

# Future Dangerousness Revisited

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*One rationale used in the imposition of capital punishment is the potential future dangerousness of the most serious offenders. Most research in this area has focused on the postcommutation and postrelease behavior of formerly condemned offenders and found that the majority of them did not pose significant danger risks. The current study examined the prison infraction records of 1,005 Arizona inmates serving determinate, life, or death sentences. Zero-inflated negative binomial regression models indicated that inmates sentenced to death were more dangerous than noncondemned inmates were. This effect achieved modest statistical significance and withstood controls for demographic characteristics, offense severity and type, criminal history, and diagnostic measures. Overall, these findings suggest that condemned defendants may be more dangerous than others, a statement sharply discordant with the extant literature regarding the future dangerousness of capital defendants. Additional research employing different samples from different regions of the United States is needed.*

*Keywords: dangerousness; death penalty; prisoners*

One of the most dramatic discretionary processes in criminal justice is the decision to sentence an offender to death. At the sentencing phase, a primary concern of jurors or judges is the criminal propensity and risks that an offender poses. Many questions are considered. If this individual were one day released from prison, would he likely commit another heinous offense?<sup>1</sup> Is life imprisonment veracious, or is it likely that this defendant will be released from prison? Is this offender so volatile that he is a likely danger to correctional staff, medical practitioners, and other inmates? Does the extensive criminal record of this defendant guarantee that he will similarly victimize others in the future? In short, is this individual too dangerous to take a

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chance on his potential future crimes? In more than 20 jurisdictions across the United States, affirmative answers to these very questions can be used as aggravating factors in determining a sentence of death (Cunningham & Reidy, 1998).

## LITERATURE REVIEW

### Legal Background

Future dangerousness is not simply a matter of debate during criminal sentencing for it has generated ample legal discourse. State and federal courts have grappled over the constitutionality and ethics of forecasting an individual's potential future risks to society. It has been suggested that expert assessments of dangerousness are not actually diagnoses but clinical impressions of future conduct inferred from prior conduct. Because of this, legal scholars are usually against the use of expert testimony asserting a defendant's future dangerousness (Davis, 2001; Miller, 2001), primarily because the science of prediction is so inexact (Davis, 2001; Litwack, 2001; Pearlman, 1998; Wyda & Black, 1989). Not all researchers agree, however (e.g., Grisso & Appelbaum, 1992; Walker, 1982). For example, Walker (1982) has argued that most research does not adequately sample the most dangerous types of offenders for whom risk assessments would be more meaningful. Citing the large literature on criminal careers, violence patterns, and the incapacitation effects of imprisonment, Walker has suggested that prior conduct is reason enough to believe that the most serious offenders will (if given the opportunity) recommit serious crimes.

The Supreme Court and lower appellate courts have busily examined future dangerousness. *Estelle v. Smith* (1981) established that the state could not compel a defendant to submit to a psychiatric evaluation from which a prediction of future dangerousness would be made. Instead, only when the defendant requests a mental health defense and/or a psychiatric examination can potentially aggravating factors about his future dangerousness be raised (*Vanderbilt v. Collins*, 1993). Once it is determined that future dangerousness will be an issue in sentencing, due process measures still prevail. For example, Fourth, Fifth, and Sixth Amendment provisions must be preserved and defendants must be advised of Miranda rights prior to any questioning germane to future dangerousness (*Ake v. Oklahoma*, 1985; *Barefoot v. Estelle*, 1983; *Powell v. Texas*, 1989). After learning of a defendant's future dangerousness, jurors must be informed of parole ineligibility to avoid de facto death sentences (*Simmons v. South Carolina*, 1994). In

sum, the U.S. Supreme Court has legally settled the academic dispute about the appropriateness of assessing future dangerousness. In *Barefoot v. Estelle* (1983), the Court rejected the argument that expert testimony about future risks is unreliable. Thus, as long as the other applicable constitutional provisions are followed, future dangerousness will continue to be used in capital sentencing.

### Empirical Background

To date, investigations of the institutional and postrelease misconduct of condemned or formerly condemned offenders are decisively unresponsive of the future dangerousness doctrine. Marquart and Sorensen (1988) monitored 47 Texas inmates whose death sentences were commuted by governors following the U.S. Supreme Court ruling *Furman v. Georgia* (1972). They found that condemned offenders were generally compliant and that a small cadre of inmates committed most prison infractions. In fact, most persons who have been sentenced to death were model inmates during their incarceration (Marquart, Ekland-Olson, & Sorensen, 1989; Marquart & Sorensen, 1988). After release from prison, only 8% of the formerly condemned offenders committed new felonies, suggesting that the future dangerousness of capital offenders was exaggerated. Similarly, Vito and Wilson (1988) tracked 17 Kentucky inmates who were eventually paroled after the commutation of their death sentence; 65% of these ( $n = 11$ ) were so compliant on parole that they were placed on inactive supervision. Only 4 inmates were rearrested, none for an additional homicide.

Marquart and Sorensen (1989) later conducted a national study of 558 formerly condemned inmates in 30 legal jurisdictions whose sentences were commuted. They found that these 558 offenders committed six homicides while incarcerated (four inmates and two correctional officers) but that the majority of inmates served their sentences with few incidents of misconduct. A subset of the original sample ( $n = 239$ ) was ultimately released from prison to the community; 79% were completely crime-free during their release. The remaining 21% of the parolees recidivated and were reincarcerated. Cunningham and Reidy (1998) disaggregated Texas Department of Corrections data and compared the base rates of violence of released death row inmates, inmates serving a life sentence, high-security inmates, and other inmates. Using a measure of offenses per 100 inmates, they found that former death row inmates (mean = 1.61) had the lowest involvement in serious violent prison rule violations, which included homicide, assault with a weapon, sexual abuse by threat, and striking an officer.

"Lifers" (mean = 2.60), others (mean = 11.66), and high-security (mean = 19.54) inmates constituted much greater threats than formerly condemned offenders.

Using data from the Missouri Department of Corrections, Sorensen and Wrinkle (1996) compared the prison misconduct careers of 93 condemned inmates, 323 inmates serving life imprisonment without the possibility of parole, and 232 inmates sentenced to life with parole. Like earlier studies, they found that most inmates, regardless of their sentence, were generally compliant during imprisonment and that a handful of volatile inmates committed most of the serious infractions. Generally, condemned and life-without-parole inmates were not appreciably more violent than inmates serving less punitive sentences. Sorensen and his colleagues (1998) later found that demographic indicators such as age and race were much more related to assaultive behavior in prison than capital offender status.

Sorensen and Pilgrim (2000) later examined the infraction records of more than 10,000 convicted murderers in Texas. Generally, they found that criminal history measures such as prison history, gang membership, and prior involvement in felony murder crimes, such as the contemporaneous commission of armed robbery and murder, significantly impacted prison violence. However, once again, the majority of capital murder defendants did not pose significant risks to correctional staff and other inmates. Finally, Reidy and colleagues (2001) retrospectively studied the prison misconduct careers of 39 Indiana inmates whose death sentences were reduced to capital life between 1972 and 1999. They found that the prevalence rate of violence in prison for former death row inmates was 20.5%. Moreover, they found that 60% of the formerly condemned offenders were never placed in administrative segregation for committing serious violations during their stay in the general prison population. They concluded that contrary to the public perception of their future dangerousness, most death row inmates were cooperative and rather manageable.

Perhaps the relatively low levels of misconduct among condemned vis-à-vis general prisoners are a consequence of the unique characteristics of death row. For example, Arriaga (2000) described death row as an arena of deprivation, depersonalization, and demoralization. Condemned offenders are virtually denied human interaction, and many states mandate that death row offenders spend 23 hours per day in their cells. Compared to other incarcerated persons, condemned offenders have restricted recreation, visitation, and work opportunities and scarce opportunities to engage other inmates. Although there is considerable state variation in terms of the deprivations experienced by condemned offenders, death row is, generally

speaking, a stark environment. Although the conditions of death row cannot explain why formerly condemned prisoners have low recidivism levels once released from prison, the punitive level of social control on death row could explain their low rates of misconduct while imprisoned.

There are additional hypotheses for the relatively low levels of violence engaged in by condemned offenders. Cunningham and Vigen (2002, pp. 203-204) have suggested that, contrary to conventional wisdom, death row inmates have much to lose by engaging in prison misconduct. Many are pursuing appeals or postconviction reviews of their sentence, processes that could be compromised by further violent behavior. Also, some capital defendants have little to no prior criminal record and have been convicted of a relatively out of character, isolated event such as a "passion killing." Hence, further violence is not expected from an individual whom, prior to his or her capital offense, ostensibly did not engage in criminal activity.

Another explanation is that the future dangerousness doctrine itself is problematic. Condemned offenders might demonstrate low levels of institutional and postrelease violence because the courts simply cannot predict future dangerousness.<sup>2</sup> Obviously, further understanding of the institutional behavior of condemned and noncondemned offenders is needed to further assess future dangerousness. The current study seeks to accomplish this in two ways. First, previous studies are geographically limited because they are disproportionately based on Texas data (see Cunningham & Reidy, 1998, p. 81; Reidy et al., 2001, p. 67). Therefore, the replication of prior findings in other jurisdictions and geographic areas is important. To redress this, the current research employs a large, heterogeneous (e.g., determinate, life, and death sentences) sample of offenders from a new geographic area, Arizona. Second, the current research empirically examines the relationship between sentence type and institutional violence, controlling for a battery of diagnostic, offense, and demographic characteristics with robust multivariate models. This will isolate the potentially independent effects on sentence type of prison misconduct and build on the extant literature that generally uses retrospective, descriptive data analysis.

## METHOD

### Data

Data are derived from the official prison records of inmates committed to the Arizona Department of Corrections. Prison classification and diagnostic personnel compile an encyclopedia dossier for each inmate in their

custody. This report contains demographic information, primary charge and felony classification, length and type of sentence, admission and expected release dates (if applicable), housing and facility transfers, escape and absconding information, work and prison industry history, and parole history. In an effort to appropriately classify inmates according to their needed level of custody, programming, and treatment, the prison diagnostic unit creates quantitative scales that measure inmates according to a variety of risks such as institutional, security-threat group, and escape.<sup>3</sup>

## Sample

A simple random sample of 1,005 inmates was selected from a sampling frame of nearly 27,000 inmates (the state prison population). Of these, 893 inmates were serving determinate sentences ranging from 1 to 70 years, 43 inmates were serving a life sentence, and 69 inmates had been sentenced to death. The latter offenders were oversampled to ensure enough cases for statistical analyses. The total sample was 83% male ( $n = 831$ ) and 17% female ( $n = 174$ ). Forty-six percent ( $n = 460$ ) of the inmates were White, 29% ( $n = 294$ ) were Hispanic, 16% ( $n = 160$ ) were Black, 7% ( $n = 66$ ) were Native American, and 2% ( $n = 25$ ) were Asian American. These demographic estimates did not appreciably differ from the prison population parameters: 92% male, 8% female; 45% White, 24% Hispanic, 15% Black, 5% Native American, and 1% Asian American.

Although the purpose of the current research is to assess the future dangerousness of capital offenders, the extant literature indicates several important correlates of prison misconduct, such as demographic, offense type/severity, and diagnostic/criminal history factors. Models that omit such factors risk misspecification. The empirical relevance of each variable and coding scheme are briefly described below.

## Independent Variables

### *Demographic Factors*

By and large, investigators have found that age, race, and gender significantly influence prison misconduct just as they influence involvement in crime. Specifically, scholars have found that racial minorities, particularly Blacks, engage in more prison misconduct than Whites (Craddock, 1996; Gendreau, Goggin, & Law, 1997; Harer & Steffensmeier, 1996; Poole &

Regoli, 1983; Wooldredge, 1991; Wooldredge, Griffin, & Pratt, 2001).<sup>4</sup> Race is operationalized as nonwhite = 0 and White = 1.

A more robust and less controversial finding is the link between age and assorted forms of prison misconduct. Myriad studies have documented that younger inmates are more volatile, problematic, and prone to commit violations in prison than older inmates (Cao, Zhao, & Van Dine, 1997; Flanagan, 1980, 1983; Gendreau et al., 1997; Goetting & Howsen, 1986; Poole & Regoli, 1980, 1983; Reidy et al., 2001; Simon, 1993; Wooldredge, 1994; Wooldredge, Griffin, & Pratt, 2001). Age is continuously coded from 16 to 78 years (mean = 33.22,  $SD = 11.18$ ).

Gender differences in prison misconduct are a clear example of the differences between substantive and statistical significance. On one hand, male inmates are overwhelmingly more dangerous than female inmates, evidenced by their involvement in the most severe forms of violence such as murder, hostage taking, and rioting (Bottoms, 1999; Craddock, 1996; Farr, 2000; Goetting & Howsen, 1983, 1986; Harer & Langan, 2001; Maghan, 1999; Toch & Adams, 1986). On the other hand, female inmates are subject to greater social control in correctional facilities, resulting in inflated official misconduct records for women (McClellan, 1994; McCorkle, 1995). Gender is coded as male = 0 and female = 1.

Finally, fewer studies have examined the relationship between educational attainment and prison violence, and to date, the findings are mixed (Gendreau et al., 1997). It is hypothesized that educational attainment is inversely related to involvement in prison violence. Prison officials score inmates on an interval scale ranging from 1 (*very low risk*) to 5 (*very high risk*). The average educational assessment is 2.53 ( $SD = 0.75$ ). The scale is reverse-coded, thus high risk indicates low educational attainment.

### *Offense Type/Severity*

An important criticism of capital punishment is the seemingly arbitrary relationship between the severity and legal classification of the capital offense and the resultant imposition of a death sentence. A variety of extralegal factors (e.g., geographic region, publicity surrounding the case, or political orientation of prosecution) can differentiate killings that result in a first-degree murder convictions with special circumstances, first-degree murder convictions without special circumstances, second-degree murder convictions, or manslaughter. Prior research (Cunningham & Reidy, 1998; Sorensen & Wrinkle, 1996) has examined the future dangerousness of murderers whose cases reflected these different charges and sentencing

outcomes. Dichotomous terms for first-degree murder (mean = 0.11,  $SD = 0.31$ ), second-degree murder (mean = 0.02,  $SD = 0.13$ ), and manslaughter (mean = 0.02,  $SD = 0.16$ ) convictions were introduced as controls.

### *Diagnostic/Criminal History*

An extensive literature has documented the positive relationship between criminal record and institutional misconduct; chronic offenders or "career criminals" with extensive arrest, conviction, violence, and prison history tend to disproportionately violate prison order (Flanagan, 1983; Gendreau et al., 1997; Goetting & Howsen, 1986; Myers & Levy, 1978; Reidy et al., 2001, p. 71; Simon, 1993; Toch & Adams, 1986; Wang & Diamond, 1999; Wooldredge et al., 2001). Interval scales ranging from 1 (*very low risk*) to 5 (*very high risk*) are created from the inmate's criminal, incarceration, and substance abuse history to classify each offender according to his or her needed supervision level. This classification (and, subsequently, the inmate's institutional behavior) is the initial determination of whether an inmate is housed in minimum, medium, maximum, or super-maximum security (see Maghan, 1999).

Measures used to determine institutional classification are weapons history (mean = 1.63,  $SD = 0.90$ ), confinement history (mean = 1.72,  $SD = 0.83$ ), gang/security-threat group history (mean = 1.96,  $SD = 0.22$ ), probation and parole history (mean = 1.90,  $SD = 0.78$ ), substance abuse history (mean = 2.00,  $SD = 0.76$ ), alcohol and drug treatment needs (mean = 3.90,  $SD = 1.31$ ), and institutional risk (mean = 2.61,  $SD = 0.54$ ). Two additional measures, violence and arrest history, were omitted because they posed multicollinearity problems,  $r_{\text{violence history/determinate sentence}} = -.37$ ;  $r_{\text{arrest history/determinate sentence}} = -.67$ ;  $r_{\text{violence history/death sentence}} = .39$ ;  $r_{\text{arrest history/death sentence}} = .61$ . Finally, time served obviously affects opportunities to engage in prison violence; therefore, it needs to be statistically controlled. The diagnostic unit assesses an additional risk based on the amount of time remaining until the expiration of the inmate's sentence (mean = 2.46,  $SD = 1.15$ , range = 1-5).<sup>5</sup>

### **Dependent Variable**

The dependent variable is the sum of eight criminal offenses that are roughly commensurate with the Part I Index offenses in the *Uniform Crime Reports*. They are murder, rape, rioting, hostage taking, aggravated assault, escape, arson, and weapons possession. Unfortunately, there is no scholarly consensus about which offenses underlain future dangerousness; however,

the current violations are similar to those from earlier studies (e.g., Cao, Zhao, & Van Dine, 1997; Cunningham & Reidy, 1998; Harer & Steffensmeier, 1996; Reidy et al., 2001). Violent prison violations (mean = 0.98,  $SD = 2.57$ , range = 0-26) were summed to provide adequate variation for quantitative analyses.

### **Analytical Technique**

Ratio-level count data like the current dependent variable pose a variety of potential data estimation problems. Counts are bound by zero, take only integer values, do not occur independently, and are positively skewed, conditions that violate the normal distribution assumption of conventional ordinary least-squares (OLS) regression. This is precisely the case with the current measure of prison violations (skewness = 4.26, kurtosis = 34.04). To compensate for this, researchers generally use the logarithm of the dependent variable; however, this procedure eliminates all cases in which the pretransformation count = 0. Another strategy is to use Poisson regression because count data fit the properties of the Poisson distribution. Poisson models work best for the estimation of relatively low count phenomena. High counts, such as arrests or violations in a criminal career, result in overdispersion that violates the conditions of Poisson. Fortunately, zero-inflated negative binomial regression models can accommodate the troublesome characteristics of count data, including overdispersion and high frequencies of zero counts.<sup>6</sup> Dichotomous terms for each sentence type automatically dropped out of the model due to collinearity. For this reason, three separate regressions were conducted. The regression output appears in Table 1.

## RESULTS

The central finding is that death row inmates were significantly involved in serious prison violence, more so than any other type of inmate (estimate = 1.03,  $z = 1.77$ ,  $p = .077$ ). Moreover, there was a significant negative relationship between serving a life sentence and serious prison violence (estimate =  $-.863$ ,  $z = 1.74$ ,  $p = .081$ ), rendering lifers the least violent offenders in prison. Inmates serving determinate sentences were neither more nor less involved in serious misconduct than their peers serving more punitive sanctions. That persons sentenced to death will continue to engage in serious and violent crime while incarcerated is fully consistent with the future dangerousness doctrine and thereby directly in opposition to the extant literature (Cunningham & Reidy, 1998, 1999; Cunningham & Vigen, 2002; Marquart

**Table 1: Zero-Inflated Negative Binomial Regression Model**

Variable	(1)	(2)	(3)
Age	-.004 (0.44)	-.004 (0.49)	-.004 (0.45)
Gender	.261 (1.31)	.257 (1.30)	.248 (1.25)
Race	-.695 (4.48)***	-.693 (4.47)***	-.689 (4.43)***
Education	.330 (3.24)***	.321 (3.18)***	.310 (3.07)***
Murder 1	-1.26 (2.32)***	-.324 (0.96)	-.218 (0.23)
Murder 2	.445 (0.82)	.435 (0.80)	.441 (0.81)
Manslaughter	-.087 (0.20)	-.095 (0.22)	-.107 (0.24)
Weapon history	.304 (3.46)***	.306 (3.49)***	.312 (3.54)***
Gang history	.850 (2.20)***	.842 (2.18)**	.810 (2.10)**
Prison history	.664 (6.79)***	.669 (6.85)***	.675 (6.89)***
Probation/parole	-.130 (1.24)	-.121 (1.16)	-.129 (1.22)
Drug history	-.308 (2.59)***	-.292 (2.49)***	-.272 (2.30)**
Treatment needs	.137 (1.99)**	.136 (1.97)**	.130 (1.88)*
Institutional risk	.271 (1.76)*	.266 (1.73)*	.266 (1.73)*
Time served	.545 (6.26)***	.560 (6.39)***	.546 (6.17)***
Determinate sentence	—	—	.260 (0.28)
Life sentence	—	-.863 (1.74)*	—
Death sentence	1.03 (1.77)*	—	—
Chi-square	196.44***	196.25***	193.52***
Pseudo R <sup>2</sup>	.098	.098	.096

NOTE: Unstandardized coefficients with z score in parentheses.

\* $p < .10$ . \*\* $p < .05$ . \*\*\* $p < .01$ .

et al., 1989; Marquart & Sorensen, 1989; Reidy et al., 2001; Sorensen & Pilgrim, 2001; Sorensen & Wrinkle, 1996), which has consistently found, through retrospective analyses, that condemned offenders generally did not pose risks for future violent offending.

As shown in Table 1, the remaining controls produced consistent effects for all three equations. Some of the more unexpected results occurred among the demographic variables. Although age was inversely related to prison violence for all three equations, none of these effects achieved statistical significance. Similarly, there were no statistically significant gender differences for violent prison misconduct. Having said this, it is important to notice the more substantive effects between gender and inmate status by examining the distributions across sentence types. None of the condemned offenders (0%) in this study were female. Only 3 of 43 (7%) inmates serving life imprisonment were female. However, nearly 1 in 5 inmates (171 out of 893, or 19%) serving a determinate sentence was female. Therefore,

although regression analyses did not produce significant effects for male and female inmates, it is clear that the most serious offenders, according to sentence severity, were male. For all three regressions, minority inmates engaged in significantly more violent prison misconduct than White inmates.<sup>7</sup> This is supportive of prior research (Gendreau et al., 1997; Goetting & Howsen, 1986; Harer & Steffensmeier, 1996; Poole & Regoli, 1983). Finally, less educated inmates were more likely to engage in prison violence than inmates who have completed more years of school. Again, it is important to note that educational score is reverse-coded, thus higher values indicate greater risk, which in turn equates to low educational attainment.

With the exception of one regression in which first-degree murder was negatively related to prison violence, severity of offense was unrelated to involvement in prison violence. Otherwise, violent prison misconduct did not depend on the legal classification of the inmate's instant offense, whether first- or second-degree murder or manslaughter. For the record, all 69 condemned offenders were convicted of at least one count of first-degree murder. Comparatively, 41 lifers were convicted of first-degree murder, along with 4 inmates serving determinate sentences.

Overall, the most robust predictors of prison violence were diagnostic measures based on prior criminal record. Inmates with extensive weapons history were more than three standard deviation units above the mean levels of prison violence. More dramatic was the relationship between confinement history and prison violence. Inmates with multiple prior stints in prison were nearly seven standard deviation units above the mean levels of prison violence. Whereas prior prison record was an important predictor, prior punishment history was not. Inmates who had been adjudicated and sentenced to community corrections such as probation were not significantly likely to commit serious prison violations. As expected, gang-affiliated inmates committed more prison violence than inmates not involved in gangs.

Inmates who had more extensive substance abuse histories were less involved in prison violence; however, inmates with more acute drug and alcohol treatment needs were more involved in prison violence. These seemingly contradictory findings probably indicate the temporal component of addiction. Offenders may report substantial drug histories, but these histories can be dated. Conversely, offenders with current addictions and the need for immediate treatment constitute a more grave, contemporaneous risk. The composite measure of institutional risk was, predictably, significantly related to engaging in prison violence. This suggests that the

prison classification unit appropriately assessed the risks that various inmates pose to prison safety (see Brennan, 1987). Finally, time served was positively related to prison violence. This makes intuitive sense because the more time served correlates to more opportunities to engage in misconduct and to be cited by correctional staff.

## DISCUSSION

The personification of the future dangerousness doctrine is Kenneth McDuff. A chronic delinquent, McDuff was on parole for burglary in 1966 when he and a drinking companion happened on three teenagers in a park. Intoxicated and armed, McDuff commandeered their car and abducted the three youths (two males and one female). He summarily executed the males; then proceeded to rape, rob, torture, and ultimately kill the young girl. McDuff became known as the "Broomstick Killer" because he used the blunt instrument to bludgeon the young girl. For these crimes, McDuff was convicted and sentenced to death.

Like more than 500 condemned offenders nationwide, McDuff's death sentence was commuted to life imprisonment following the 1972 Furman ruling. McDuff would remain incarcerated for the next 17 years until severe crowding in the Texas prison system, his relatively pliant conduct in prison, his middle-age status, and other factors resulted in his parole release in 1989. Within 1 year, McDuff was reincarcerated after menacing two young African Americans with a knife (McDuff was an avowed racist, alcoholic, and cocaine addict). After a brief incarceration, McDuff was rereleased again. Over the next several years, he would engage in an array of criminal activity including the abduction, rape, robbery, torture, and murder of several women. Estimates vary, but law enforcement officials and investigators have linked the serial killer to as many as nine abduction/homicides in Texas. Convicted and returned to death row, Kenneth McDuff was finally executed in November 1998.

The indignant, sullen, unrepentant, and frighteningly recidivistic McDuff was the exception, however. Retrospective analysis of condemned offenders from prior studies revealed a story far different from McDuff's. Most capital offenders adjusted well to prison and complied with its rules. Moreover, formerly condemned offenders behaved well while on parole and were more likely to be reincarcerated for technical violations or minor crimes rather than violent ones (Cunningham & Reidy, 1998, pp. 80-82). If analyzed by the same method, the current data would have produced similar results. Only 3 inmates killed again while incarcerated: a condemned

inmate who totaled 37 total prison violations, including one escape; a lifer who totaled 95 violations, including two escapes, two threatening staff, nine assaults, two weapons violations, and two incidents of arson; and an inmate serving a 2-year sentence who amassed 46 prison violations (21 for disobeying staff).<sup>8</sup> Respectively, 1.4% (1 out of 69) of condemned offenders, 2.3% (1 out of 43) of lifers, and 0.1% (1 out of 893) of other inmates killed while incarcerated. These prevalence numbers are low and resemble those from prior research. However, multivariate analyses here portray an entirely different situation than prior research. Condemned offenders were more dangerous than other inmates, evidenced by their significant involvement in the most serious forms of prison misconduct such as murder, rioting, aggravated assault, arson, and so on. This relationship persisted when controlling for 15 demographic, offense type, criminal history, and diagnostic variables.

Obviously, no research design is perfect and the current study was potentially limited by the reliance on official misconduct data. Prior research (Hewitt, Poole, & Regoli, 1984; Poole & Regoli, 1980; Van Voorhis, 1994) indicated that correctional staff differentially cited inmates for misconduct based on their ascribed characteristics. This could be the case here. Although officer discretion is minimized when discussing the most serious forms of misconduct (Cao et al., 1997), it is simply unknown to what degree official biases affected the recording of misconduct. Another important correlate of prison misconduct lacking from this study was psychometric test score. For example, Hare's psychopathy scale (PCL-R) is a valid and reliable predictive instrument (Hare, 1993, 1996, 1998; Harris, Rice, & Cormier, 1991) that could mediate or suppress the relationship between sentence length and violent misconduct.<sup>9</sup>

Finally, the lack of structural variables describing the correctional facilities within which the inmates lived was an important limitation of these data. For example, one could argue that the current findings had less to do with individual dangerousness and more to do with the social control and environment experienced by condemned versus other inmates. Whether the current findings are artifactual is unknown; as a result, the external validity of these findings should be interpreted with caution and future research should include both individual-level factors and multilevel variables. Nevertheless and despite these admonitions, the current study employed a large probability sample, included many empirically important statistical controls, and used a robust data analysis technique.<sup>10</sup>

Cunningham and Reidy (1999, pp. 25-27) have claimed that prison is fundamentally different than free society and that prison violence does not

predictably follow from preincarceration violence or the capital offense of conviction. This statement contradicts both the current findings and scores of evidence suggesting that individuals with extensive criminal records, consistent adverse contacts with the criminal justice system, antisocial personality disorders, and histories of violence are most likely to engage in misconduct while imprisoned (Cao et al., 1997; Goetting & Howsen, 1986; Hare, 1993; MacDonald, 1999; Maghan, 1999; Poole & Regoli, 1983; Sorensen, Wrinkle, & Gutierrez, 1998; Wang & Diamond, 1999). In fact, Gendreau and his colleagues' (1997) meta-analysis of 39 studies encompassing 695 correlations with prison misconduct indicated that criminal history is one of the most important predictors of prison violence. It is unclear why prior criminality was largely unrelated to previous studies of future dangerousness and/or condemned offenders but critical to the larger study of institutional misconduct. Future research should sample sufficient numbers of condemned, life-imprisonment, and other inmates from new jurisdictions to assess this further.

## CONCLUSION

Although future dangerousness has important legal value, it could be interpreted as a superfluous concept. Criminals who are convicted of the most heinous crimes are marked for death for what they have done. Therefore, it is rather curious that so much emphasis is placed on the probabilistic prediction of future conduct and social scientists' ability to do so when it is known with certainty what has already occurred. However, prior conduct is not the only consideration in the capital punishment debate. A defendant's probable future criminal behavior is a critically important issue to juries, courtroom officers, and citizens. More needs to be known about future dangerousness. The current study provides fresh evidence that condemned offenders will indeed continue to behave violently even within the confines of death row. That finding was unexpected, should prove to be controversial, and should serve as the impetus for additional research.

## NOTES

1. The masculine pronoun is used because the overwhelming majority of condemned inmates are male. Otherwise, gender-neutral language is employed.
2. In general, scholars have been largely unsuccessful with prediction in criminology. Prediction poses several ethical, legal, theoretical, and methodological dilemmas (see Gottfredson & Tonry, 1987). Identifying and predicting the most serious offenders is one of

the most difficult tasks and has not met with empirical success (DeLisi, 2001; Greenwood & Turner, 1987; Shannon, 1985; Wang & Diamond, 1999).

3. The current data are derived from a larger project that investigates the criminal/prison misconduct careers of inmates serving assorted sentences. The senior author of the current study collected these data from the on-line repository provided by the Arizona Department of Corrections (ADOC). The current measures were electronically retrieved from each inmate's correctional classification profile. The correctional classification profiles constitute the ADOC's Offender Classification System, which is an objective administrative classification system used to assess the behavioral history of prisoners (for more information, go to [www.adc.state.az.us](http://www.adc.state.az.us)).

4. It has been argued that race differences in prison misconduct reflect biased discretionary decision making among prison officials (Hewitt et al., 1984; Poole & Regoii, 1980; cf. Hemmens & Marquart, 2000). For example, Poole and Regoli (1980) concluded,

The administration of justice in prison is not color blind . . . while Black and White inmates were equally likely to engage in rule-breaking activity, they were not equally likely to be reported for rule infractions. *Ceteris paribus*, being Black increased the inmate's risk of receiving a disciplinary report. (p. 944)

More recent research suggests that this conflict-theory proposition might be overstated. For example, Cao and his colleagues (1997) found that minorities totaled significantly more serious prison infractions than Whites. They conclude that "the race effect for more serious infractions—where presumably discretion would be less wide—is not merely an artifact of racial discriminations in administering disciplinary tickets" (Cao et al., 1997, p. 111).

5. Prior researchers (Cao et al., 1997; Craddock, 1996; Goetting & Howsen, 1986; MacKenzie, 1987; Wooldredge, Griffin, & Pratt, 2001) have found that the relationships between age, time served, and misconduct are not linear. Inmates tend to amass violations early in a sentence or on admission to a new facility. Afterward, inmates are less likely to engage in or be cited for prison misconduct. Following Cao et al. (1997, p. 108), a curvilinear term,  $age^2 = (age - \text{mean of age})^2$ , was created to examine this. The variable was not significantly related to the dependent variable and was omitted from the model that appears in this study.

6. Long and Freese (2001) have provided a detailed explanation for these types of data estimation. The negative binomial regression model equation is:

$$\Pr(Y_i = k | \chi_i) = \Gamma(k + \alpha^{-1}) / k! \Gamma(\alpha^{-1}) (\alpha^{-1} / \alpha^{-1} + \mu_i)^{-\alpha^{-1}} (\mu_i / \alpha^{-1} + \mu_i)^k \quad k = 0, 1, 2, \dots$$

7. Separate analyses containing disaggregated racial and ethnic variables were not significant but can be provided on request. Dichotomous terms were created for Whites, Blacks, Hispanics, and American Indians. Asians were omitted because there were not sufficient cases.

8. Data on numerous, less serious prison violations were also collected. Only the most serious prison violations constituted the prison violence underlying future dangerousness.

9. Not everyone is as sanguine about the efficiency of the Hare PCL-R (e.g., Freedman, 2001).

10. Not all scholars agree that structural or institutional-level variables are as important as individual-level variables. Harer and Langan (2001, p. 534) argue that prison classification systems play a major role in determining the nature of prison environments and the prison environment is, to a large degree, predetermined by the classification system in terms of inmate population, composition, architecture, custody, and programs. Following this logic,

the current research findings would be based on the inmate's criminality or dangerousness, not the conditions of death row.

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