	1.50		
Five Priors	0	1.34	5.51	.000*
	1	1.11		
Lead Drug	0	1.60	- 2.50	.010*
	1	1.71		
Lead Property	0	1.61	2.67	.008*
	1	1.48		
Lead Violent	0	1.46	4.72	.000*
	1	1.21		
<b>Informal Controls</b>				
Family Relate	0	2.21	3.96	.000*
	1	1.82		
Living Arrange	0	1.36	- 5.47	.000*
	1	1.66		
Peers	0	1.39	- 4.26	.000*
	1	1.63		
Employment	0	1.30	- 5.35	.000*
	1	1.60		
Marriage	0	1.37	- 3.80	.003*
	1	1.54		
Education	0	1.66	- 1.01	.310
	1	1.71		
<b>Substance Abuse</b>				
Drug Use	0	1.78	7.07	.000*
	1	1.38		
Alcohol	0	1.84	5.50	.000*
	1	1.53		
<b>Commitment to Change</b>	0	2.63	9.53	.000*
	1	1.90		

\* Significant at the 0.05 level (2- tailed)

## Survival Function

Figure 1 displays the full sample's cumulative probability of survival as a function of time. At approximately 180 days following release from prison the survival rate was roughly .91, implying that 9 percent of the sample had recidivated and 91 percent managed to avoid committing crime. After one year, approximately 31 percent of ex-convicts in the sample had been rearrested, subsequently, after two years 57 percent of ex-convicts had recidivated and 43 percent remained in a state of desistance. Overall, estimates from the survivor curve for the full sample imply that the greatest risk for recidivism exists in the first 10 to 12 months of the release period. These findings are analogous with the results from Langan and Levin's (2002) investigation of national recidivism trends.



**Figure 1 Cumulative Survival Function: Full Sample**

## Proportional Hazard Models

### Interpreting Proportional Hazard Results

For each Cox model consisting of a block of covariates a -2 log likelihood statistic is reported along with a conditional Chi-Square value. A statistically significant Chi-Square from one successive model to the next indicates that a decline in the -2 log likelihood (or the difference between) per added block of covariates is significant, and the likelihood of a chance model is null (Kleinbaum 1997). Similar to linear regression models, the Cox hazard model generates diagnostics for each covariate. The computed hazard functions displayed in an output file are simply the exponential values for a particular covariate ( $\text{Exp}(B)$ ). These may be interpreted as percentage increases or decreases in the risks of a terminal event by utilizing the formula,  $100 * (\text{Exp}(B) - 100/100)$  (Allison 1984). Hazard rates less than a value of 1 suggest that a covariate is related to a reduction in relative risk, and values larger than 1 indicate an increased hazard rate. Reciprocal hazard rates can also be calculated to be interpreted more readily with per one unit changes in predictor values, using the formula  $(1/x=x)$  where  $x$  is a defined  $\text{Exp}(B)$ . However, for the current analysis, relative risk rates and their affiliated percentages are referred to according to their original exponential values.

### Time Stable Factors

#### Ascribed Characteristics

In model 1, the association between ascribed characteristics and time to failure was estimated. Table 4 presents the coefficients obtained from the model.

Concordant with previous studies (Kruttschnitt et al. 2000), younger offenders are at a greater risk for recidivism in comparison to those who are released from prison when they are older. In particular, a one unit increase in age reduces parolee's hazard ratio for recidivism by approximately 2 percent. Also, the analysis indicated that males are at a significantly greater risk for failure. Compared to males, female's relative hazard ratio is .690, constituting a relative risk of failure that is 30 percent lower than males. In addition, the analysis suggested that minority offenders are significantly greater risk for recidivism in comparison to non-minorities. Specifically, the "race" coefficient indicates that minorities are 38 percent more likely to be rearrested at a conditional time interval following release from prison.

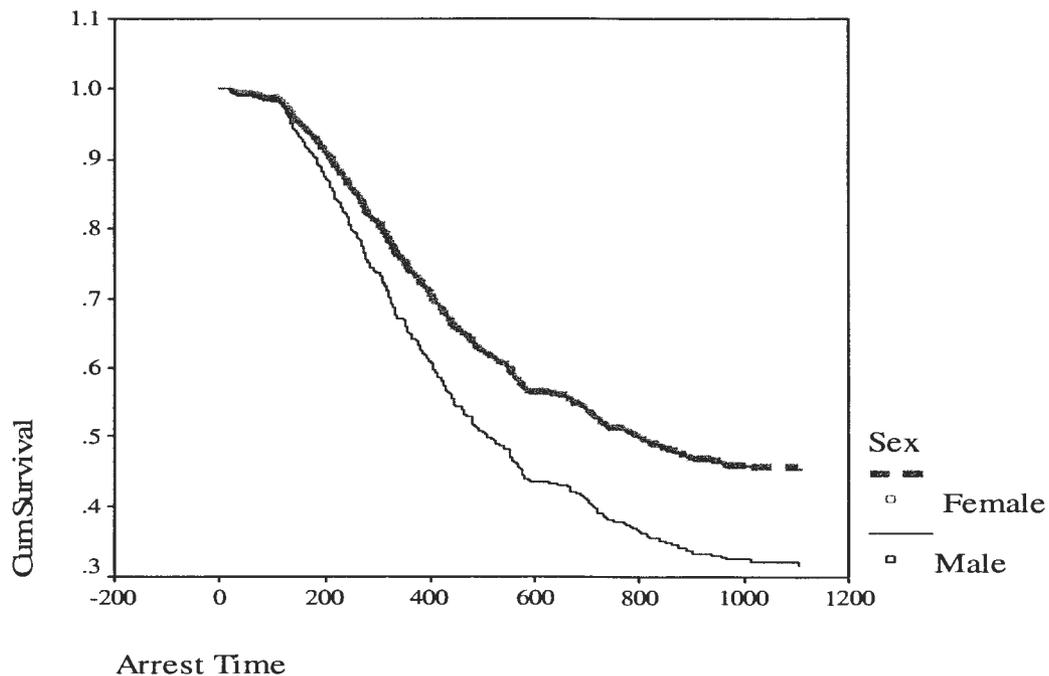


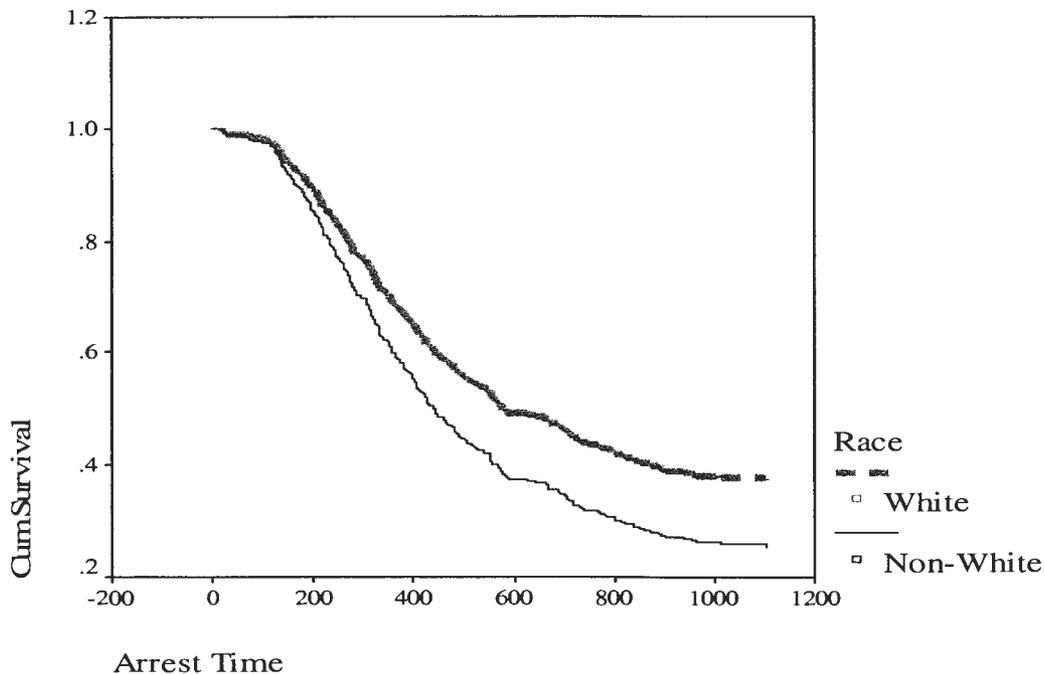
Figure 2 Cumulative Survival Function: Sex

**Table 4** Proportional Hazard Model Predicting Recidivism

<u>Covariates</u>	Model 1		Model 2		Model 3		Model 4		Model 5	
	<u>B</u>	<u>Exp (B)</u>								
Age	-.018*	.982								
Race	.326*	1.38								
Sex	-.371*	.690								
Juvenile Arrest										
Five Priors										
Lead Drug										
Lead Property										
Lead Violent										
Family										
Liv. Arrange										
Peers										
Employment										
Marriage										
Education										
Alcohol										
Drugs										
Commitment										
-2 Log Likelihood		3381.46								
Chi Square		18.62*								
df		3								

\* p ,.05

Figure 2 illustrates the divergent level of risk between the sexes at particular points in time throughout the 42 month follow up period.<sup>1</sup> For example during the time frame when inmates had the highest rates of failure, roughly up until the one year point, approximately 24 percent of female ex-convicts had been rearrested compared to roughly 36 percent of males. After three years, nearly 70 percent of males had not reoffended versus 49 percent of females.



**Figure 3 Cumulative Survival Function: Race**

Survival curves in Figure 3 articulate the discrepant failure rates for minority versus non-minority offenders. According to the plot, at the one year mark roughly 72 percent of whites had not been arrested, opposed to 61 percent of non-white offenders, which constituted an 11 percent disparity in the cumulative survival rate.

<sup>1</sup> In the figures, per covariate cumulative survival curves are evaluated at the means of the remaining covariates in the model (Kleinbaum 1997)

Moreover, the chart indicates that the proportional differences in survival rates between non-white white ex-convicts gradually increased throughout the duration of the study. In fact, by the final month of the observation period, the difference in survival rates between both groups was over 28 percent; approximately 48 percent of white offenders had abstained from offending and 26 percent of non-whites

Overall, the results from Model 1 support the first hypothesis and are consistent with extant research that outlines the substantial risk for recidivism posed by ascribed characteristics in the post-prison environment. To review, the findings inferred that ex-convicts who are male, a racial minority and those who are younger are at an increased risk for rearrest compared to their counterparts (Hoffman and Beck 1984).

### **Criminal History**

Table 5 presents the results from Model 2, which assessed the relationship between criminal history measures and recidivism while controlling for ascribed characteristics. Several significant findings resulted from Model 2 with relevance to both the second and third hypotheses; those concerning hypothesis 2 are discussed first followed by the results pertaining to hypothesis 3.

As expected, the respective criminal history measures of juvenile arrest and five prior arrests have a substantial influence on the cumulative odds of recidivism. In fact, the results from Model 2 signify that a juvenile arrest record increased offenders' chances of recidivism by roughly 39 percent. Furthermore, the binary measure for five prior arrests exerts a significant positive value. Based on the

coefficient, offenders with five priors have a risk of re-arrest that is increased by a magnitude of 1.70 (70 percent) at a conditional time interval following their release.

The relative risk of recidivism associated with a juvenile arrest record is conveyed in the survival curves in Figure 4. As the plot conveys, beginning at approximately 6 months after release, offenders who were arrested as juveniles began to recidivate at significantly higher rates than those without a history of juvenile involvement in crime. This trend increased gradually and leveled at roughly 21 months. Within this timeframe nearly 56 percent of offenders with a juvenile arrest record had failed, versus 29 percent without such a record. Relatively no change in relative survival functions occurred between the two groups from the 24 month time point until the end of the study.

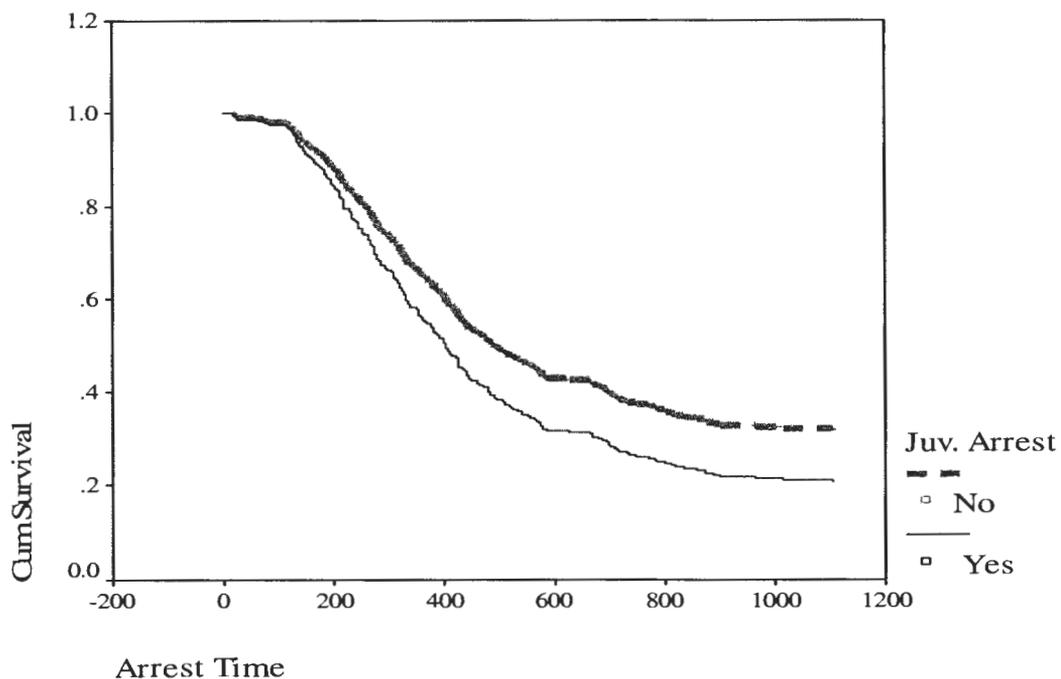


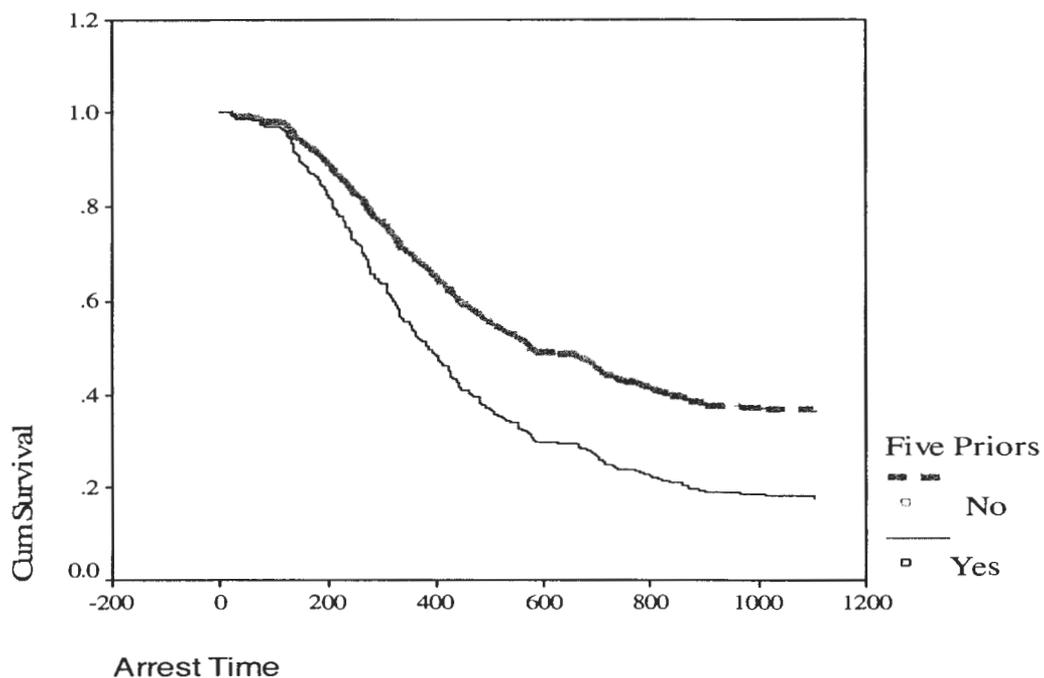
Figure 4 Cumulative Survival Function: Juvenile Arrest

**Table 5** Proportional Hazard Model Predicting Recidivism

<u>Covariates</u>	Model 1		Model 2		Model 3		Model 4		Model 5	
	<u>B</u>	<u>Exp (B)</u>								
Age	-.018*	.982	-.015	.985						
Race	.326*	1.38	.396*	1.48						
Sex	-.371*	.690	-.263	.769						
Juvenile Arrest			.329*	1.36						
Five Priors			.534*	1.70						
Lead Drug			-.073	.929						
Lead Property			-.006	.994						
Lead Violent			.340	1.40						
Family										
Liv. Arrange										
Peers										
Employment										
Marriage										
Education										
Alcohol										
Drugs										
Commitment										
-2 Log Likelihood		3381.46		2680.57						
Chi Square		18.62*		36.36*						
df		3		8						

\* p ,.05

Figure 5 provides a picture of the pronounced divergence in survival rates for ex-convict's with and without a record of five prior adult arrests. The survival curves elaborate that the group of offenders with a lengthy arrest history had proportionate survival rates which were markedly lower than their counterparts throughout the entire follow up period. Moreover, as time transpired, offenders with five priors were progressively more likely to recidivate. In fact the cumulative survival functions between the two groups differed by roughly 12 percent in the first year and by as much as 20 percent in the latter 100 to 150 days of the study.



**Figure 5 Cumulative Survival Function: Five Priors**

In addition, proportional hazards estimates in Model 2 failed to support hypotheses 3. To reiterate, coinciding with predominant recidivism studies (Bales et al. 2005; Langan and Levin 2002), offenders incarcerated for property crimes were

hypothesized to re-offend earlier while on parole in comparison to those incarcerated for drug or violent crimes. Antithetical to my prediction, the analysis indicated that, an offender's lead offense was not related to their odds of rearrest. Thus, ex-convicts incarcerated for property crimes did not have significantly higher chances of failure in the post-prison environment.

Table 5 also shows that in Model 2, the age and sex covariates are diminished to insignificant levels, which suggests that the criminal history measures account for the previously strong relationship (see Model 1) between the two covariates and the hazard of rearrest. Thus, this indicates to some extent that males have a higher hazard ratio due to the fact that they have a more pronounced criminal record. With regard to the non-significant age coefficient, no plausible explanation can be put forth. However, unlike what occurs for the sex and age covariates, the criminal history vector does not reduce the potent effect of racial status on recidivism; instead the results suggest the opposite. Indeed Model 2 indicates that the race coefficient actually increased in power when the criminal history variables were included in the analysis. For instance, in the first Model minorities were 38 percent more likely to be arrested than were non-minorities, and in Model 2 minorities rate of relative risk increased to 48 percent.

In conclusion, consistent with the second hypothesis, Model 2 revealed that juvenile involvement in crime and a record of five prior arrests are statistically significant predictors of failure. These findings are analogous to those reported in several recidivism studies (Benda and Toombs 2002; Lattimore et al. 2004) However, discordant with the third hypothesis the results also pointed out that an ex-

convict's lead offenses did not significantly amplify their likelihood for re-arrest. Also, the results suggested that criminal history measures mediate the pathway between sex, age and recidivism, but slightly amplify the hazard ratio affiliated with minority status.

### Informal Social Controls

For the purpose of testing hypotheses 4 and 5, Model 3 estimated the effects of informal social controls on recidivism, net of ascribed characteristics and criminal history covariates. Results of the estimates obtained from Model 4 are presented in Table 6. In the succeeding paragraphs, the findings pertaining to hypothesis 4 are discussed first, followed by those with relevance to hypothesis 5.

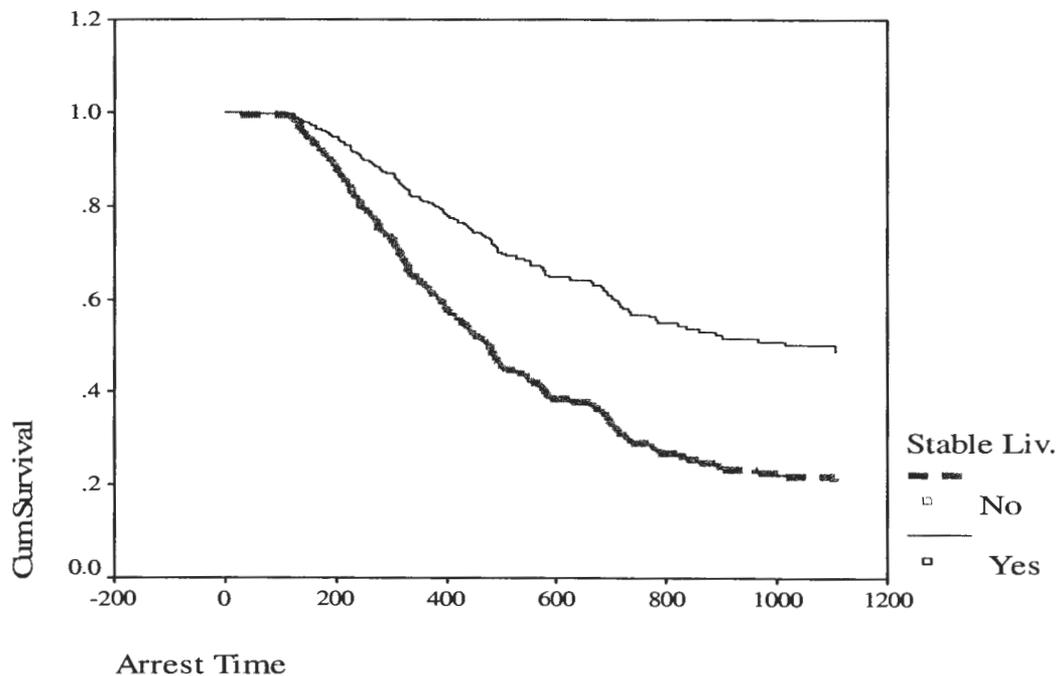
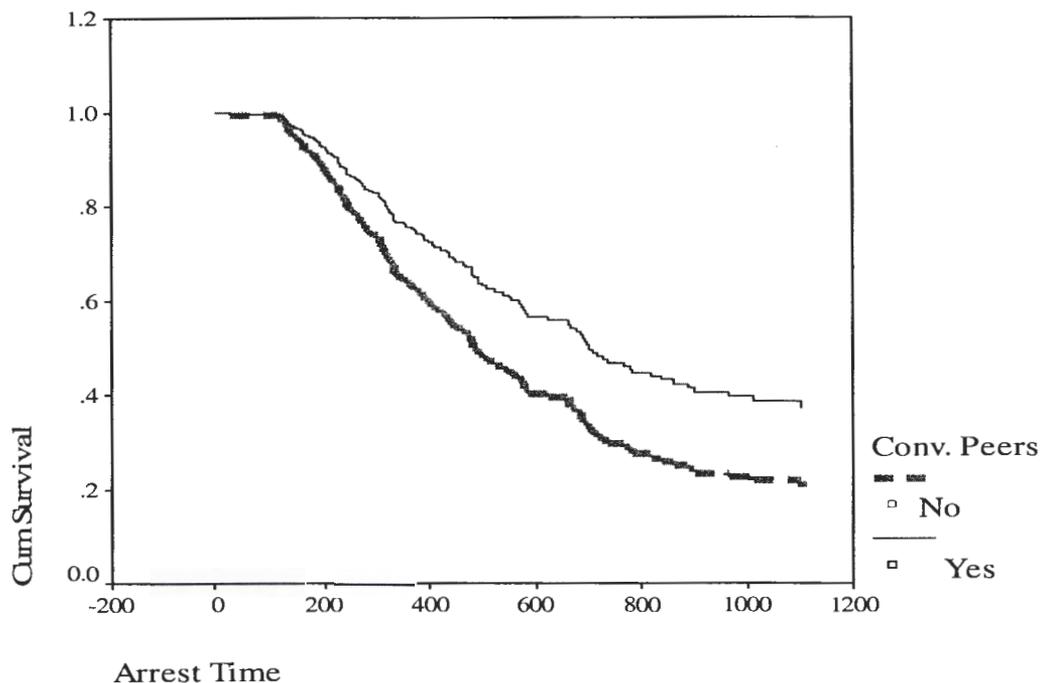


Figure 6 Cumulative Survival Function: Stable Living Arrangements

Consistent with expectations, Model 3 ( see Table 6) reveals that offenders who resided in stable living arrangements were 51 percent less likely to be rearrested in the follow up period. It is important to point out that the decrease in relative risk attributed to the "good living arrangements" variable was the second most powerful among the six informal social control measures. Figure 6 portrays the obvious discrepancy in cumulative survival rates associated with living in non-stable versus stable living arrangements. As illustrated in the figure, the risk posed by the characteristics of offenders' living arrangements was relatively obscure through the first 180 days following release. However, the benefits of stable living arrangements manifested by the sixth month and gradually decreased ex-convicts' chances of recidivism throughout the duration of the study. For example, by 16 months, the proportion of ex-convicts residing in unstable residences who failed was almost 27 percent higher as opposed to those who lived in stable residences. And in the last three months of the study the very same difference in rates of survival between the groups had elevated to approximately 31 percent.

Estimates from Model 3 also suggest that conventional peer relationships significantly decrease the probability of re-arrest. More specifically, controlling for criminal history measures and ascribed characteristics, offenders who were deemed as having primarily conventional friends are 38 percent less likely to be rearrested at a conditional time interval during the study time-frame. Figure 7 highlights the inequalities in cumulative survival functions contingent on peer affiliation scores. It is apparent in the figure that the effect of peer relationships on the outcome measure noticeably emerged approximately 9 months after offenders were released and

persistently increased. Furthermore, the plot illustrates that after approximately 24 months the magnitude of the survival curves differed very little in relative proportion, which suggests that peer associations have the greatest impact on the hazard of re-arrest in the first two years, especially the first year after an offender is released from prison.

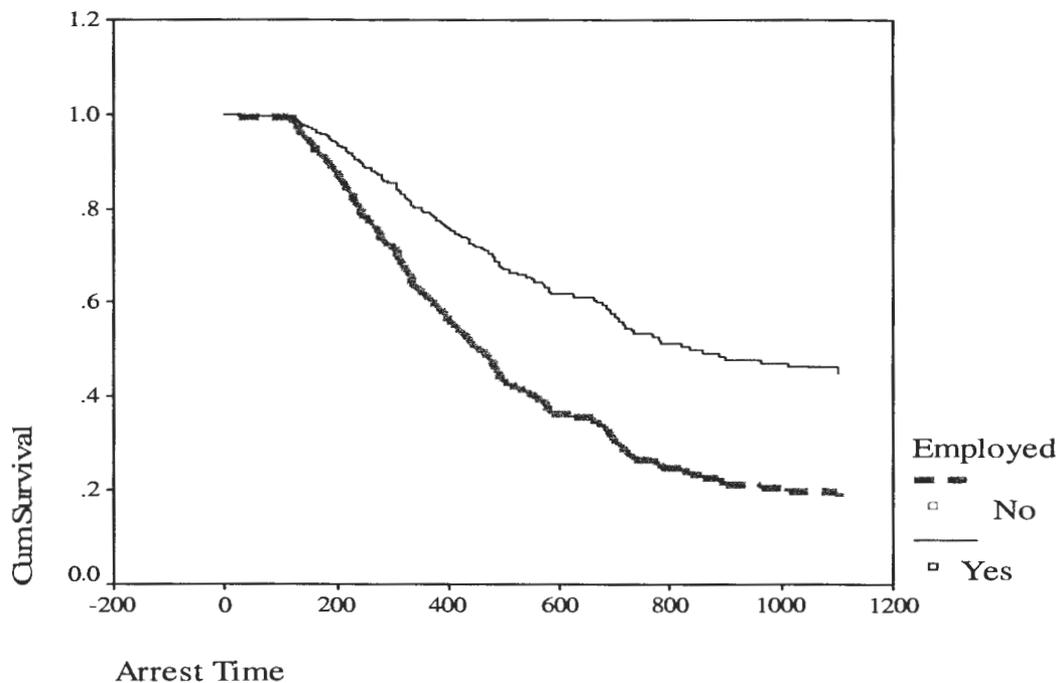


**Figure 7 Cumulative Survival Curves: Conventional Friends**

In accordance with the fourth hypothesis, Model 3 also revealed that stable employment in a legitimate enterprise is related to a lower hazard of re-arrest. Actually, Table 6 indicates that the beta value of  $-.690$  elicited by stable employment is the largest among the informal social control variables, and is affiliated with a 50 percent reduction in the relative hazard rate of recidivism. In other words, offenders

who do not maintain a "decent" job after prison are 50 percent more likely to be rearrested (Uggen 1999).

Figure 8 illuminates the implications of stable employment on the post release outcome. The figure conveys the accelerated decrease in the proportion of unemployed offenders that survived compared to employed offenders. Interestingly, the contrastive survival functions associated with employment status increase rather rapidly in magnitude from roughly 9 months until 15 months and then remain in relative value to one another throughout the remainder up of the follow up period. Such a trend in survival functions provides evidence for the scholarly assertion that ex-convicts are in the greatest need for stabilizing influences, especially legitimate employment, during the first year after their release from prison (Petersilia 2003).



**Figure 8 Cumulative Survival Function: Employed**

**Table 7** Proportional Hazard Model Predicting Recidivism

Covariates	Model 1		Model 2		Model 3		Model 4		Model 5	
	B	Exp (B)								
Age	-.018*	.982	-.015	.985	-.008	.993	-.005	.995		
Race	.326*	1.38	.396*	1.48	-.158	.854	-.200	.819		
Sex	-.371*	.690	-.263	.769	-.301	.740	-.294	.745		
Juvenile Arrest			.329*	1.38	.093	1.09	.149	1.16		
Five Priors			.534*	1.70	.425	1.53	.315	1.37		
Lead Drug			-.073	.929	-.449	.638	-.200	.819		
Lead Property			-.006	.994	-.403	.668	-.126	.882		
Lead Violent			.340	1.40	-.386	.680	-.079	.924		
Family					-.205	.815	-.223	.800		
Liv. Arrange					-.699*	.497	-.659*	.517		
Peers					-.470*	.625	-.527*	.564		
Employment					-.690*	.502	-.558*	.572		
Marriage					.104	1.10	.158	1.17		
Education					-.008	.992	.265	1.30		
Alcohol							.054	1.05		
Drugs							.738*	2.09		
Commitment										
-2 Log Likelihood		3381.46		2680.57		1221.71		1167.27		
Chi Square		18.62*		36.36*		70.66*		86.75*		
df		3		8		14		16		

\* p, .05

A number of the findings derived from Model 3 are contrary to the fourth hypothesis. Foremost, a good marital relationship did not significantly reduce parolee's odds of re-arrest. More specifically, a good marital relationship actually insignificantly increased offenders' relative risk of failing in the follow up period by a factor of approximately 1.1. In addition, inconsistent with expectations, the results from Model 3 assert that positive relationships with tangential family members do not significantly decrease an offender's likelihood of re-arrest. It is notable, however, that the "family relationship coefficient" was in fact negatively related to recidivism risk (though insignificantly). The evidence, nevertheless, clearly affirms that offenders' likelihood of recidivism is determined independent of support from uncles, cousins, parents or the like. Finally, Table 6 specifies that one's level of educational attainment, in this case a high school diploma, does not exert a significant influence on the hazard of failure.

Model 3 also revealed several key findings regarding the mediating relationship between informal social controls and criminal history measures that was articulated in the fifth hypothesis. First, as anticipated, the vector of informal social controls mediated the strong connection between five prior arrests and recidivism. As presented in Table 6, the coefficient for five prior arrests is reduced to a positive non-significant value when social bonds are incorporated into the model. What this suggests is that sustained involvement in proximal social institutions in adulthood diminished the deleterious effects of ex-convict's antisocial propensity, or in this case a protracted history of arrests (Sampson and Laub 1993). Second, the inclusion of informal social controls in Model 3 diminished the amplifying effects of juvenile arrest

history on post-release failure. This indicates that the presence of legitimate opportunities in adulthood mediates the pathway between a juvenile arrest record and future criminal involvement - regardless of adult antisocial behavior (i.e., five priors). Or put differently, the effects of a juvenile arrest record on the risk for recidivism are dependent on the existence of adult informal social controls. With a deficit of informal controls, an ex-convict who has a juvenile record is much more likely to return to their previously established criminal habits.

Finally, Model 3 produced an interesting finding that was not affirmed in the fourth or fifth hypotheses. Specifically, the vector of informal social controls in Model 3 washed away the formerly significant association between race and time to failure (see Model 2). This suggests that the variation in race in relationship to recidivism risk, is accounted for by informal social controls. Therefore, independent of social controls minority offenders are more likely to commit another crime (see Model 2), however, with all else being equal (levels of informal controls) an offenders race does not directly impact their odds of failure.

Taken together the numerous conclusions generated in Model 3 provide support for hypotheses 4 and 5 and coincide with the age-graded theory of informal social control (Sampson and Laub 1993). Furthermore they are consistent with the predominant findings in the literature regarding effects of local life circumstances on recidivism patterns (Griffin and Armstrong 2002; Horney et al. 1995). To recap, Model 3 revealed that net of criminal history and demographic measures - employment, stable living arrangements and positive peer associations significantly reduce offenders' risks of recidivism. In addition, the model indicated that strong

marriages, supportive relationships with family members and a high school diploma are unrelated to the hazard of failure. Finally, informal social controls eliminated the significant hazard rate posed both by five prior arrests and a juvenile record on recidivism. Also, unexpectedly Model 3 revealed that informal bonds mediate the pathway between minority status and re-arrest.

### **Substance Abuse**

The explanatory variables used to assess levels of alcohol and drug abuse were added to the analysis in Model 4 in order to test the sixth hypothesis. It was expected that heavy drug and alcohol consumption would increase offenders' relative risk of recidivism net of social control variables.

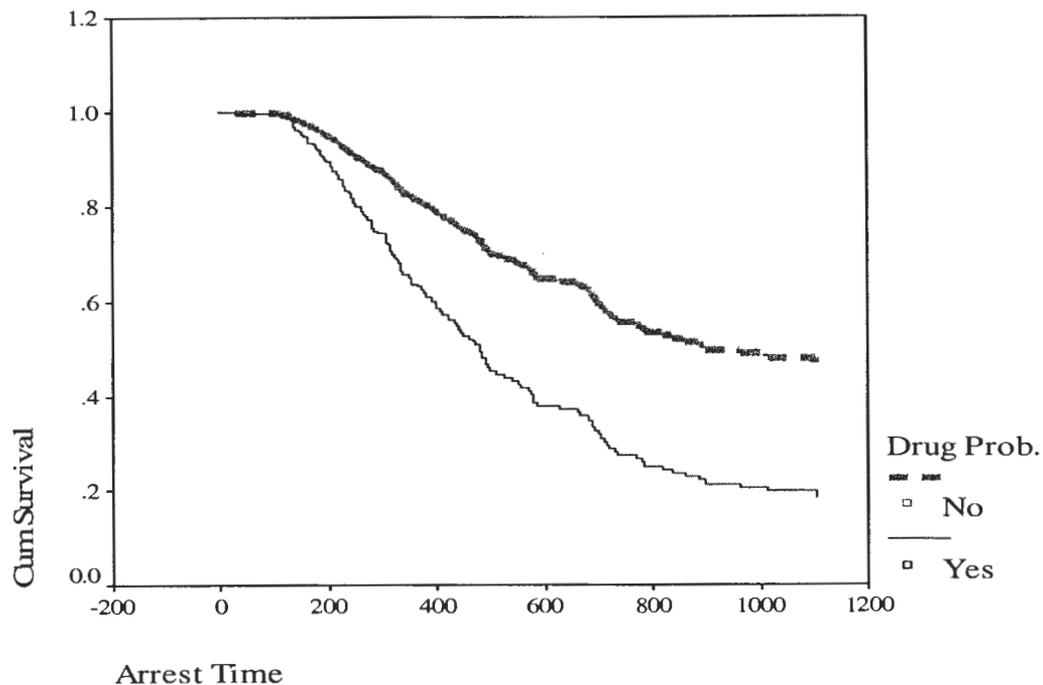
Consistent with the fourth hypothesis, Table 7 reports that the drug abuse coefficient elicited a positive effect on the hazard of failure. Therefore, controlling for time-stable factors and informal social controls, offenders have significantly greater chances of recidivism if they engaged in illegal drug use. In fact compared to offenders who are not ingesting drugs, active users are 110 percent more likely to be rearrested.

Figure 9 demonstrates the disparities in cumulative survival functions between drug users and non-users; as the figure shows the differences in success between both groups follow an ever more divergent pattern with time. Most notably, at the end of the study period only 21 percent of offenders on drugs had survived compared to 50 percent of non-users.

**Table 6** Proportional Hazard Model Predicting Recidivism

Covariates	Model 1		Model 2		Model 3		Model 4		Model 5	
	<u>B</u>	<u>Exp (B)</u>								
Age	-.018*	.982	-.015	.985	-.008	.992				
Race	.326*	1.38	.396*	1.49	-.158	.854				
Sex	-.371*	.690	-.263	.769	-.301	.740				
Juvenile Arrest			.311*	1.36	.093	1.09				
Five Priors			.534*	1.70	.425	1.53				
Lead Drug			-.073	.929	-.449	.638				
Lead Property			-.006	.994	-.403	.668				
Lead Violent			.340	1.40	-.386	.680				
Family					-.205	.815				
Liv. Arrange					-.699*	.497				
Conv Peers					-.470*	.625				
Employment					-.714*	.477				
Marriage					.104	1.11				
Education					-.008	.992				
Alcohol										
Drugs										
Commitment										
-2 Log Likelihood		3381.46		2680.57		1221.71				
Chi Square		18.62*		36.36*		70.66*				
df		3		8		14				

\* p .05



**Figure 9 Cumulative Survival Function: Drug Problem**

Additionally, the results from Model 4 indicate that unlike the effects of drug use, chronic consumption of alcohol is not statistically related to a higher risk of post-release failure. Since the coefficient for heavy drug use corresponded to such an extreme increase in the exponential value (Hosmer and Lemeshow 1999), it is possible that the direct effects of alcohol abuse on recidivism are in fact masked by heavy drug use when both are included simultaneously in the model (Yu 1998). The positive, though barely non-significant, effect of the alcohol abuse coefficient further supports this view. Notwithstanding this, the current finding regarding alcohol abuse and recidivism deduced in Model 4 does not coincide with hypothesis 6.

An unexpected finding was also deduced from Model 4 that was not specified in hypothesis 6. The results indicate that the presence of the alcohol and drug use covariates moderately decreased the inhibitory effects of employment on the hazard

function. More specifically, the beneficial impact of employment on recidivism risk was reduced in magnitude by approximately 10 percent of its value in Model 3.

In review, the estimations obtained in Model 4 afford partial support both for hypothesis 6 and the general findings in the offending literature regarding the effects of substance abuse on offending patterns (Friedman 1998). For independent of informal social controls and ascribed characteristics drug use increases ex-convicts relative risk of failure. Moreover, though not directly specified in the sixth hypothesis, drug use reduces the alleviating effects exerted by stable employment on the likelihood of recidivism. Contrary to expectations, alcohol use renders a non-significant impact on offenders' hazard rate.

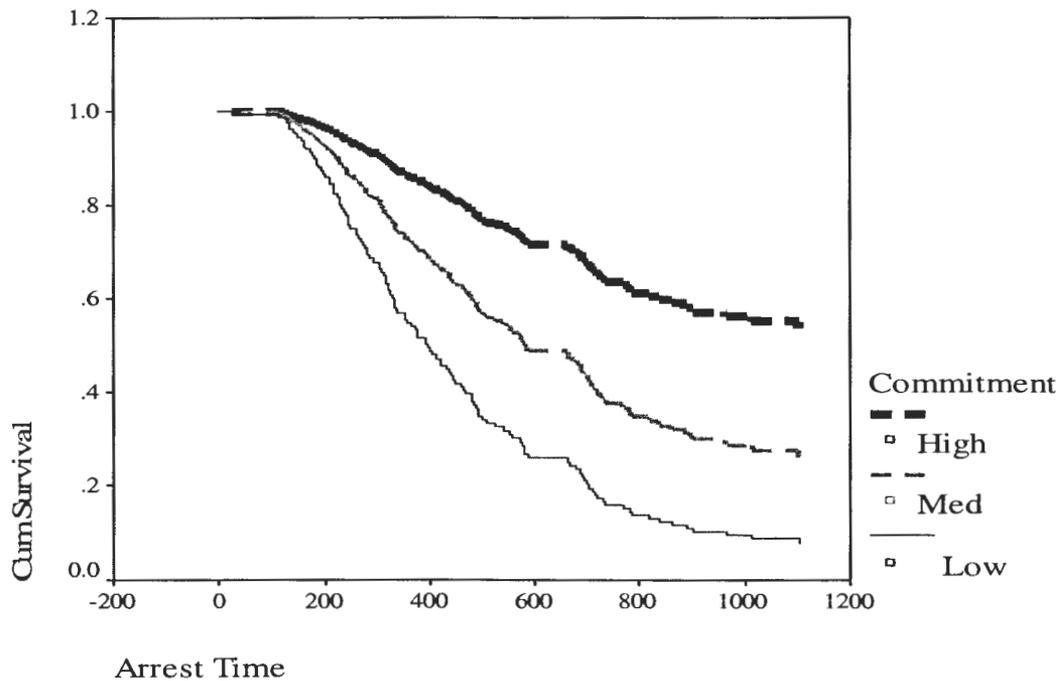
### **Commitment to Change**

Model 5 is the full model that adds the effects of the commitment to change covariate to the vectors previously tested in Model 4. Model 5 is estimated in order to test hypothesis 7 which assumes that ex-convicts level of conformity to the requirements of supervision will significantly alter offenders' relative risk of re-arrest.

Presented in Table 8 are the findings from the analyses. The results indicate, that high levels of commitment were in fact significantly related to reductions in the hazard ratio. To be more specific, the relative risk of re-arrest decreased by a factor of .50, per unit increase in the level of commitment. In other words, offenders who were noted as fully responsive to the requirements of supervision were 108 percent less likely to recidivate in comparison to those who were completely disengaged.

Figure 10 displays the varying levels of risk according to offenders' intensity of commitment to "going straight". The survival curves provide glaring evidence of

the significant effect of legitimate intentions on offender's eventual post-prison outcome. For example, at the one year time point, approximately 12 percent of ex-convicts with high levels of commitment to change had recidivated, compared to 26 percent of those with moderate levels and 44 percent of offenders who were deemed not committed. As demonstrated in the plot, the survival curve for "high committed" offenders decrease with a lesser magnitude than do the "medium" and "low" level curves. Even more, by the two and half year point, only 10 percent of low committed offenders had survived versus 58 percent of those who were considered highly committed. Once again this illustrates distinctively that ex-convicts who are highly committed to the "straight life" are more likely to abstain from criminal behavior.



**Figure 10 Cumulative Survival Function: Commitment to Change**

**Table 8** Proportional Hazard Model Predicting Recidivism

Covariates	Model 1		Model 2		Model 3		Model 4		Model 5	
	B	Exp (B)	B	Exp (B)						
Age	-.018*	.982	-.015	.985	-.008	.993	-.005	.995	-.002	.998
Race	.326*	1.38	.396*	1.48	-.158	.854	-.200	.819	-.254	.757
Sex	-.371*	.690	-.263	.769	-.301	.740	-.294	.745	-.413	.662
Juvenile Arrest			.329*	1.38	.093	1.09	.149	1.16	.153	1.16
Five Priors			.534*	1.70	.425	1.53	.315	1.37	.129	1.13
Lead Drug			-.073	.929	-.449	.638	-.200	.819	.298	1.34
Lead Property			-.006	.994	-.403	.668	-.126	.882	.275	1.31
Lead Violent			.340	1.40	-.386	.680	-.079	.924	.196	1.21
Family					-.205	.815	-.223	.800	-.221	.801
Liv. Arrange					-.699*	.497	-.659*	.517	-.035	.966
Peers					-.470*	.625	-.527*	.564	-.668*	.513
Employment					-.690*	.502	-.558*	.572	-.570*	.565
Marriage					.104	1.10	.158	1.17	.134	1.14
Education					-.008	.992	.265	1.30	.179	1.19
Alcohol							.054	1.05	.029	1.02
Drugs							.738*	2.09	.451*	1.57
Commitment									-.787*	.455
-2 Log Likelihood	3381.46		2680.57		1221.71		1167.27		1106.96*	
Chi Square	18.62*		36.36*		70.66*		86.75*		109.05*	
df	3		8		14		16		17	

\* p ,.05

Analysis from Model 5 also provided two additional noteworthy findings that were not stated in the hypothesis 7. First, estimates from Model 5 revealed that the addition of the commitment covariate diminished the previously strong negative coefficient of living arrangements to a non-significant value (see Models 3 and 4). Applying Baron and Kenny's (1986:1176) reasoning it can be assumed that the variation in levels of commitment mediates the indirect association between living arrangements and re-arrest. As a result, this finding strongly implies that stable living arrangements reduce potential risk for recidivism, though largely for offenders who are dedicated to leading the "straight life." Second, the commitment variable reduced the drug addiction coefficient by 55 percent from its original value in Model 4. While this constitutes a remarkable decline in relative risk, it is important to note that drug abuse is still weakly related to offender's odds of failure.

To summarize, the results obtained from Model 5 support hypothesis 7, as well as the literature that stresses the value of individual commitment in the process of adult trajectory change (Giordano et al. 2002; Maruna 2000). Indeed, the findings indicate that independent of remaining explanatory variables an offender's motivation to change is negatively related to the hazard for failure. Furthermore, the commitment covariate fully accounts for the statistical relationship between stable living conditions and recidivism, and in addition dramatically lessens the hazard ratio affiliated with drug addiction.

## Chapter 6

### Discussion

Even prior to exiting the nation's prisons, offenders' odds of post-release success are severely hindered due to the assortment of adverse features that define their antisocial lives; including substance abuse, a lack of formal education and an inescapable criminal record, to name a few. On top of this, their level of risk for failure is compounded by the range of consequences that accompany the stigma of being an "ex-con", moreover by an alluring lifestyle of criminality that is veritably accessible. Indeed, an obvious indicator of the extent of adversity ex-convicts face upon entry into free society is found in the nation's remarkably high recidivism and reimprisonment rates. They convey the ominous reality that, ex-convicts more likely than not, will fall back into the criminal cycle: the one that follows the seemingly endless sequence of offending to incarceration.

In light of this, the current study was conducted in order to further investigate the structural and individual level factors that mitigate or aggravate the extraordinary risk that impedes ex-convicts chances for legitimate success in the post-prison world. Guided by the assumptions of Sampson and Laub's (1993) age-graded theory of informal social control, as well as a recognized body of offending literature, I addressed the following research questions, stated tersely: Do certain ascribed features enhance offender's odds of recidivism? Is an extensive history of offending indicative of future criminal behavior? Even with an antisocial past, can informal social controls reduce one's risk for recidivism? Are ex-convicts who are addicted to

drugs or alcohol more likely to reoffend? Lastly, are offenders who are motivated to change more apt to abstain from crime? Employing a sample of ex-convicts paroled from Iowa prisons, these questions were empirically investigated, resulting in several significant findings with regard to correlates of release outcomes. In the following paragraphs the results and their implications are discussed.

Scholars have consistently proven that certain ascribed characteristics are independently strong predictors of re-arrest, namely being young, a minority, or male. The present analysis reaffirmed these findings in the first model. Likewise, the scholarly literature is rather conclusive on the positive relationship between a lengthy criminal history and offenders' odds of rearrest. In accordance with the prevailing conclusions, the second model indicated that offenders' chances of recidivism are increased if they were arrested as a juvenile, or if they have at least five prior arrests. Moreover, the relative risk for recidivism was unrelated to the offense for which an offender was incarcerated. Importantly, however, the results from the second model shed further light on the mechanisms connecting ascribed characteristics to high rates of recidivism. Interestingly, they indicate that male ex-convicts are at greater risk for rearrest not simply by default but because they have a longer, more involved history of criminal behavior. Furthermore, the coefficient for minority status substantially increased net of criminal history covariates in Model 2, which suggests that the strong correlation between race and recidivism is partially attributed to the fact that minorities have a lengthier criminal record that in turn amplifies their relative risk of failure. While the estimates from the initial analysis (Models 1 and 2) pertaining to time-stable factors are significant, their interpretation

is irrelevant to some degree without taking into consideration the competing influence of informal social controls.

Current trends in recidivism research point to factors in the post release environment that are amendable to change, deemed informal social controls, as the most influential with regard to an offender's hazard of recidivism. According to this reasoning, the risk posed by a lengthy criminal record and racial status are undeniably detrimental to post release outcomes; nevertheless they are in effect placated by informal social controls (Sampson and Laub 1993; Piquero et al. 2002 ). In line with these assumptions, the third stage of this analysis (Model 3) revealed that informal bonds mediate the risk posed by significant time-stable factors (e.g. criminal history and racial status). More simply, the model showed that offenders' likelihood of failure is contingent on whether they can secure strong, long lasting attachments to legitimate institutions once they enter the post-prison environment. Without doing so, released offenders will be at an increasingly high risk for returning to crime.

Of the collection of informal social controls in this study, the transition into stable employment has the most significant inhibitory power on offenders' risk for re-arrest. Fortunately, the research provides clues into the underlying rationale for this finding. Considering the robust strength of the employment coefficient (see Model 3) it is conceivable that the beneficial impact of having a job is not merely attributable to monetary return. Only a small number of ex-convicts earn more than nominal wages (La Vigne et al. 2004:11). Instead, for ex-convicts a job provides instrumental returns including self respect and "usefulness", moreover, it represents the idea that they

are for once a contributory force in society (Bazemore and Erbe 2004:44, Farrall 2004). Sampson and Laub echoed these assertions (1993) and insisted that the social investment associated with meaningful employment is equally, if not more important than the monetary rewards that it offers. Moreover, they contend that it is the affective reciprocities and the consequent social capital associated with employment that inspires deep trajectory change. Although the underlying function connecting employment to recidivism reduction was not specifically deduced from the present analysis, the current finding nevertheless encourages further academic exploration. Notwithstanding the veiled relationship connecting a job to recidivism, this result however leads to an obvious and very pragmatic conclusion - ex-convicts who maintain steady employment have a higher likelihood of post-prison success.

Residing in stable living arrangements after prison also has positive effects on offenders' post-release survival rates and contributes to the diminution in risk that is affiliated with time stable factors. This finding is not surprising, since for the majority of offenders securing accommodations after incarceration is a formidable challenge (Irwin 2005:175). Without a place to go, too often ex-convicts are forced to bounce between "crashing" with old acquaintances, homelessness, and at times staying in tawdry per night facilities (Irwin 2005:173). Such detraction from structure makes it challenging to maintain employment; moreover it becomes increasingly difficult to avoid potentially risky indulgences (Farrall 2004). This notion is illustrated in the present study by the ever widening gap in survival functions that cumulated between released offenders who resided in stable housing and those who did not (see Figure 6). In all, this result corroborates researcher's claims that residential stability is an

important component of the situational forefront influencing offenders' actions (Farrall 2004; Laub and Sampson 2001; 2003), still before any conclusions can be drawn further research is warranted.

The transition into conventional peer networks also substantially lessens offenders' relative risk of recidivism and along with stable living arrangements and employment, mediates the deleterious impact of time-stable factors on release outcomes. In general, this finding reaffirms Warr's (1998) conjectures that peer networks are vital to understanding change in adult antisocial trajectories. Furthermore, it facilitates the relatively unexplored idea that pro-social peers, in particular, can contribute to positive adult lifestyle modifications even for chronic offenders deeply enmeshed in the criminal lifestyle. Offenders themselves too realize the pitfall of affiliating with criminal peers; in fact in a recent survey of soon-to-be released prisoners 81 percent attributed their persistent antisocial behavior to the influence of their former criminal acquaintances (La Vinge, et al. 2004). For this reason, it is compulsory that ex-convicts avoid formal criminal acquaintances and build friendships with conventional others. Indeed, the literature implies that it is through these positive peer relationships that offenders' perception of their "self" gradually shifts towards one of a conformist (Giordano et al. 2002:1035). As a result of the "self" transformation offenders develop an active role as a pro-social individual, one which they seek to maintain. As Giordano (2003:321) remarked, "[offenders] who have forged prosocial peer associations have added advantages - continuing reinforcement for conventional activity, [and] a greater level of respectability". Thus, in light of the evidence in the literature and the empirical results

from the current study, it is obvious that affiliations with conventional others can buffer ex-convicts' risk for failure. Therefore, future recidivism studies should build upon the present finding and delve more deeply into the means by which conventional peer networks curb antisocial trajectories.

While ex-convicts' potential for recidivism is weakened by stable employment, residential stability, and prosocial peers, the results from the current study indicated that their risk is unaffected by involvement in the social institutions of marriage, family and education. However, several caveats are in order regarding the interpretation of each finding before any substantive opinion can be formulated on the apparent ineptitude of these institutions to improve ex-convicts odds for success.

Indeed, it is logical to assume based on the current analysis that a good marriage provides little incentive for released offenders to abandon their old ways and lead the straight life. This finding is of course in contrast to expectations and the assertions of leading life course theorists. Recall that intimate relationships devoid of conflict and replete with shared commitment function as an impetus for ex-convicts to eschew criminal behavior (Laub, et al. 1998). Fortunately the null effects of marriage deduced in this analysis may be explained by the recent study conducted by Simons et al. (2002) on assortative mating and antisocial behavior. As already discussed in Chapter 3, the research team asserts that a quality romantic relationship diminishes an individual's involvement in crime insofar as the relationship is with a conventional partner, rather than with one who supports or even engages in crime. In reference to the current study sample, it is highly plausible that many ex-convicts may in fact be in good relationships where they are in love,

yet given their antisocial pasts it is conceivable that many are intimately involved with someone who is equally as crime prone as they are (Gottfredson and Hirschi 1990; O'Connell 2003). As Simons et al. (2002) argue, an antisocial partner would in due course undermine offenders' efforts to avoid crime. Overall, the current result does not negate the benefits of marriage as outlined in the prevailing life course literature, but instead it suggests that the concept of a good marriage must be refined and put into the context of the sample in question, especially with regard to the sorted lives of many ex-convicts.

Although a supportive relationship with tangential family members failed to elicit any direct effect on recidivism rates in Model 3, the strength and direction of the coefficient posits that family support moderates risk to some degree, yet unfortunately not enough. Although this finding lacks statistical significance, this does not preclude the obvious beneficial role of familial support in the post-prison environment (Bradley 2001); in fact drawing on the reentry literature, conclusions may be inferred from its negative effect. This body of research indicates that the family is a salient component of ex-convicts' adaptation and success following prison in that family provides a large amount of instrumental, pro-social support. However, according to the literature, out of fear of being taken advantage of (Shover 1996: 98-99), family members are typically less willing to also offer ex-convicts the physical resources that are crucial to establishing a comfortable life (Farrall 2004:69-70). Noting the evidence in the literature, this may indicate that the weak effects elicited by the tangential family relationship covariate (net of remaining controls) are attributed to what can be termed "fractional support". In accordance with scholars

conjectures this term implies that family members are disposed to give encouragement and emotional support but stop short of offering for instance money, or transportation. Affective wherewithal especially from family is fundamental to an individual's abstention from crime, but it is more salient and perhaps only effective when combined with physical resources. By and large, the lack of clarity on benefits received from tangential family relationships signifies that the whole notion is more complex than a single binary variable can capture, therefore more rigorous research is required.

Similar to the estimate for the "family" covariate, the "high school diploma" coefficient elicited a negative though non-significant effect on the outcome variable. Based on the corpus of prisoner reentry literature this finding is likely explained by the strong link between a high school education, employment and recidivism. For criminologists consistently document that they are interrelated factors. In fact Bossler (2004) found that federal parolees who had a high school diploma were almost three times more likely to be consistently employed in comparison to those who did not have a high school education. Moreover, qualitative researchers found that offenders' level of education determined not only their entry into the job market, but the type and quality of job they were eligible for and ultimately it was employment, rather than one's education that *directly* affected their parole outcome (Richie 2001). Returning to the finding in the current study, the literature suggests then that the benefits of a high school education operate indirectly through employment and resultantly impact offenders' risk for failure. In other words, beyond

its effect on employment, a released offender's high school diploma has no independent influence on their likelihood for recidivism.

Conclusively, this study finds that the burden of risk that offenders' contend with from their long and involved criminal pasts is alleviated directly by attachments to the informal social controls of conventional peer networks, residential stability and employment. Although a high school diploma, supportive tangential family relationships and loving intimate partners did not lead to significant reductions in risk, they are, however, influential social institutions in the post-prison environment and to a certain extent negatively related to the hazard of recidivism. Future scholarly investigations conducted specifically on release outcomes should aim to clarify the more complex (e.g., marriage, tangential family relationships) (Taxman, Young and Byrne 2004:256) as well as less powerful informal controls (e.g., education), in addition they must uncover further empirical conclusions pertaining to those for which the academic world has up to this point all but ignored (e.g., peer effects, living arrangements) (Giordano et al. 2003; Laub and Sampson 2001).

Reentry and recidivism research points out that risk can also arise in the post-prison environment via addictions to either alcohol or drugs (Putnins 2003). Partially consistent with this literature, Model 4 of the analysis showed that drug use not alcohol use was positively related to future crime on the streets, despite secure attachments to informal social bonds. Moreover, the exceedingly potent drug use covariate unexpectedly decreased the exponential value of the employment coefficient. Together this group of results has striking parallels with those deduced from both qualitative and quantitative research on the lifestyles of offenders.

Qualitative investigations reveal that habitual criminal behavior occurs in tandem with chronic drug use and is part of the "life as party" motif that characterizes the disordered lives of many persistent offenders (Shover 1996). Specifically, in the party lifestyle the consumption of drugs enables crime by lowering a person's inhibitions to be deviant. Moreover, researchers note that chronic drug use propels offenders to commit crime in order to obtain money to satisfy their addictions (Walters 1994). Quantitative evidence indicates that the physical demands of this lifestyle, particularly the consumption of drugs, are done at the expense of legitimate opportunities including employment (Uggen and Staff 2004). Therefore drug use has a two-pronged effect on the post-prison lives of offenders, it not only encourages criminal behavior but it curtails the conventionalizing consequence of pro-conformist resources. In fact scholars have shown that during the months which ex-convicts use drugs they are less likely to have attachments with conventional others and more prone to commit crime (Li, Priu, MacKenzi 2000), furthermore during periods of engaged heavy drug use offenders are substantially less likely to maintain steady employment (Irwin 2005). Thus the findings from Model 4 reaffirm what has become almost an axiom in substance abuse and criminological research: drug use leads to higher risk for criminal behavior - especially for those who are predisposed to crime (Welte, Zhang, Wieczorek 2001). More specifically though, the current results detail the means whereby drug use erodes pro-social opportunities (e.g., employment) (Labouvie 1996) and consequently spurs continued offending.

Recently, academic discourse centered on the life-course of antisocial behavior has also begun to integrate constructs of human agency as theoretical

correlates of offending patterns. Specifically, the reciprocal link between human agency and informal social controls has been given the majority of the attention in the literature (Sampson and Laub 2004). With regard to ex-convicts' release success, this literature indicates that both their desire to change and level of motivation to do so arise regardless of the risk imposed by their antisocial backgrounds as well as substance abuse. Furthermore, their willingness to "go straight" is complimented if not dependent on the simultaneous presence of informal social controls, or hooks for change, in the post-prison environment (Giordano et al. 2002). Results from Model 5 in the current study suggested in line with emerging "agency" research that offenders who are committed to avoiding crime are substantially less likely to be rearrested. As indicated in the survival curves (see Figure 10) those who were not committed relapsed at exceedingly high rates. This provides evidence that transformative action or the intention to alter one's behavior is independently related to offenders' release outcome (Maruna 2001). In the absence of straight motivations the results indicate that offenders will more likely than not relapse back into crime.

On top of the independent effect elicited by commitment on recidivism, Model 5 showed that commitment mediated the negative relationship between living arrangements and reoffending. Although the reason for this finding is not entirely discernable, intuitively it indicates that offenders who are "committed" are less impacted by the benefits afforded by residential stability. Providing insight into this finding, a team of researchers noted in a similar study on paroled inmates that, "...individuals need a minimum level of resources to draw on in order to *begin* [the]

transformation process." (Giordano et al. 2002:1056). According to these scholars, residential stability could possibly be for whatever reason *solely* an antecedent to transformative action, therefore the initial link in the chain leading to abstention from crime. In all, the findings from the full model support the assertions that cognitive measures are indicative of offending patterns in the life course, moreover they provide evidence that agency is indeed tethered to informal social controls (Maruna 2001).

### **Limitations**

This study, however, contains several methodological limitations. First, the sample was derived from Iowa, a rural state in the Midwest that experiences a relatively low to moderate incidence of the contemporaneous social ills such as poverty and joblessness that many other states contend with. Therefore legitimate opportunities for good employment may be more abundant for offenders paroled to Iowa versus states at the higher end of the "social ills continuum", such as Mississippi or New Mexico. As a result the current findings, especially those pertaining to the benefits of employment, may not be representative of the post-prison experience of offenders released to other more disadvantaged states in the nation (see Sampson and Laub 1997). Second, the data drawn from the risk assessment instruments used for the "marriage", "peers", "living arrangements" and "family" variables were scored via parole officer's subjective appraisals of the specific situation. While parole officers are administered thorough training to minimize reporting errors and increase construct reliability, inaccuracies do occur for reasons such as interviewer bias. Moreover, subjective scoring is also hampered

by common problems attributable to the respondent which include response fatigue and lethargy (Neuman 2003). Third, the arrest data was limited to official arrest records. There is much academic controversy between the utility of official versus self report data (Lauritsen 1998), it is widely believed that officially reported crime does not reflect true rates of offending. Finally, the study data does not contain time varying covariates; instead information pertaining to the explanatory factors and their relationship to the release outcome is assessed only once, in the beginning stages of ex-convict's parole. Although this is a widely used method of recidivism research (Benda and Toombs 2002; Kruttschnitt et al. 2000; Roundtree et al. 1984), more accurate conclusions can be obtained by exploring the effects of variation in explanatory measures over periods of time and their subsequent impact on recidivism using month-long life history calendars (Horney et al. 1995; MacKenzie and Li 2002).

### **Conclusion: Contributions to Theory and Policy Implications**

A number of compelling findings resulted from the current study that contributes to the expansive body of life course criminological theory. Principally, the analysis shows that there is robust continuity in antisocial behavior from late adolescence into the adult years. Furthermore, empirical evidence from the models indicates that informal social controls in the post-prison environment explain variation in criminal behavior independent of offenders' prior criminality. Indeed, attenuation in levels of attachment to adult bonds aggravates the risk for recidivism, and an increase in attachments to these bonds diminishes risk. Excluding the null effects ensuing from a good marriage, these results therefore contribute added

support for Sampson and Laub's (1993) age-graded theory of informal social control, specifically their emphasis on behavioral change. As a result this study also provides further evidence that the state-dependence view of persistence and desistance can be extended to explain differences in offenders' post-prison behavioral trajectories (Nagin and Paternoster 2000). Indeed, "good things happen to bad actors" (Laub et al. 1998:237) and "offenders may at times improve their condition in life" (Nagin and Paternoster 2000:127). In light of this, little substantive support is found for the static assumptions (e.g., self-control) regarding antisocial behavior put forth by the population heterogeneity explanation of offending (Gottfredson and Hirschi 1990).

In addition, the results from this study uncovered two relatively unexplored transitions that alter antisocial trajectories in the adult life-course: conventional peer relationships and residential stability. Each factor is uniquely comprised of the common features that invariably demarcate such as a turning point in the age-graded life course. Indeed, both transitions afford "structured role stability" to the offender that involve renewed opportunities for "social support and growth" and ultimately provide the requisite conditions for "positive identity transformation" (Sampson and Laub 2004:11). Taken together the beneficial effects of peer networks and residential stability contribute empirical proof that tangible sources of informal social control extend beyond those consistently used in extant research (e.g., employment, marriage, school). On top of this the analyses contributed a key finding to the emerging body of work that links human decision making with turning points in the life course. For up to this point in time scores of research endeavors have investigated the role of structural and institutional factors in the adult offending

process yet few have empirically considered "choice" as a participatory influence on future action (Maruna 2001). By employing a quantified measure of commitment to change this study in fact contributed evidence that concrete resources for social support are mediated in part by human agency. Moreover the results indicate that an offender's motivation to avoid crime is a strong and direct determinant of future action. Overall, the challenge of future life course research is to build upon the primary findings resultant from this study; in particular those that pertain to the effects of peers, situational contingencies and agency. Although criminologists have made rapid progression in the last decade with regard to the etiology of crime (Farrington and Coid 2003), the salient predictors of change in behavioral trajectories in the *adult life course* are only beginning to be understood (Laub and Sampson 2003).

Apart from contributing to criminological theory, the findings concluded in this study also have pragmatic implications on prisoner reintegration policy. Over the last few years the nation's political apparatus has abandoned its push for retributive correctional policy and begun to channel its interests towards developing more progressive reintegration programs that encourage ex-convicts' successful reentry into legitimate society (Petersilia 2003:14-16). Contemporary reentry initiatives typically create a joint partnership between the formal criminal justice system and informal social controls embedded within the community to act combined, as key components of the reintegration process. In this context the community is viewed as "people who by virtue of their natural relationship with the offender have the greatest impact on the offenders' behavior, or are the most affected by that behavior"

(Taxman et al. 2004:250). Scholars insist that family and friends are a large part of offender's community and perhaps play perhaps the most critical role in successful reentry. Due to the robust positive impact of conventional friends in this analysis as well as the literature, the present study supports community orientated reintegration programs that place emphasis on building pro-social peer groups. For instance, the Re-entry Partnership Initiative (RPI) provides criminal justice officials and "volunteer guardians" from the community who help offenders build links to pro-social peer networks in their neighborhood (Byrne, Taxman and Young 2003). The results from this study, however, call into question policy maker's heavy reliance on family relationships to facilitate successful reentry. Undeniably the family is as Taxman et al. (2004: 250) claim "an untapped resource" for progressive policy, but it cannot be concluded based on the corpus of scholarly research that family relationships are by any means key institutions of offender reintegration.

More than anything the objective of reentry programs must be to provide an education and jobs skills to released offenders so that they can obtain stable employment. Such a task requires a sustained effort both on the part of the criminal justice system as well the community at large. This is a worthwhile effort. Indeed, the present study demonstrated that a steady job greatly increases offenders' odds of success on the streets. Unfortunately, due to the stigma of being an "ex-con", employment is difficult to come by for former prisoners. Moreover many lack even a high school education which further precludes them from being eligible for most "decent" jobs. In light of this policy makers must continue to invest public funds in programs that assist ex-convicts in obtaining employment, such as the Texas based

Reintegration of Offenders (RIO) project. Through RIO corrections officials have found steady jobs for upwards of 70 percent of ex-offenders who were released from Texas prisons in the last two decades. Ex-offenders who were placed in jobs through RIO had markedly lower recidivism rates compared to offenders who sought employment on their own (Petersilia 1999). In fact, an independent evaluation concluded that the program saved the state of Texas \$15 million dollars in 1990 alone.

In addition to connecting offenders with social institutions and social support networks in the community, criminal justice officials should strive to link offenders who have addictions to substance treatment programs. Drug use in particular has been deemed as one of the greatest threats to offenders' post-prison success (Petersilia 2003). Corresponding with the literature this analysis implies that offenders risk for recidivism is increased exponentially if they are engaged in heavy drug use. Although in the past, prison based and post-prison substance abuse treatment programs have been criticized for being ineffective at curbing drug addictions, there are recent advances in treatment modalities that show consistently low relapse rates. The more successful of these programs apply a multi-stage community approach that targets the needs of crime prone individuals' such as ex-convicts. Specifically, these programs recognize that environmental factors including taverns, local hangouts and certain interpersonal situational contexts can stimulate a relapse back into drugs and consequently crime. Therefore offenders' are educated on how to better manage the alluring stimulus that exists in their environment. In fact, Delaware's Key-Crest therapeutic community implements targeted

programming to inmates shortly before they are released from prison and at three time periods in the 18 months following release (Travis 2001). A number of professional assessments have shown that Key Crest and similar treatment multi-stage programs are rather successful at preventing relapse.

Finally, the results of this study imply that we must "front-load" post-prison services during the first 6 to 12 months following offender's release from prison. Recall that the survival curve for the full sample (see Figure 1) indicated that the majority of offenders who recidivate will do so in the first year following release. By 30 months the risk for recidivism drastically declines to just over half of its original magnitude in the first year. In fact these cumulative trends are comparable to national recidivism rates (Langan and Levin 2002). Furthermore, the evidence from this study also implies that sources of informal social controls including conventional peers (see Figure 7) and stable employment (see Figure 8) have the largest impact on offender's odd of success in the year directly following their release. Hence, by front-loading correctional services such as substance abuse programming and community partnerships in the beginning stages of release, officials could potentially offset the greatest risk for recidivism. However current correctional policy, in particular the parole system, executes services that are counterintuitive to actual survival rates. For instance, instead of concentrating their limited resources on offenders who are in the critical first stages of their release, officials too often continue to manage those who have been on supervision for long periods of time (Petersilia 2003). Hence, parole officials should drastically reduce services for

offenders who have avoided arrest after three years and redirect their efforts to facilitate the ones who are in the first 12 months of their release.

### **Concluding Remarks**

Unfortunately the rift between the criminological academy and the criminal justice policy world is very wide (Cullen 2002). Progressive studies such as this one illustrate that chronic offenders can alter their negative behavior when certain social support mechanisms are implemented at the right time. Yet political and public sentiment is remiss to the idea that such liberal criminology is applicable to the "real world" and instead it faithfully maintains a simplified cynical logic that bad people do not change. Consequently, in most states and jurisdictions post-release criminal justice policy does not reflect empirical fact but rather prevailing public and political attitude (Cullen, Wright and Chamlin 1999).

Neither pessimistic public attitudes nor ignorant correctional policy will do anything to curb the astronomical rates of recidivism that plague this nation. Guided by the "nothing works" (Martinson 1974) mentality the revolving door of justice will continue to spin at a blinding speed. As Maruna remarked, "Essentially, societies that do not believe that offenders can change will get offenders who do not believe they can change" (2001:166). Although we have made progress towards post prison reform in recent years, the macabre media periodically showcases extraordinary heinous crimes committed by anomalous perpetrators that remind us how much criminals are not like us (DeLisi 2005:122; Hochstetler 2001). As a result we again back away from liberal reintegration ideology, because criminals are in our minds "them", the alien members of our communities who are devoid of all conventional

aspirations (Irwin 2005, Maruna 2001). Realistically though, well over the majority of offenders convey that they want to lead a "normal life"; to have a job, own a home and most of all to avoid crime (La Vigne et al. 2004; Scott 2004). However, without support from the community, many will never have access to the resources that facilitate the acquisition of the normal life. Fortunately our compassion and effort pays off in the end. Indeed as this study showed if we provide ex-convict's the skills to gain employment, treatment for their addictions, a stable to place to reside and the wherewithal to obtain pro-social friends they will in turn behave as more productive members of our society. Admittedly this is a lot to ask; yet on the other hand if we do nothing we will continue to pay the public coffers the high fiscal expenses to operate our tireless criminal justice machine.

**Table 3**

**Correlation Matrix**

	Reoffend	Age	Race	Sex	Juv Arrst	Five Priors	Lead Drug	Lead Prop	Lead Viol	Family	Liv Arrange	Peers	Employ	Marriage	Education	Alcohol	Drug	Commitment
Reoffend	1.000	-.127**	-.101*	.085	-.153**	-.276*	.119*	-.123**	-.239**	-.206**	.298**	.219**	.271**	.157**	.053	-.278**	-.349**	-.460**
Age	-.127**	1.000	-.060	-.031	.251**	-.166**	-.161**	-.181**	-.063	-.068	.060	-.035	.110	.098	-.177**	-.017	.051	.058
Race	-.101*	-.060	1.000	-.026	-.040	.006	-.053	-.010	.235**	.094	-.122**	-.089	-.070	-.081	.029	.008	-.036	.131*
Sex	.085	-.031	-.026	1.000	-.067	-.078	.069	.032	-.184**	-.041	-.130	.066	-.036	-.037	-.119*	-.118*	-.036	-.006
Juv Arrst	-.153**	.251**	-.040	-.067	1.000	.021	-.157**	.155**	.164**	.115*	-.078	-.101	-.176**	-.115*	-.191**	.010	.072	.096
Five Prior	-.276**	-.166**	.006	-.078	.021	1.000	-.096	.097	.237	.073	-.084	-.133*	-.153**	-.102	-.019	.134*	.159**	.118
Lead Drug	.119**	-.161**	-.053	.069	-.157**	-.096	1.000	-.649**	-.141**	-.099	.022	-.002	.112*	.106	.013	-.147*	-.040	-.068
Lead Prop	-.123**	.181**	-.010	.032	.155**	.097	-.649**	1.000	-.018	.019	-.064	-.035	-.134*	-.033	.033	.042	.095	.111*
Lead Viol	-.239	-.063	.235	.184**	.164*	.145	-.181**	-.018	1.000	.183**	-.054	-.187**	-.149**	-.224*	-.122*	.170*	.115*	.037
Family	-.206**	-.068	.094	-.041	.115	.073	-.099	.019	.183**	1.000	-.226**	-.213**	-.165**	-.241**	.016	.068	.034	.111
Liv Arrange	.298**	.060	-.122*	-.130**	-.078	-.084	.022	-.064	-.054	-.226**	1.000	.088	.176*	.239**	.019	-.164*	-.173**	-.300*
Peers	.219**	-.035	-.089	.066	-.101	-.133*	-.002	-.035	-.187**	-.213**	.088	1.000	.175**	.030	.157**	-.026	-.115*	-.038
Employ	.271**	.110*	-.070	-.036	-.176**	-.153**	.112*	-.134*	-.149*	-.165**	.176**	.175**	1.000	.282**	.006	-.218**	-.254**	-.207**
Marriage	.157**	.098	-.081	-.037	-.115*	-.102	.106*	-.033	-.224**	-.241**	.239**	.030	.282**	1.000	.093	-.195**	-.196**	-.089
Education	.053	-.177**	.029	-.119*	-.191**	-.019	.013	.033	-.122*	.016	.019	.157**	.006	.093	1.000	.020	-.160**	.021
Alcohol	-.278**	-.017	.008	-.118*	.010	.134*	-.147**	.042	.170**	.068	.164*	-.026	-.218**	-.195**	.020	1.000	.311**	.275**
Drug	-.349**	.051	-.036	-.036	.072	.159**	-.040	.095	.115*	.034	-.173**	-.115*	-.254**	-.196**	-.160**	.311**	1.000	.322**
Commitment	-.460**	.058	.131*	-.006	.096	.118	-.068	.111**	.037	.111	-.300*	-.038	-.207**	-.089	.021	.275*	.322**	1.000

\*\* Correlation is significant at the 0.01 level (2-tailed).

\* Correlation is significant at the 0.05 level (2-tailed).

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