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REPORT TO THE NATIONAL INSTITUTE OF JUSTICE

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NCJRS

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ACQUISITIONS

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CATEGORICAL GRANT PROGRESS REPORT

Rec'd 1/2/92

This recordkeeping requirement falls under the authority of P.L. 96-511, Sec. 3507. The information provided will be used by grant monitors to track grant progress. No further monies or other benefits may be paid out under this program unless this report is completed and filed as required by existing laws and regulations (OMB Circulars A-102 and A-110; Omnibus Crime Control and Safe Streets Act of 1968, as amended; Juvenile Justice and Delinquency Prevention Act of 1974, as amended; and the Justice System Improvement Act of 1979, as amended).

1. GRANTEE Board of Regents of the University of Nebraska		2. AGENCY GRANT NUMBER 89-IJ-CX-0030	3. REPORT NO. 7
4. IMPLEMENTING SUBGRANTEE		5. REPORTING PERIOD (Dates) FROM: 4/1/91 TO: 8/31/91	
6. SHORT TITLE OF PROJECT Crime Commission Rates Among Incarcerated Felons in Nebraska		7. GRANT AMOUNT \$167,565	8. TYPE OF REPORT <input checked="" type="checkbox"/> REGULAR <input type="checkbox"/> SPECIAL REQUEST <input checked="" type="checkbox"/> FINAL REPORT
9. NAME AND TITLE OF PROJECT DIRECTOR Julie Horney, Department of Criminal Justice, Annex 37, Omaha, NE		10. SIGNATURE OF PROJECT DIRECTOR <i>Julie Horney</i>	11. DATE OF REPORT 12/19/91
12. COMMENCE REPORT HERE (Continue on plain paper) 68182-0149			

In a pioneering study of adult felons, the RAND Corporation obtained detailed self-reports of criminal behavior from nearly 2,200 inmates of prisons and jails in California, Michigan, and Texas (Chaiken and Chaiken, 1982). Because of the importance of the RAND self-report methodology, we conducted a replication of the RAND study with a number of methodological modifications and with extensions in the scope of the survey. Our methodological developments included a more detailed calendar system for cueing recall of past events and month-by-month reporting of rates of offending. We also used individual interviews rather than self-administered surveys. These changes were intended to produce more valid data, to determine whether offending occurred at constant rates or if offending varied from month to month, and to determine whether, as some researchers had suggested (Cohen, 1986; Visher, 1986), the RAND study may have produced artificially high estimates of λ .

In order to determine whether our modifications in the self-report methods would lead to different estimates of λ , we conducted an experiment in which 700 convicted male offenders were randomly assigned to two groups. For the experimental group, we asked crime rate questions using our modified month-by-month reporting system; for the control group, the questions were asked using the RAND methodology.

(continued on attached page)

13. CERTIFICATION OF RECEIPT BY GRANTEE CRIMINAL JUSTICE COUNCIL (Official signature)	14. DATE
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Grant # 89-IF-CX-0030 (continued):

We can summarize here our major findings about patterns of offending and estimates of λ :

1. Only a small proportion of frequent offenders are active every month in a particular crime category.
2. The majority of the offenders report more than one rate of offending during the active periods.
3. Activity patterns vary by crime types.
4. Taking variability in individual offending into account by allowing respondents to report different levels of offending on a month-by-month basis produces estimates of λ that do not differ from those obtained with the RAND questions about offense frequency.

The results of this experiment will appear as:

Horney, Julie and Ineke Haen Marshall, An Experimental Comparison of Two Self-Report Methods for Measuring Lambda, Journal of Research in Crime and Delinquency, 1992, 29, 102-121.

One other paper based on this survey and an earlier pilot study has been submitted for journal review:

Horney, Julie and Ineke Haen Marshall, Perceived Risk of Arrest and Behavioral Experience in a Sample of Incarcerated Felons.

One paper has been presented at a national meeting, and a second has been accepted for presentation:

Marshall, Ineke Haen and Julie Horney, Motives for Crime Among a Sample of Convicted Felons, presented to the 1991 American Society of Criminology meeting, San Francisco, California.

Horney, Julie and Ineke Haen Marshall, Race and Criminality: Participation versus Frequency, accepted for presentation to the 1992 Academy of Criminal Justice Sciences meeting, Pittsburgh, Pennsylvania.

In addition, the authors organized and chaired a panel on criminal careers for the 1990 meeting of the American Society of Criminology, Baltimore, Maryland. The preliminary results of the randomized experiment were presented at that time.

We are continuing to analyze data from the study. One particular focus of our work in the next year will be on the relationships between life events and frequency of criminal offending. We will also explore the relationships between drugs and crime. In addition, the paper on motives will be revised for publication with data analysis.

In a pioneering study of adult felons, the RAND Corporation obtained detailed self-reports of criminal behavior from nearly 2,200 inmates of prisons and jails in California, Michigan, and Texas (Chaiken and Chaiken, 1982). Because actual rates of committing crimes are poorly represented by official statistics, the study that has become known as the RAND Second Inmate Survey made an important contribution to the measurement of lambda (λ), or the individual frequency of offending. The RAND study has received considerable attention not only because of its methodological contribution, but also because of the policy implications of its findings.

The RAND study found that the distribution of λ is highly skewed. Most of the inmates reported committing crimes at a fairly low rate, about five crimes a year, but a small number of offenders indicated that they committed crimes at very high rates--over a hundred crimes per year. These finding stimulated interest in selective incapacitation strategies that could make efficient use of scarce criminal justice resources by focusing on those individuals who account for a disproportionate share of the crime problem. Zedlewski (1987), for example, using the RAND study's estimate of mean annual crime rate, concluded that incarcerating 1,000 more offenders would prevent 187,000 felonies through incapacitation alone. According to his cost-benefit analysis, incarcerating the additional offenders would cost \$25 million for prison space, but would result in a savings of \$430 million in the social costs of the crimes that would be prevented.

Because of the practical and methodological importance of the RAND self-report survey, we conducted a replication of the RAND study with a number of

methodological modifications and with extensions in the scope of the survey. Our work had several purposes:

1. We developed new methods for asking the important crime rate questions. Our methodological developments included a more detailed calendar system for cueing recall of past events and month-by-month reporting of rates of offending.¹ We also used individual interviews rather than self-administered surveys. These changes were intended to produce more valid data, to determine whether offending occurred at constant rates or if offending varied from month to month, and to determine whether, as some researchers had suggested (Cohen, 1986; Visher, 1986), the RAND study may have produced artificially high estimates of λ .

2. We wanted to determine if the RAND results on race and individual offending frequencies (Petersilia, 1983) could be replicated. Questions about racial effects relating to participation in versus frequency of criminal behavior are important to the development of theories of criminal careers.

3. If we found that offenders committed their offenses at varying rates, we wanted to explore their reasons for the varying rates. We believed that understanding why individuals sometimes offend at high rates and other times at low or zero rates could potentially lead to improved intervention strategies.

4. We wanted to study the relationship between subjective perceptions of the probability of punishment and individual offending frequencies to see if the same negative relationship between perception and experience would exist with convicted

felons as has been found with college students and delinquent populations (Paternoster, et al., 1982).

PATTERNS AND FREQUENCY OF CRIMINAL BEHAVIOR

Most criticisms of the RAND data have implied that methodological problems may have led to estimates of λ that were too high. Critics have focused on specific problems that RAND researchers faced because of missing and ambiguous responses resulting from the long and complicated, self-administered survey (Visher, 1986) and on general problems related to trying to measure response rates over extended time periods--including the suggestions that in reporting "typical" rates of offending respondents might refer to salient high rate periods (Cohen, 1986) or to recent periods preceding arrest, which were also likely to be high rate periods (Visher, 1986).

In order to determine whether our modifications in the self-report methods would lead to different estimates of λ , we conducted an experiment in which 700 convicted male offenders were randomly assigned to two groups. For the experimental group, we asked crime rate questions using our modified month-by-month reporting system; for the control group, the questions were asked using the RAND methodology.

We found, using the month-by-month reporting method, clear evidence of variability in individual rates of offending, similar to what we found in an earlier pilot study (Horney and Marshall, 1991). In examining offending activity patterns, we focused on those offenders who reported committing more than 10 crimes in a category.² Table 1 presents, for each crime category, the percentage of respondents who reported

committing that crime during every street month on the calendar versus those who alternated between active and inactive.³ The table shows clearly that the activities of the majority of the offenders fit the intermittent model of offending.

Table 2 shows the extent of variability in offending during the active months. In this table we present the percentage of respondents who reported committing offenses at one, two, and three different rates. Although slight majorities in each crime category only used one rate (whether they described it as low, medium, or high) to describe their offending when active (not counting the months during which they did no offending), approximately 20% in most categories used three different rates to describe their activity.

Another way of looking at offending patterns is to consider the proportion of time people spend committing crimes at different rates. In Table 3 we present the mean percentage of time our respondents reported committing crimes at zero, "low," "medium," and "high" rates. Percentages were calculated as the number of months during which a respondent reported offending at a particular rate divided by the total number of street months for that respondent. Again, these data are for those respondents who reported committing more than 10 offenses in a particular category.

The patterns varied considerably by crime. Those respondents who committed forgeries were inactive during more than half of their months on the street. On the other hand, those who did drug deals, thefts, assaults, and frauds were active more than two-thirds of the time.

In Table 4 we present the summary data for our comparisons of the experimental and control (RAND) groups (from Horney and Marshall, 1992). The presentation of λ s for groups of inmates is complicated by the highly skewed nature of the resulting distributions. Figures 1 and 2, which plot distributions for burglary and drug dealing illustrate this problem. As Chaiken and Chaiken (1982) and others have noted, the mean is not an adequate measure because it is so sensitive to the extreme values of the highest-rate offenders. The median is also not completely satisfactory since it conveys so little information about those high-rate individuals. In Table 4 we thus present the mean, median and 90th percentile, as well as the percent active in each crime category.

The percent active in each crime category is the percent of respondents who reported committing at least one of that offense during the reference period we asked them to consider. The mean, median and 90th percentile then refer to the λ s calculated for that active group. Because the distributions clearly do not meet the necessary assumption of normality, a test of difference in means is not appropriate for comparing the two groups. Instead we used the Mann-Whitney U test to see if the methods of asking about offense rates produced any significant differences in the calculated λ s. In addition we used the chi-square test to compare the percent active in each crime category for the two groups. As Table 4 indicates, there were no significant differences between the two groups, either in the percent active, or in the crime commission rates.⁴

We can summarize here our major findings about patterns of offending and estimates of λ :

1. Only a small proportion of frequent offenders are active every month in a particular crime category.
2. The majority of the offenders report more than one rate of offending during the active periods.
3. Activity patterns vary by crime types.
4. Taking variability in individual offending into account by allowing respondents to report different levels of offending on a month-by-month basis produces estimates of λ that do not differ from those obtained with the RAND questions about offense frequency.

RACE AND LAMBDA

Previous research has indicated that different conclusions about the relationship between race and crime are reached depending on whether official records or self-report data are used. Official records have typically indicated more involvement of blacks in crime than of whites, while self-reports have suggested less difference between blacks and whites. Hindelang, Hirschi, and Weis (1981: 159) indicated that "the very strong relation between race and delinquency in official data is not present in self-report data."

Petersilia (1983) used the data from the RAND Second Inmate Survey to analyze racial differences in commission of crimes and in arrest rates. She found some racial differences in the kinds of crimes committed by the different races (reported committing at least once during the reference period), but very few differences in the frequency of

committing different crimes (λ). Specifically, she found that more Hispanics reported committing personal robberies and aggravated assaults, and that more whites and Hispanics reported committing burglary and drug deals. More whites committed forgery and auto theft. When frequency of committing the different crimes was considered, she found that blacks reported committing fewer burglaries and Hispanics reported fewer frauds and swindles.

Our results for participation in crime categories (reporting committing the crime at least once during the three-year reference period) are presented in Table 5. The only significant differences for our population of offenders were in burglary and auto theft. Blacks were least likely to report committing either of these crimes. Although we found fewer differences than did Petersilia (1983), those two were in the same direction as the differences she found.

In Table 6 we present the crime commission rates for blacks and whites. (The number of Hispanics and Native Americans in our sample reporting committing offenses in each category was too small to make estimates of λ meaningful.) The only crime for which λ s differed significantly was drug dealing. Although roughly the same percentage of blacks and whites reported committing drug deals (Table 5), blacks reported committing them at much higher rates. These results are in contrast with those of Petersilia, who found no racial differences in λ s for drug dealing.

The findings on race and crime commission are important for indicating that there may be fewer racial differences in offending than is commonly thought. We think the differences between our results and those from the RAND Second Inmate Survey

(Petersilia, 1983) indicate that racial patterns may depend on geographic location, and that therefore caution must be used in attributing any differences in offending frequency or participation to basic racial factors.

REASONS FOR VARYING OFFENDING RATES

We documented in the previous section that there is considerable variability in offending rates within individuals (see Table 2). One of the purposes of the present study was to examine the kinds of reasons offenders give for their varying involvement in a particular crime during the reference period. For example, why commit 10 burglaries one month and zero the next month? We designed a set of questions to determine, for each crime, what kind of factors made a difference in how often an offender active in a particular crime during the street months would commit that particular offense.

Table 7 presents the distribution of responses to the question "Can you tell me why some months you did not do any [burglaries] (or did them at a low rate) and other months you did them at a medium or high rate?"⁵ We have grouped the self-reported reasons into five categories: (1) Opportunity; (2) Need for money; (3) High or drunk; (4) Friends or partners; and (5) Job or family.

Two general observations present themselves. First, offenses differ with regard to the self-reported importance of particular motives for differential offending frequencies. There are differences in the degree of inter-offense variability by type of motive. For example, the motive of job or family problems has approximately 20 %

points spread, while the motive of need for money has a range of about 40 % points. The greatest degree of inter-offense variability is shown for the need for money (with a range between 11.4% and 55.3%) and thinking that one would be able to get away with it (with a range between 16.8% and 57.3%).

Second, there appears to be a general rank-ordering of the five groups of motives, regardless of the inter-offense variability. The most frequently mentioned factors for most of the offenses refer to opportunity or ability to get away with it. A close second appears to be the need for money for daily support. High on drugs or drinking heavily, generally speaking, provide the third most-frequently motive for offending. Having a partner in crime or hanging around with friends doing crime was mentioned approximately as often as being high or drunk. Finally, job or family problems appear to be the least common motives for differential involvement in offending.

Our analysis of reasons for offending at different rates is exploratory at this point, but we believe that such an approach has the potential to help us understand intra-individual variability in offending rates and to suggest possible intervention strategies. Further research should consider whether the reasons given for being more or less active in crimes at different times differ from the reasons given for initial participation in crime.

SUBJECTIVE ARREST PROBABILITIES

Numerous studies have found that individuals with little prior experience in committing an offense have higher estimates of the certainty of punishment than those with experience. This negative correlation has been seen by some as evidence for a deterrence effect (Claster, 1967; Jensen, 1969), while others have interpreted it as an experiential effect, with behavior determining the perceptual risk (Saltzman, Paternoster, Waldo, and Chiricos, 1982; Minor and Harry, 1982; Paternoster, Saltzman, Waldo, and Chiricos, 1985). The interpretation of the negative correlation between perceived risk and self-reported criminality as an experiential effect rests on the assumption that "people who commit illegal acts and get away with it (as most do) tend to lower their perceptions of the risks involved" (Saltzman, et al., 1982). If people commit illegal acts and do not get away with it we might expect that this effect would be negated. It is thus important to consider not only whether individuals have engaged in the particular criminal behavior, but also whether formal sanctions have been applied as a result of that behavior.

Several studies have considered the influence of formal sanctions and have not found the predicted positive correlations with risk perceptions (Cohen, 1978; Richards and Tittle, 1982; Lanza-Kaduce, 1985). Paternoster, et al., (1985), on the other hand, found a significant and positive relationship between changes in formal sanctions and changes in the perceptions of arrest risk for petty theft and writing bad checks but not for marijuana use. These studies of the role of formal sanctions have been limited in several ways. First, very few in the populations studied have ever been arrested.

Second, most of the studies have measured general sanction experience rather than crime-specific sanction experience. Finally, only absolute measures of sanctioning have been used, rather than relative measures that express the ratio of sanctions to offenses. Who should have the higher estimate of the likelihood of arrest--the person who has written hundreds of bad checks and has been arrested twice, or the person who has written one bad check and was arrested once for that offense?

In our interviews we asked respondents to estimate the likelihood of being arrested if they committed each of the target crimes. Respondents answered on an 11-point scale ranging from 0% to 100%, with 0%, 20%, 40%, 60%, 80%, and 100% labelled respectively, "no chance," "low chance," "some chance," "good chance," "high chance," and "completely certain." We were thus able to explore the relationship between experience and perceptions of risk with a population of incarcerated felons, considering nine different serious crimes.

Our data allowed us to compare three different measures of arrest history--lifetime arrests, recent crime-specific arrests, and the recent arrest/offense ratio. Each respondent was asked how many times he had been arrested in his life (excepting traffic violations). Response categories were once, 2-3 times, 4-6 times, 7-10 times, 11-15 times, 16-25 times, and more than 25 times. To measure crime-specific arrests, we asked, for each crime in which the respondent reported being active, how many of the offenses had resulted in an arrest during the "street months" on the calendar. For arrest to crime ratio we divided that crime-specific number of arrests during the street months

by the total number of offenses in that category he reported during the reference period.

We found that the basic deterrence/experiential effect was replicated with our sample of serious offenders. Table 8 shows that significant inverse relationships were found for every one of the nine crimes.⁶ We also found that the relationship between sanctioning experience and perceptions of arrest certainty depended on the measure of sanctioning history. Table 9 shows that consistently negative, although not usually statistically significant, correlations were found between estimates of arrest likelihood and the number of lifetime arrests. We suspect that the lifetime arrests variable is an indicator of overall depth of criminal involvement, and thus actually reflects a general lowering of perceptions of arrest certainty by those who commit extensive crimes.

When the absolute number of crime-specific arrests was used as the measure, the correlations were positive for some crimes and negative for others, and were statistically significant for only three of the crimes. Much stronger results were found when the ratio of arrests to offenses was considered. Every correlation with perceived arrest certainty was positive, and correlations for seven of the crimes were significant.

Our replication of the basic deterrence/experiential effect (the inverse relationship between perceived certainty of arrest for a particular crime and participation in that crime) with a sample of serious offenders is an important first step in extending the generalizability of the studies of perceptual deterrence, most of which have been based on college students or young delinquents and have considered fairly minor offenses (Paternoster and Iovanni, 1986). If we believe that deterrent effects are

mediated through risk perceptions, it is important to know whether these perceptions are formed in the same way for serious offenders as for minor law-breakers and law abiding citizens.

Our findings on the role of formal sanctions are also important for showing that offenders' perceptions are affected by their experiences with the criminal justice system. Our findings indicate that, although sanctions do play a role in the formation of risk perceptions, we cannot look at sanctioning experience without considering offending frequency. They suggest that perceptions are formed in a rational manner, with likelihood of arrest being judged on the basis of how many times a person has been able to commit the crime successfully relative to how many times the offense has resulted in an arrest.

SIGNIFICANCE OF THE STUDY

Previous research on estimating λ has focused on the tremendous variability among offenders, and particularly on the skewness of the distributions, with a few offenders committing crimes at extremely high rates (Chaiken and Chaiken, 1982). While previous research has considered the issue of variability within offenders in asking whether λ is constant over a career (Blumstein and Cohen, 1979; Farrington, 1986; Loeber and Snyder, 1990), our detailed calendar method enabled us, for the first time, to look at variability of offending within individuals over relatively short time periods.

We found considerable variability in individual offending, and we found that patterns of activity varied by crime type. These differences raise a number of interesting

questions. We might ask whether the nature of the offense itself leads to different activity patterns. Drug deals, for example, in many ways require little effort on the part of the offender for any particular offense. Customers often seek out drug dealers, and it is easy to complete a large number of deals simply by going to a party where potential buyers will congregate or by being stationed in a "crack" house or other place known to customers. Burglary, on the other hand, requires more effort to initiate each criminal act, and thus other things occurring in the offender's life may be of more importance in determining whether he is active or at what rate he is active.

Alternatively, it is possible that the lifestyles associated with different criminal offenses are more responsible for the variations in activity patterns. There continues to be debate over the extent to which offenders "specialize" in their criminal behavior. As more is learned about different "varieties of criminal behavior," it will be useful to explore the associated lifestyles and how they may be related to offending frequencies.

We believe that the variability in offending rates within individuals has important implications for understanding criminal behavior and for developing intervention strategies. It may be as important to identify the situational correlates of different offending rates as to identify the correlates of participation in crime. If we know what factors lead an offender to commit crimes less frequently or to become inactive for some period of time, we may gain insights into designing interventions for rehabilitation.

Our findings on variability in offending suggested that methods for determining λ that involve assumptions of constant rates might produce invalid estimates. The results of our experiment, however, indicated that the month-by-month method, even

though it takes intra-individual variability into account produces overall estimates of λ that do not differ from those produced by the RAND method.

Our experiment, especially in light of other replications of the RAND study (Mande and English, 1987; Miranne and Geerken, 1991), in fact suggests that the RAND results are very robust. Studies have been very consistent in finding heavily skewed distributions, with most respondents committing a relatively small number of offenses a year and a very few respondents reporting extremely high rates of offending.

We believe that our findings suggest that the self-report methodology is a valid tool for the study of criminal careers. Because the RAND instrument is so long and complicated, and because it was self-administered in the original study, questions have been raised as to whether a population of prison inmates, with limited verbal skills, were capable of producing valid data with this method. The fact that RAND researchers had to develop a set of assumptions and strategies for handling missing and ambiguous responses further clouded interpretation of their results. In the present study we used individual interviews in order to avoid these problems. Our calculations of λ were straightforward; we did not have to interpret responses, substitute mean values, or use minimum and maximum estimates for any of the components. With these advantages, we still obtained results that are overall quite comparable to the original RAND results. Our further analyses of race and crime commission rates, of reasons for varying frequencies of offending, and of subjective perceptions of risk and offending behavior illustrate the utility of the self-report methodology.

REFERENCES

Blumstein, Alfred and Jacqueline Cohen (1979). Estimation of individual crime rates from arrest records. Journal of Criminal Law and Criminology, 70, 561-585.

Chaiken, Jan M. and Marcia Chaiken (1982). Varieties of criminal behavior. Santa Monica, CA: Rand Corporation.

Claster, Donald S. (1967). Comparisons of risk perceptions between delinquents and non-delinquent. Journal of Criminal Law, Criminology and Police Science, 58, 80-86.

Cohen, Larry (1978). Problems of perception in deterrence research. In Charles Wellford (ed.), Quantitative studies in criminology. Beverly Hills: Sage.

Cohen, Jacqueline (1986) Research on criminal careers: individual frequency rates and offense seriousness. In Alfred Blumstein, Jacqueline Cohen, Jeffrey A. Roth and Christy Visher (Eds.), Criminal careers and "career criminals." Vol 1. Washington, D.C.: National Academy Press.

Farrington, David (1986). Age and crime. In Michael Tonry and Norval Morris (eds.), Crime and justice. Vol. 7. Chicago: University of Chicago Press.

- Hindelang, Michael J., Travis Hirschi, and Joseph G. Weis (1981). Measuring delinquency. Beverly Hills, CA.: Sage.
- Horney, Julie and Ineke Haen Marshall (1991). Measuring lambda through self-reports. Criminology, 29, 471-495.
- Horney, Julie and Ineke Haen Marshall (forthcoming, 1992). An experimental comparison of two methods for measuring lambda. Journal of Research in Crime and Delinquency.
- Jensen, Gary F. (1969) Crime doesn't pay: Correlates of a shared misunderstanding, Social Problems, 17, 189-201.
- Lanza-Kaduce, Lon (1988). Perceptual deterrence and drinking and driving among college students, Criminology, 26, 321-341.
- Loeber and Snyder (1990). Rate of offending in juvenile careers: Finding of constancy and change in lambda. Criminology, 28, 97-190.
- Mande, Mary J. and Kim English (1987). Individual crime rates of Colorado prisoners. Denver, CO: Colorado Department of Public Safety, Division of Criminal Justice.

Minor, W. William and Joseph Harry (1982). Deterrent and experiential effects in perceptual deterrence research: A replication and extension, Journal of Research in Crime and Delinquency, 19, 190-203.

Miranne, Alfred C. and Michael R. Geerken (1991). The New Orleans inmate survey: A test of Greenwood's predictive scale. Criminology, 29, 497-518.

Paternoster, Raymond and LeeAnn Iovanni (1986). The deterrent effect of perceived severity: A reexamination. Social Forces, 64, 751-777.

Paternoster, Raymond, Linda E. Saltzman, Gordon P. Waldo, and Theodore G. Chiricos (1982). Perceived risk and deterrence: Methodological artifacts in perceptual deterrence research, Journal of Criminal Law and Criminology, 73, 1,238-1,258.

Paternoster, Raymond, Linda E. Saltzman, Gordon P. Waldo, and Theodore G. Chiricos (1985) Assessments of risk and behavioral experience: An exploratory study of change, Criminology, 23, 417-433.

Petersilia, Joan (1983). Racial disparities in the criminal justice system. Santa Monica, Calif.: RAND Corporation.

Richards, Pamela and Charles R. Tittle (1981). Gender and perceived chances of arrest, Social Forces, 59, 1,182-1,199.

Richards, Pamela and Charles R. Tittle (1982). Socioeconomic status and perceptions of personal arrest probabilities, Criminology, 20, 329-346.

Saltzman, Linda E., Raymond Paternoster, Gordon P. Waldo, and Theodore G. Chiricos (1982). Deterrent and experiential effects: The problem of causal order in perceptual deterrence research, Journal of Research in Crime and Delinquency, 19, 172-189.

Visher, Christy A. (1986). The Rand inmate survey: a reanalysis. In Alfred Blumstein, Jacqueline Cohen, Jeffrey Roth, and Christy Visher (Eds.), Criminal careers and "career criminals." Vol. 2. Washington, D.C.: National Academy Press.

Zedlewski, Edwin F. (1987) Research in brief: making confinement decisions.

Washington, D.C.: U.S. Department of Justice, National Institute of Justice.

NOTES

1. We used two calendars--an event calendar on which respondents indicated month-by-month whether they had been going to school, working, drinking heavily, living with a wife or girlfriend, etc. and a crime calendar on which they indicated their levels of offending for nine different crimes on a month-by-month basis. On the crime calendar they indicated for each month whether they were doing a particular crime at a zero, low, medium, or high rate. Each respondent then defined "low," "medium," and "high" rates in terms of the number of offenses committed per month. The RAND study, in contrast, asked respondents to indicate for the entire reference period the number of offenses per month they would usually commit.

2. After control group respondents completed the RAND version interview, we also used our modified interview method to ask them the more detailed crime rate questions. The supplemental data were available for 308 of the control group respondents. For analysis of activity patterns, we combined the two groups, and thus have a sample of 658, rather than just the 350 respondents in the experimental condition.

3. We have omitted the business robbery and personal robbery categories from this analysis because of the small numbers of respondents who committed more than 10 of those crimes, and we urge caution in interpreting the results for auto theft and fraud, which also involved very small numbers.

4. We also used chi-square tests of differences in distributions with cut points used by Chaiken and Chaiken (1982: 49) as well as with cut points creating fewer categories. None reached a .05 significance level.

5. For the analysis of motives, we used a combined data set that included 403 respondents who answered the same questions in an earlier study (Horney and Marshall, 1991) and 658 respondents from the current study, for a total sample size of 1061.

6. For these analyses on subjective probabilities of arrest, as with the analyses of motives, we combined the data from two studies that used the same survey instrument (Horney and Marshall, 1991; Horney and Marshall, 1992). The following two tables thus present results based on interviews with 1061 inmates.

Table 1. Activity patterns for respondents who committed more than 10 offenses in specific crime categories.

	<u>Active Every Month</u>	<u>Not Active Every Month</u>
Burglary (N=36)	25.0%	75.0%
Theft (N=60)	41.7	58.3
Auto Theft (N=12)	16.7	83.3
Forgery (N=19)	5.3	94.7
Fraud (N=10)	40.0	60.0
Assault (N=32)	37.5	62.5
Drugs (N=210)	33.3	66.7

Table 2. Number of different rates when active for respondents who committed more than 10 offenses in specific crime categories.

	<u>One Rate</u> ^a	<u>Two Rates</u> ^b	<u>Three Rates</u>
Burglary (N=36)	63.9%	16.7%	19.4%
Theft (N=60)	56.7	25.0	18.3
Auto Theft (N=12)	50.0	16.7	33.3
Forgery (N=19)	63.2	15.8	21.1
Fraud (N=10)	50.0	40.0	10.0
Assault (N=32)	53.1	25.0	21.9
Drugs (N=210)	51.9	26.7	21.4

^a Either "low," "medium," or "high" during all active months.

^b Either "low" and "medium" rates, "low" and "high" rates, or "medium" and "high" rates during all active months.

Table 3. Mean percent of street months spent doing crimes at different self-described rates for respondents who committed more than 10 offenses in specific crime categories.

	<u>No Crimes</u>	<u>"Low" Rate</u>	<u>"Medium" Rate</u>	<u>"High" Rate</u>
Burglary	39.2%	16.8%	13.7%	30.2
Theft	31.3	22.9	24.6	19.8
Auto Theft	37.3	19.0	12.2	31.4
Forgery	57.8	12.8	12.8	14.7
Fraud	24.9	27.4	16.5	31.2
Assault	18.9	33.3	21.4	25.8
Drugs	29.4	20.2	21.8	28.5

Table 4. Estimates of Lambda by Crime Category

FOR ACTIVES						
		X2		90TH		MANN-
	% ACTIVE	SIG. LEVEL	MEDIAN	PERCENTILE	MEAN	WHITNEY U
						SIG. LEVEL
<u>BURGLARY</u>						
EXPER.	22%	.7848	1.70	49.35	29.86	.1075
CONTROL	23%		2.18	154.80	67.32	
<u>ROBBERY</u>						
EXPER.	7%	.4825	2.09	20.91	12.18	.7098
CONTROL	9%		1.30	140.52	31.06	
<u>THEFT</u>						
EXPER.	20%	.4590	4.94	770.54	296.02	.5736
CONTROL	22%		4.71	247.21	125.10	
<u>AUTO THEFT</u>						
EXPER.	11%	1.00	1.26	19.20	67.92	.3102
CONTROL	11%		1.50	36.00	9.51	
<u>FORGERY</u>						
EXPER.	13%	.2876	3.53	300.46	85.14	.4028
CONTROL	10%		2.11	268.16	96.97	
<u>FRAUD</u>						
EXPER.	5%	.1984	4.67	553.80	137.17	.2734
CONTROL	3%		1.57	1365.52	180.29	
<u>ASSAULT</u>						
EXPER.	30%	.7394	1.82	50.16	43.83	.1713
CONTROL	29%		2.49	36.00	135.89	
<u>DRUG DEALS</u>						
EXPER.	41%	.8782	361.20	7799.49	2438.05	.7170
CONTROL	42%		166.71	13141.98	3918.56	
<u>TOT. CRIME</u>						
<u>(NO DRUG)</u>						
EXPER.	60%	.2832	4.00	285.56	175.07	.5559
CONTROL	56%		4.42	341.55	180.82	

Table 5. Percent of Prisoners Committing Crime,
By Crime Type and Race

Crime Type	White (400)	Black (208)	Hispanic (46)	Native American (32)	Chi- Square
Burglary	27.3	13.0	19.6	40.6	<.001
Business Robbery	3.8	3.8	4.3	6.3	NS
Personal Robbery	5.3	5.8	4.3	9.4	NS
Theft	20.5	18.8	17.4	34.4	NS
Auto Theft	14.0	6.3	10.9	25.0	<.01
Forgery	13.3	9.1	8.7	12.5	NS
Fraud	5.8	3.4	2.2	0.0	NS
Assault	27.5	32.2	34.8	43.8	NS
Drug Deals	38.3	41.8	52.2	34.4	NS

Table 6: Annualized Crime Commission Rates for Active Offenders

Crime Type	White			Black			Mann Whitney U
	Mean	Median	90th%	Mean	Median	90th%	
Burglary	66	1	112	11	1	41	NS
Business Robbery	9	1	51	13	2	—	NS
Personal Robbery	8	1	35	49	2	329	NS
Total Robbery	10	1	31	41	2	239	
Theft	142	4	201	207	3	722	NS
Auto Theft	47	1	20	35	2	228	NS
Forgery	51	2	152	124	1	360	NS
Fraud	121	3	415	6	1	—	NS
Assault	35	1	43	40	2	23	NS
Drug Deals	1216	180	3730	4958	1404	21820	<.001
Total (Non-drug)	130	3	240	129	3	408	
Total	749	31	2124	3255	149	8505	

Table 7 - Self-Reported Reasons for Varying Offending Frequency

	Burglary (n = 242)	Theft (n = 234)	Car Theft (n = 132)	Forgery n = (131)	Fraud (n = 61)	Bus. Robbery (n = 38)	Pers. Robbery (n = 61)	Assault ¹ (n = 197)	Drug dealing (n = 394)	Range
<u>Opportunity</u>										
Had opportunity	47.5	53.8	44.7	41.2	57.4	44.7	42.6	NA ²	64.5	41.2-64.5
Could get away with it	50.8	57.3	50.8	45.0	55.7	39.5	50.8	16.8	46.7	16.8-57.3
Local police active	25.6	18.4	13.6	7.6	9.8	28.9	18.0	13.2	27.9	7.6-28.9
<u>Need for Money</u>										
Money for living	48.3%	53.8%	14.4%	48.9%	62.3%	55.3%	37.7%	NA ²	54.8%	14.4-55.3
Money for drugs	30.6	29.5	11.4	29.0	36.1	55.3	44.3	NA ²	34.3	11.4-55.3
<u>High or Drunk</u>										
High on drugs	33.1	27.8	24.2	26.0	27.9	47.4	42.6	22.3	28.9	22.3-47.4
Drinking heavily	39.7	29.9	36.4	32.1	21.3	34.2	32.8	36.5	15.0	15.0-39.7
<u>Friends or Partners</u>										
Partner in crime	37.2	30.3	28.0	18.3	27.9	34.2	42.6	NA ²	24.9	18.3-42.6
Friends	42.6	37.2	28.8	23.7	21.3	26.3	44.3	20.8	27.4	20.8-42.6
Gang involvement	NA ²	NA ²	NA ²	NA ²	NA ²	NA ²	NA ²	9.6	NA ²	---
<u>Job or Family</u>										
Employment	30.2	33.8	14.1	29.8	31.1	26.3	18.0	9.6	29.9	9.6-33.8
Wife or girlfriend	21.1	20.5	17.4	16.8	24.6	21.1	24.6	32.0	24.4	16.8-32.0
Family problems	24.8	23.9	16.7	22.9	19.7	23.7	19.7	31.0	16.8	16.7-31.0

1. Data for reasons for assault are missing for 132 of the 329 assaults. Motives for assault were not asked in the pilot study.

2. This response category was not given as an option for this crime category.

Table 8. Relationship Between Perceived Likelihood of Arrest
and Participation in Specific Crime

<u>Offense</u>	<u>r</u>
Burglary	-.22**
Business robbery	-.15**
Personal robbery	-.12**
Assault	-.10**
Theft	-.18**
Auto theft	-.23**
Forgery/ bad checks	-.09**
Fraud	-.12**
Drug dealing	-.20**

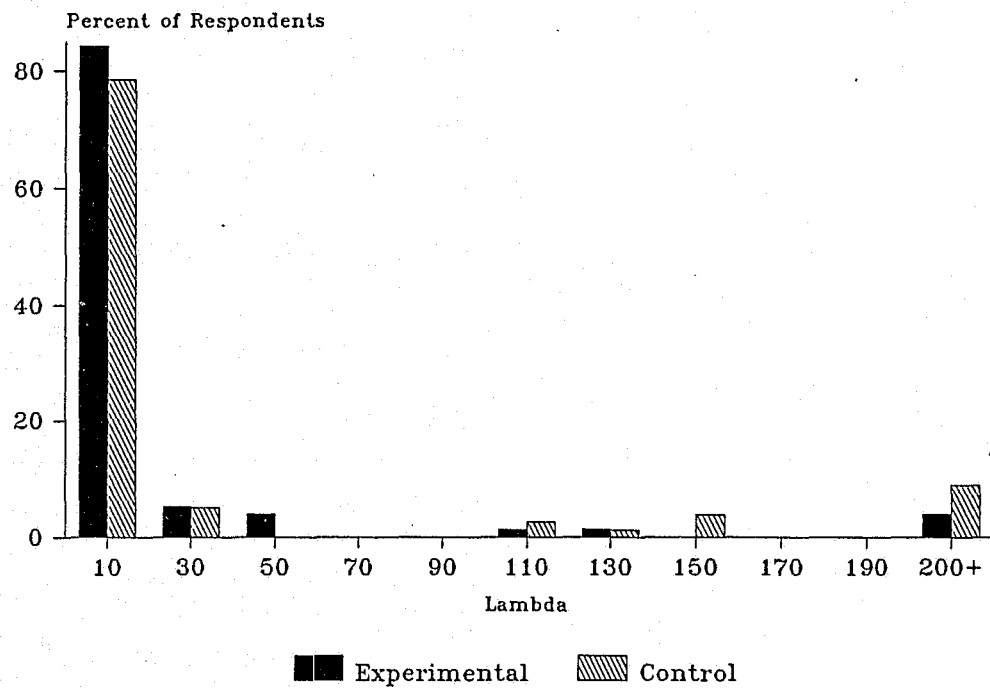
*p<.05 **<.01

Table 9. Relationship Between Perceived Likelihood of Arrest and Experienced Sanctions for Those Active in Crime Category

<u>Offense</u>	<u>Lifetime Arrests</u> r	<u>Crime Specific # Arrests</u> r	<u>Crime Specific Arrest Ratio</u> r
Burglary	-.12*	-.01	.26**
Business robbery	-.16	.23	.44**
Personal robbery	-.13	.36*	.24*
Assault	-.12	-.09	.10
Theft	-.12	.01	.19**
Auto theft	-.22**	.30*	.30**
Forgery/ bad checks	-.05	-.07	.21*
Fraud	-.23	.11	.14
Drug dealing	-.04	.11*	.11*

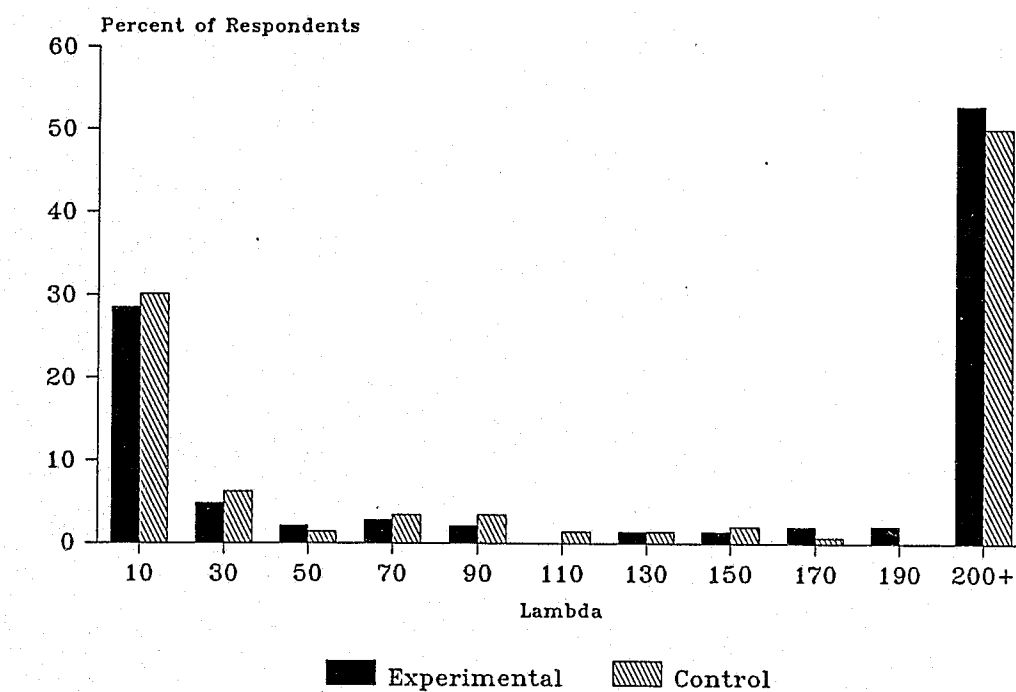
*p<.05 **p<.01

Figure 1 Distribution of Annualized Burglary Rates



Lambda values represent midpoints

Figure 2 Distribution of Annualized Drug Dealing Rates



Lambda values represent midpoints