The Influence of Social Bonds on Recidivism:  
A Study on Texas Prisoners Released from Prison  
Between 2001-2005  

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Statement of the Research Problem  
Incarceration rates in the United States have increased substantially over the past 35 years. Yearly incarceration rates remained virtually the same throughout the 20th century until 1973, which marked the beginning of the influx of offenders to federal and state prisons. Incarceration rates have increased every year since by an average of six percent per year (Travis, 2005). In 1973, there were slightly more than 200,000 people in prison, while in 2007 there were slightly more than 2 million inmates in state, federal, and private prisons throughout the United States. The 2005 per capita prison rate was approximately 500 adults for every 100,000 adult residents, and including jails, 738 adults for every 100,000 adult residents (Travis, 2005). At the beginning of 2008, more than 1 out of every 100 American adults was incarcerated in jail or prison, the highest incarceration rate in American history (The Pew Center on the States, 2008).

Due to this yearly increase in the prison population over the past 25 years, more offenders than ever are being released from prison and attempting to make a successful transition back to their communities (Petersilia, 2004; Travis, 2005). In fact, there were six times as many offenders released in 2004 than in 1973 (Petersilia, 2005). Many released offenders have already attempted to make this transition and have failed. In 1997, for example, 44 percent of offenders released from prison had prior convictions, and 36 percent of offenders released from prison were re-incarcerated for violating terms of their parole (Travis, 2005).

A large proportion of offenders released from prison recidivate within three years of release. In the largest known national recidivism study to date, the Bureau of Justice examined criminal recidivism with nearly 300,000 prisoners released throughout 15 states as the sample (including Texas). Within three years from release, 68 percent of the offenders were re-arrested for a new offense (almost exclusively a felony or serious misdemeanor), 47 percent were reconvicted for a new crime, and 25 percent were re-sentenced to prison for a new crime. When including committing a new crime or parole revocation, 52 percent of the offenders were re-incarcerated (Langan & Levin, 2002).
Similar to national trends, the total number of Texas prisoners has increased considerably since 1980. Texas has experienced a 248 percent increase in prisoners since 1980. Approximately 30 percent of Texas offenders released from prison are re-incarcerated to a state prison within three years (Watson, Solomon, LaVigne, Travis, Funches, & Parthasarathy, 2004). According to Watson et al. (2004), the highest percentage of offenders that recidivate in Texas do so their second year out of prison, with 19 months being the average time between release and re-incarceration.

Because of the increase in offenders released from prison every year, and considering that over 50 percent of these individual are re-incarcerated within three years, it is important to understand how life trajectories of recidivists and trajectories of offenders who desist from criminal behavior differ. Going beyond the correlation of demographics and recidivism, and identifying post-prison variables that predict and/or delay recidivism may allow for the tailoring of programs to meet offenders’ needs to refrain from re-incarceration. The present study assesses whether offenders released from prison that become attached to conventional activities – such as employment and marriage – are less likely to be incarcerated. Additionally, because multiple processes appear to be involved in the decision to terminate criminal activity, including initial behavior change before the maintenance of change, this study examines whether recidivists that are attached to conventional activities take longer to be re-incarcerated than recidivists that do not.

**Research Background and Hypotheses**

**Life-Course Theory**

Life-course theory provides a conceptual framework for understanding offenders that abstain from committing additional crimes by suggesting that positive social bonds decrease the likelihood of further crimes (Sampson & Laub, 1990; 1993). Several research studies have supported sociogenetic criminology, which states that events such as marriage and full-time employment have a pronounced effect on criminality (Bartusch, Jeglum, Moffitt, & Silva, 1997; Horney, Osgood, & Marshall, 1996; Paternoster & Brame, 1997; Sampson & Laub, 1993; Simons, Johnson, Conger, and Elder, 1998; Uggen, 2000; Warr, 1998). Proponents of the life-course perspective theorize that bonding with families, work, and communities reduces criminal behavior over the life-course regardless of delinquent and antisocial backgrounds. Sampson and Laub (1990, 1993) agree with Gottfredson and Hirschi (1990) that early childhood experiences, such as a lack of appropriate attachment to parents or guardians, set an individual on a trajectory with an increased or decreased likelihood of engaging in criminal behavior. Proponents of sociogenetic criminality, however, generally believe that transitions such as marriage and employment can act as turning points in an individual’s criminal trajectory (Sampson & Laub, 1990). Moreover, Laub and Sampson (2003) argue that persistence in crime is due to a lack of social bonds and a subsequent lack of structure, routine activities, and healthy human relationships.
Similarly, when assessing the influence of adult social bonds on criminal activity for juvenile delinquents by using data from Glueck and Glueck (1950), Sampson and Laub (1993) found that ties as an adult to social bonds were strong predictors of abstaining from criminal behavior. For example, young adult job stability was negatively correlated with deviant behavior during the 25-32 year old age period. Results were similar for marital attachment and job stability. In essence, the higher level of stability and attachment, the less likely the individual was to continue their criminal and deviant behavior.

**Life-Course and Employment**

According to Henderson (2001), the majority of incarcerated offenders have employment problems before their arrest. Watson et al. (2004) state that the majority of incarcerated offenders are unemployed at time of their arrest, as well as after release. Uggen (2000) reports similar results. In general, the research indicates that work appears to be a transition in the life-course for offenders over the age of 26. Additionally, results suggest that maximizing participation rates may increase program effectiveness, which suggests that full-time employment has the potential to be a turning point in the criminal trajectory (Warr, 1998).

Recently, there has been a dearth of research further analyzing this relationship. Two studies, however, do evaluate the importance of full-time employment and job stability in predicting recidivism (Benda, Harm, & Toombs, 2005; Benda, Toombs, & Peacock, 2003). Benda et al. (2003, 2005) found full-time employment to be the second strongest discriminator between recidivists and non-recidivists, second only to marriage.

**Life-Course and Marriage**

The early literature generally did not find a significant relationship between marriage and criminality (Wright & Wright, 1992). Knight, Osborn, and West (1977) found that early marriage did not produce a significant reduction in criminality, and those married before age 21 were more likely to have a conviction on their record. Rowe and Tittle (1977) suggest that any relationship between marriage and a reduction in criminality may be explained by the invariant relationship between age and abstaining from crime. West (1982) conducted a longitudinal study and found that self-reported delinquency among unmarried men differed only slightly and insignificantly from married men. Additionally, Farrington (1989) examined the differences between men who had no convictions after age 21 to men who continued to live a life of crime up until the age of 32, and there was not a difference in the proportion that lived with a significant other. Farrington’s conclusion is that marriage does not predict criminality, but the ability to sustain a marriage predicts desistance of crime.

Since 1990, researchers have generally found that marriage decreases the likelihood of committing further crimes (Benda et al., 2003; Benda et al., 2005; Horney et al., 1995; Laub et al., 1998; Sampson & Laub, 1990; Warr, 1998). Sampson and Laub (1990) found that marriage at ages 17-25 decreases the likelihood of committing a crime between ages 25-32. Similarly, researchers have found that men who marry and reside
with their spouse have lower offending rates, and these rates become even lower with time (Horney et al., 1995; Laub et al., 1998). Laub et al. (1998) consider marriage to be the beginning of a gradual movement away from criminal offending, ultimately leading to a very low rate of offending for offenders in a socially cohesive marriage.

Warr (1998) investigated the reasons why marriage seems to lead to desistance in criminality and found that marriage can indeed be a life-course transition that leads to the offenders desisting from crime because marriage leads to a reduction in time spent with friends, which ultimately leads to abstaining from criminal behavior. The relationship between marriage and crime became insignificant when controlling for the offenders’ association with peers.

There are no known studies that analyze the association between marriage and reincarceration for a sample of offenders recently released from prison. Benda et al. (2003) did assess the influence of life-course variables on recidivism for graduates of a boot camp, but this sample is different from a sample of offenders released from state prisons, considering the boot camp sample generally contains first-time offenders with less serious crimes than the prison sample. It is important to assess the influence of marriage on recidivism for released offenders in order to determine if marriage decreases the likelihood of recidivism.

**Methodology**

The present study is a secondary data analysis with a randomly selected sample of 250 Texas male parolees released from prison between 2001 and 2005. The independent variables are employment and marital status. An offender is considered employed if he obtained employment upon release from prison and receives compensation for his services. Marital status is defined as the offender living with his spouse (Horney, Osgood, & Marshall, 1995; Warr, 1998). According to Warr (1998), being married helps predict a desistance from criminal behavior for male offenders only if the offender is married and resides with his spouse. Additionally, Horney et al. (1995) found that married male offenders generally reduce their offending when they are living with their spouse and resume offending when they do not.

The present study controls for race, age, length of incarceration, number of prior offenses, and severity of prior offenses. Criminologists have consistently found that African Americans have higher recidivism rates than Caucasians and Hispanics. This is for several reasons, including a higher likelihood that police will catch African Americans committing crimes and the disproportionate number of African Americans living in impoverished neighborhoods (Marbly & Ferguson, 2005; Travis, 2005). Race is a dichotomous variable in this analysis with African Americans as the reference group. Because it is widely recognized in criminological research that younger people commit the majority of crimes, it is vital to control for the effects of age on recidivism, which is measured in the present study as age when the offender is released from prison.

The final control variable is criminal background, which is one of the strongest predictors of recidivism (Bonta, Law, & Hanson, 1998). “Career” offenders are more likely to be re-incarcerated than first-time offenders or offenders with fewer prior
offenses (Kapp, Schwartz, & Epstein, 1994; Rosenfeld, Wallman, & Fornango, 2005). Criminal background was defined as the offenders’ number of previous felony convictions.

**Dependent Variable**

Recidivism has proven to be a difficult variable for researchers to define and measure for the following four reasons: 1) not all persons committing crimes are caught, 2) not all offenses result in arrest, 3) some arrests are unfounded, and 4) arrests are influenced by police practices and public policies uncorrelated with crime rates (Petersilia, 2005). In this particular study, along with determining if the offender was re-incarcerated to a Texas Department of Criminal Justice prison, recidivism is a continuous variable, defined by months between release from prison and re-incarceration.

**Data Analysis**

Cox proportional hazard modeling is a method for modeling time-to-event data in the presence of censored cases (Hosmer & Lemeshow, 1999). Time-to-event data in the present study is the number of months between the offenders’ release from prison and re-incarceration. The survival analyses in the present study include the cumulative proportion surviving at the end of a specified time interval, and the hazard rate, or the probability that an offender not re-incarcerated at the beginning of a specified time interval (month) will be re-incarcerated during that interval (Ekland-Olson & Kelly, 1993).

Cox regression modeling allows the inclusion of predictor variables (also called covariates) in the model and is useful for modeling the time to a specified event based on the value of the covariate(s). Moreover, Cox regression modeling provides a hazard function, which is a measure of the potential for the event to occur at a particular time, given that the event has not yet occurred (Hosmer & Lemeshow, 1999). The shape of the hazard function is defined by the baseline hazard function, and the covariate effects help to determine the magnitude of the function. The value of the hazard function is equal to the product of the baseline hazard and the covariate effect (Norusis, 2004). The baseline hazard function measures the probability of the event occurring independently of the predictor variables; the baseline hazard is the hazard for the respective individual when all independent variables are equal to zero (Wu & Tuma, 1994).

One important assumption is that of proportional hazards (Hosmer & Lemeshow, 1999; Kleinbaum, 1996). The proportional hazards assumption assumes that the ratio of hazards for any two cases at any time period is the ratio of their covariate effect, and the ratio of their predicted hazards remains constant throughout all time points. Cox proportional hazards analysis provides survival function graphs with cumulative survival as the Y-axis and months crime free as the X-axis.
Results

Forty-three percent of the sample was African American, 32 percent Caucasian, and 24 percent Hispanic. The offenders’ average age when released from prison was 36 years. The offenders had an average of ten years of education and two prior offenses. Forty-six percent of the offenders committed drug crimes, 25 percent property crimes, 23 percent violent crimes, and 6 percent committed other crimes. Table 1 provides detailed characteristics of the sample.

The recidivism rate for this sample is over four percentage points lower than the most recent recidivism study for Texas offenders, which is approximately 28 percent for offenders released from Texas prisons in 2001 (Watson et al., 2004). There is a major difference, however, between the two studies. Watson et al. (2004) conducted a three-year recidivism study for all offenders released from Texas prisons in 2001 while this particular study contains offenders released from prison between 2001 and 2005.

The first Cox regression model examines the influence of employment and marriage on recidivism and time until re-incarceration. Censored cases are included in the analysis. There are 249 valid cases in this Cox regression analysis. One case was omitted from the analysis for having missing values. Almost 24 percent of the sample (59 cases) was re-incarcerated and 190 cases were censored for not having been re-incarcerated.

In the Supreme Test for the proportional hazard assumption (Willet & Singer, 1995), the p-value for the maximum absolute value for employment (1.25) is $p=.446$ and the p-value for the maximum absolute value for marriage (.75) is $p=.816$. In both cases, the researcher failed to reject the null hypothesis that there is no difference between the baseline hazard and the hazard influenced by the covariates. The proportional hazard assumption is satisfied.

The control variables were entered in the first block of the model in a stepwise approach. The forward stepwise approach only keeps the influential variables in the analysis. Control variables that had their variation explained away by other control variables were omitted from the analysis. Age and criminal background were kept in the model as control variables.

The chi-square change from previous step and the chi-square change from previous block both report the effect of adding the elements of life-course theory to the model selected in Block 1. The probability of the chi-square change from Block 1 to Block 2 (3.21) is $p=.524$. Considering this non-significant result, employment and marriage did not significantly lower the monthly hazard rate and decrease the likelihood of re-incarceration when including censored cases.

The second hypothesis states that recidivists who obtain employment or get married will have longer periods crime-free upon release from prison than recidivists who do not. The researcher conducted a Cox regression model exclusively with recidivists. There are 59 cases in this particular Cox regression model. Censored cases are excluded.

The proportional hazard assumption is satisfied in this model. In the Supreme Test for the proportional hazards assumption (Willet & Singer, 1995), the p-value for the maximum absolute value for employment (.55) is $p=.937$ and the p-value for the
maximum absolute value for marriage (.46) is \( p = .971 \), satisfying the proportional hazards assumption.

The same control variables were entered in the second Cox regression model as they were in the first model. Using a stepwise approach, race was the only control variable included in the model. The chi-square change from the block with only the control variable (race) and the block including the elements of life-course theory (15.512) is statistically significant \( (p = .004) \). The contribution of the elements of life-course theory on time until re-incarceration was supported.

As Table 1 indicates, employment had a statistically significant relationship with time to re-incarceration. The \( p \)-value of the Wald Statistic for employment (13.49) is \( p < .001 \). The recidivism hazard for employed offenders was reduced by 68.5 percent \( (\text{OR} = .315) \). Since this model is solely with recidivists, this result indicates that employed offenders took longer to recidivate than unemployed offenders. Figure 1 is the survival curve for employed and unemployed recidivists.

Although the relationship between marital status and time to re-incarceration is not statistically significant, the influence of marriage appears strong, indicating there may be a chance of a Type II error, especially considering the small number of married recidivists (\( N=13 \)). The \( p \)-value of the Wald Statistic for marriage (1.46) is \( p = .227 \). The recidivism hazard was reduced by 34.1 percent \( (\text{OR} = .659) \) for married recidivists over time. It is reasonable, however, that the results were obtained by chance. Figure 2 is the survival curve for married and single recidivists.

**Utility for Social Work Practice**

Cox regression results suggest that obtaining employment upon release from prison predicts a temporary desistance from criminal behavior, but the effects may not last over time. This has potentially important implications for policy and social work practice. Parole officers often demand that offenders on their caseload obtain and maintain employment or lose their right to parole and return to prison. The results of this study indicate that without additional services, employment requirements may not be as effective as originally thought because the influence of employment on criminal behavior appears to diminish over time. Subsequently, more money needs to be used on combining the demand for employment with substance abuse counseling, psychological counseling with a social worker, family counseling, and/or case management services (Springer, McNeece, & Arnold, 2003). Decreasing the amount of money spent on incarcerating non-violent offenders would potentially create more money to spend on providing services for offenders released from prison.

While the results indicating that employment extends offenders’ time crime-free in the community appears important – considering previous studies assertions that offenders are most at-risk for re-incarceration the first year out of prison – support to offenders’ released from prison must continue beyond the first year after release from prison. Because many criminologists consider offenders to be most at-risk for re-incarceration their first year out of prison, existing post-prison services generally target offenders within their first year of release but are virtually non-existent for offender who
have been out of prison for more than one year (Travis, 2005). If future studies find that employment extends offenders’ time crime-free in the community before re-incarceration, but also finds these effects diminish over time, this would indicate that sufficient resources must be provided to offenders who have been out of prison for more than one year.

While it is understandable and admirable that social workers act as advocates, mentors, and case managers to help their recently released clients obtain employment, especially when it is a condition of their parole, social workers should continuously measure their clients’ motivation levels regarding the desire to avoid re-incarceration. When the offenders’ desire to be employed and motivation to remain out of prison weakens, the researcher recommends using social work techniques such as motivational interviewing or solution-focused therapy (Kim, 2006), known to increase the clients’ motivation by focusing on the client’s positive attributes. Moreover, it is vital that social workers provide adequate mentorship, case management, and counseling to offenders over time.
References


Table 1 *Characteristics of the Sample*

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<thead>
<tr>
<th>Characteristics of the Sample</th>
<th>Mean</th>
<th>SD</th>
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<tr>
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<td>Age at release (N=250)</td>
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<td># of previous offenses (N=250)</td>
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<td>Education (N=198)</td>
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<table>
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<tr>
<th>Frequency</th>
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<td>Hispanic</td>
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<table>
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<tr>
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<tr>
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<td>Common Law</td>
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<tr>
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<tr>
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*Race is missing on two offenders in the dataset*
Table 2  *Social Bonding on Time to Re-incarceration*

<table>
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<th>Exp(B)</th>
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<td>1.458</td>
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<td>.227</td>
<td>.659</td>
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Figure 1  *Survival Curves for Employed and Unemployed Recidivists*
Figure 2  *Survival Curves for Married and Single Recidivists*