

PRISON RIOTERS: EXPLORING INFRACTION CHARACTERISTICS,  
RISK FACTORS, SOCIAL CORRELATES, AND CRIMINAL CAREERS<sup>1</sup>

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*Summary.*—Investigation of individual inmates' characteristics are almost entirely absent from research of prison riots. The current study sought to fill this void using official infraction records and prison dossiers of 831 male inmates selected from the southwestern USA. Logistic regression models indicated that inmates who were cited for criminal infractions, such as theft, possession of weapons or drugs, threatening staff, and social risk factors were significantly more likely to engage in prison rioting. In fact, the model which contained criminal career, demographic information, infraction, and other social risk factors explained 40% of the variation in prison rioting. Suggestions for research on prison riots that included inmates' criminal history and characteristics of infraction are offered.

Evidenced by the infamous events at Attica in 1971 and Santa Fe in 1980, prison riots are characterized by some of the most graphic, extreme forms of violence and social unrest and have served as the impetus for significant reform of American corrections. Although these worst-case scenario riots occur episodically, major disturbances by inmates in correctional facilities are relatively common. For instance, using data from the Bureau of Justice Statistics census of state and federal correctional facilities, Stephan and Karberg (2003) found that 606 major disturbances, defined as incidents involving five or more inmates resulting in serious injury or significant property damage, occurred in 2000. Moreover, inmates set 343 fires and caused 639 other collective disruptions, such as work slowdowns. The cost of inmates' misconduct has been estimated at nearly \$1,000 per infraction (Lovell & Jemelka, 1996). Beyond victimization and property damage, prison riots embody a fundamental breakdown of the state's administration of a safe, effective, and humane criminal justice system. As Useem and Goldstone (2002, p. 522) noted "Prison riots are extremely costly in injuries and lost lives, property damage, and perhaps most important, damage to the integrity of the criminal justice system."

Penologists have studied prison riots for decades but virtually all of this prior research has employed a macrosociological or structural perspective given the collective nature of prison rioting. As such, penologists have examined and identified various problems, deficiencies, or flaws within prison fa-

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cilities, prison operations, and prison administrations which may have engendered prison riots. Unfortunately, prior research has been conducted almost at the exclusion of competing explanations. For instance, Useem and Goldstone (2002, p. 522) concluded, "the basic causes of riots do not lie mainly in the inherently violent or irrational nature of inmates, but in more general principles regarding the dynamics of social order in prisons." That claim may be premature because virtually none of the research on prison riots included individual-level measures or considered an individual-level perspective. To address this void in the literature, the current research purpose is to investigate prison rioting empirically from an individual-level perspective using measures based on inmates' criminal history, demographic characteristics, records of infractions, sentence information, and other social risk factors.

#### *Inmate-balance and Administrative Breakdown Theories of Prison Riots*

A variety of theoretical explanations and empirical descriptions of prison riots have been proffered. Early penologists (e.g., Clemmer, 1940; Hayner & Ash, 1940; Sykes, 1958; Wheeler, 1961) framed prisons as separate communities that forged a distinct inmate culture and micro-society complete with its own language or argot, norms, code of conduct, and stratification system. Since conditions of confinement largely molded inmate behavior, this perspective has been referred to as the deprivation model of inmates' behavior. Prisons operated with a tacit understanding between staff and inmates that trivial forms of misconduct and indiscretions would be tolerated as long as a larger sense of order was preserved. If prison administrators or correctional staff abruptly changed this informal social control system, inmates would revolt. This has been referred to as inmate-balance theory.

Others have focused on prison administration and operating procedures (sometimes called administrative breakdown) as the primary factors in explanation of prison riots (Useem, 1985; Useem & Kimball, 1989; Colvin, 1992). From this perspective, the 1980 Santa Fe Riot was an illustration of the breakdown model of collective behavior whereby inmate violence was framed as the result of disorganization and increased alienation, frustration, and discontent among inmates. Between 1975 and 1980, the Penitentiary of New Mexico transitioned from a facility that offered employment opportunities, recreational programs, and other amenities to a spartan facility with few productive services for inmates. There were five wardens during this period, and this disruption in leadership precluded effective continuity in prison management. Moreover, the facility increasingly relied on inmate informants or snitches as the primary method of social control. Indeed, the inmate informant system was so widespread that a large subpopulation of informants was segregated from the general population. During the riot, the inmate informants in protective custody were the primary targets of the violence that

left 33 inmates dead, more than 400 injured, and resulted in \$200 million in damages.

Using data from a nationwide sample of 317 state prisons, Useem and Reisig (1999) empirically examined the inmate-balance and administrative breakdown explanations of prison riots. They included several important structural variables leading to prison rioting. These included the size of the inmate population, security, crowding, inmate organization, whether staff had "cracked down" on the inmates, administrative sanctions, staff morale, employment opportunities, and number of prohibited security-threat groups. Only the size of the inmate population and staff morale significantly predicted the occurrence of a riot. None of the remaining variables were significant. Moreover, structural variables explained 20% of the variation in the dependent variable. In other words, structural variables left 80% of the variation in rioting unexplained.

#### *State-centered Theory of Revolutions*

Goldstone and Useem (1999; Goldstone, 2001; Useem & Goldstone, 2002) likened prison riots to revolutions. Their state-centered theory of revolutions posits that prison riots arise from the combination of five conditions: (1) external pressures on the state from elites, (2) internal pressures on the state from elites, (3) internal pressures on the state from inmates, (4) ideologies that unify rebels/inmates and justify their actions, and (5) ineffective state actions which indicate state's weakness of injustice. These conditions explicitly relate to prisons and riot situations in the following ways. First, external pressures from elites often take the form of cuts in appropriations to prisons. These fiscal cuts result in fewer staff, fewer amenities for inmates, and a greater ratio of inmates to staff. Second, budgetary cuts tend to increase stress among correctional personnel, reduce officers' morale, increase staff turnover, and lead to confrontations between line staff and prison administration. Third, inmates' perceptions of the conditions of their confinement and their treatment by correctional staff tend to worsen when the first conditions are met. Often, the interaction between inmates and staff becomes more arbitrary, negative, and unfair from the inmates' perspective. Fourth, inmates' ideologies foster alienation and outrage among prisoners so that rioting is perceived as a justified course of action. Fifth, prison administrators may take action viewed to be ineffective, inept, or unjust—conditions that further justify retaliatory inmate violence.

Goldstone and Useem (1999) stated some combination of at least three of these conditions were present in 13 prison riots that they studied. Moreover, they found that the majority of these conditions were not present during periods of correctional stability before and immediately prior to the riots. Although state-centered theory continues the tradition of a structural ap-

proach to the study of prison riots, penologists have at least begun to consider inmates' characteristics as potentially important in prison riots. For instance, Useem and Goldstone (2002) explored aggregated inmates' characteristics including the number of inmates charged with violent crimes, the percent of total admissions charged with violent crimes, and the ratio of violent to property crimes among new admissions. They found that these aggregated measures of inmate characteristics did not appear to influence the incidence of correctional rioting.

#### *Models of Inmates' Behavior and Violence*

The literature on prison riots rests squarely in the traditions of deprivation (Clemmer, 1940; Sykes, 1958; McCorkle, Miethe, & Drass, 1995) and administrative control (DiIulio, 1987; Reisig, 1998; Huebner, 2003) models of inmate behavior. A different perspective is the importation model in which individual inmates' characteristics manifest prior to incarceration were used to explain violence and misconduct occurring within a prison. Accordingly, prisoners' individual values, beliefs, and behaviors external to the institution remain important while they adjust or adapt to the prison environment. Theoretically, variables which are risk factors, e.g., age, sex, for offending in society at large should correspond to risk factors for prison misconduct. To date, criminologists have furnished impressive empirical support for the importation model of inmates' behavior. Offenders with more extensive arrest and incarceration histories, prior involvement with gangs or security-threat groups, serious substance abuse problems, or previous use of violence were among the inmates most difficult to manage (Schrag, 1954; Irwin & Cressey, 1962; Flanagan, 1983; Harer & Steffensmeier, 1996; Cao, Zhao, & Van Dine, 1997; Gendreau, Goggin, & Law, 1997; Gaes, Wallace, Gilman, Klein-Saffran, & Suppa, 2002; DeLisi, 2003; DeLisi, Berg, & Hochstetler, 2004).

The salience of the importation model is not merely academic. In practice, inmates' classification systems are largely predicated on importation variables, such as criminal, confinement, gang, violence, weapons, and disciplinary histories, and type of sentence, e.g., death, life without the possibility of parole. For example, the California Department of Corrections, among the largest correctional organizations in the world, recently revised its classification system according to criminal history-based factors and found that importation variables enhanced anticipation or prediction of serious misconduct (Berk, Ladd, Graziano, & Back, 2003, pp. 232-241). Recent research based on these data provided even greater support for the importance of individual inmates' characteristics in explaining institutional misconduct. Camp and Gaes (2005) tested whether different security procedures made inmates more prone to institutional misconduct among 561 male inmates with equivalent

classification scores. In one study with design controls, 50% of the inmates were placed in the lowest security prisons in California (Level I), and 50% were placed in the second highest security prisons (Level III). Inmates were equally likely to engage in misconduct. This suggests that prison misconduct was a function of characteristics of inmates, not of facilities.

Unfortunately, the rich empirical tradition of the importation model focused on inmate misconduct and assorted acts of interpersonal violence, such as homicide, rape, or assault, rather than prison rioting (see Bottoms, 1999, pp. 205-206). In this sense, the current study was done to explore connections between macrosociological study of prison riots and the importation model of inmate misconduct or violence although analyses pertain only to the latter.

#### METHOD

##### *Sample and Data*

Data were derived from publicly available information recorded by the offenders' classification system within the department of corrections of a large state located in the southwestern United States. The purpose of the offenders' classification system is to provide an appropriate classification and institutional placement for each inmate who is committed to correctional supervision by the criminal courts. To accomplish this an objective administrative classification system quantifies each inmate according to social background, criminal history, substance abuse history, and related demographic information. Each area was scored within a risk-range using indicators of 1 (very low risk), 2 (low risk), 3 (moderate risk), 4 (high risk), and 5 (very high risk). Finally, staff for the classification system compiled an official disciplinary report chronicling the violations committed while offenders were in state custody.

A simple random sample from a roster of over 20,000 inmates yielded an initial sample of 1,005 inmates. Of the inmates selected, 831 were men (83%) and 174 were women (17%). Unfortunately, none of the female inmates were ever officially cited for prison rioting so they were excluded from the study (54 male inmates had been cited for rioting). Admittedly, this limits the generalizability of the current findings to male inmates incarcerated within correctional facilities of the state. The majority of the men (54%) were members of racial minority groups and the remaining 46% were white. The average age of inmates was 34 yr. (range of 16 to 78 years).

##### *Variables and Measures*

*Criminal history or career variables.*—Nine criminal-career variables were used because prior research indicated an empirical relationship between these constructs and involvement in prison violence. All were operationalized with

Likert-type scales having anchors of 1 (very low risk) and 5 (very high risk) by the Department of Corrections' classification and diagnostic unit. Confinement history ( $M=2.1$ ,  $SD=1.1$ ) quantified the risk each inmate posed based on the extensiveness of his incarceration record. Based on prior research (Wooldredge, 1991, 1994; DeLisi, 2003), the hypothesized effect is that risk based on confinement history positively predicts prison violence. Previous arrest history ( $M=2.0$ ,  $SD=1.2$ ), probation and parole history ( $M=2.2$ ,  $SD=1.0$ ), violence history ( $M=1.9$ ,  $SD=1.1$ ), and weapons history ( $M=1.9$ ,  $SD=1.1$ ) were risk factors which encompassed various features of the inmate's criminal career. Escape risk score ( $M=1.7$ ,  $SD=.8$ ) quantified dangerousness an inmate posed to the general public should he escape from prison. Severity of offense ( $M=3.0$ ,  $SD=1.0$ ) measured the violence used in the inmate's instant conviction offense. Prior investigators (Flanagan, 1983; Wooldredge, 1991; DeLisi, *et al.*, 2004) have reported offenders convicted of more serious crimes were disproportionately involved in prison violence. Similarly, inmates with more extensive substance-abuse histories ( $M=2.2$ ,  $SD=1.0$ ) were hypothesized as greater risks to engage in prison violence (Flanagan, 1983). Finally, street-gang history ( $M=1.5$ ,  $SD=.8$ ) was included based on its empirical relation to inmates' violence (MacDonald, 1999; Fleisher & Decker, 2001; Gaes, *et al.*, 2002).

*Social demographic variables.*—Five social demographic variables were included in the analyses because the importation model posits that pre-confinement characteristics predict subsequent misconduct, so they should similarly affect prison behavior. It has consistently been found that young (Flanagan, 1983; Goetting & Howsen, 1986; Wooldredge, 1991, 1994; Hochstetler & DeLisi, 2005), foreign national (Gaes, *et al.*, 2002; Camp, Gaes, Langan, & Saylor, 2003), and nonwhite inmates (Wooldredge, 1994; Harer & Steffensmeier, 1996) were significantly more dangerous prisoners than older inmates and white inmates. Inmates' age was operationalized as a risk factor ( $M=1.7$ ,  $SD=1.0$ ). Dichotomous terms coded residents' alien status (0 United States National, 1 non-U.S. National, 89% U.S. citizen, 11% non-U.S. citizen), and three racial/ethnic groups (Black, Latino, and White).

*Social risk factors.*—Additional sociological risk factors have also been linked to involvement in prison violence (Wheeler, 1961; Bottoms, 1999), so additional covariates included inmates' educational status ( $M=2.8$ ,  $SD=1.1$ ), vocational history ( $M=3.4$ ,  $SD=.8$ ), occupational skills ( $M=3.6$ ,  $SD=.8$ ), and a residency risk scale by which familial and social support that the inmate had was measured ( $M=1.7$ ,  $SD=1.1$ ).

*Infraction/misconduct history.*—Investigators have reported inmates' violence stems from involvement in illicit prison activities or an overarching antisocial career (Wang & Diamond, 1999; DeLisi, 2003, 2005; Homant & Witkowski, 2003; Hochstetler & DeLisi, 2005). As such, inmates who engage in

prison riots might simply be those who also engage in generalized forms of institutional misconduct. To control for these risk factors, official infraction counts for 19 institutional offenses encompassing violence, property damage, noncompliance, and insubordination were included. These included homicide ( $M=.0$ ,  $SD=.1$ ), rape ( $M=.0$ ,  $SD=.1$ ), aggravated assault ( $M=.2$ ,  $SD=.7$ ), escape ( $M=.0$ ,  $SD=.2$ ), arson ( $M=.0$ ,  $SD=.3$ ), possession of a prison weapon (e.g., knife) ( $M=.2$ ,  $SD=.8$ ), threatening staff ( $M=.3$ ,  $SD=1.0$ ), fighting ( $M=.2$ ,  $SD=.8$ ), possession of drugs ( $M=.6$ ,  $SD=1.8$ ), disobeying orders from staff ( $M=3.3$ ,  $SD=5.4$ ), obstructing staff operations ( $M=.3$ ,  $SD=.8$ ), theft ( $M=.3$ ,  $SD=.8$ ), disrespecting an officer ( $M=.3$ ,  $SD=.8$ ), unauthorized physical contact with staff ( $M=.0$ ,  $SD=.1$ ), gambling ( $M=.0$ ,  $SD=.2$ ), disorderly conduct ( $M=.1$ ,  $SD=.3$ ), possession of contraband ( $M=.2$ ,  $SD=.7$ ), bartering ( $M=.2$ ,  $SD=.7$ ), and being in an unauthorized area of the facility ( $M=.5$ ,  $SD=1.4$ ).

*Institutional risk factors and remaining controls.*—Seven covariates pertaining to institutional risk factors, length of sentence, and time served rated risk for security-threat group history ( $M=2.1$ ,  $SD=.4$ ), prior adjustment to confinement ( $M=1.7$ ,  $SD=1.1$ ), number of detainers or correctional wants or warrants from other agencies ( $M=1.3$ ,  $SD=.7$ ), and overall institutional risk ( $M=2.8$ ,  $SD=.7$ ) measured inmates' magnitude of threat to correctional safety and stability. Others (e.g., Zamble, 1992; Cao, *et al.*, 1997) have noted misconduct is most likely to occur in the earliest stages of confinement as inmates learn to adjust to prison life. The diagnostic unit constructed a scale to assess each inmate's adjustment during initial classification ( $M=1.3$ ,  $SD=.7$ ). To control for time served, a proxy for opportunity to engage in prison misconduct, two measures were used. Length of sentence ( $M=2.8$ ,  $SD=1.2$ ) assessed the risk posed by an inmate based on the amount of time served for the current sentence. A dichotomous term for sentence length ( $M=.9$ ,  $SD=.3$ ) indicated whether the inmate was eligible for release (0 for life imprisonment or death sentence or 1 for determinate sentence). Approximately 87% of inmates were serving fixed sentences, and the average sentence length was over four years (range was 4 mo. to 70 yr.). The remaining 13% of inmates would not be released barring commutation or some other method of extraordinary release. These controls are important because the relationships among sentence length, time served, and prison misconduct have produced mixed results. Some reported inmates serving shorter sentences are more prone to misconduct (e.g., Flanagan, 1980; Wooldredge, 1991), while others observed inmates serving lengthier sentences engage in more misconduct (e.g., Goetting & Howsen, 1986).

#### *Analytic Strategy*

An official citation for prison rioting ( $M=.1$ ,  $SD=.3$ , measured in

counts), defined as "inciting or participating in a riot, disturbance, demonstration or work stoppage" was the dependent variable. In the state in which these data were collected, prison rioting is a Group A violation and carries an assortment of penalties, such as 0 to 15 days in detention, loss of all good time, placement in more restrictive parole classification, loss of privileges, restitution, reprimand, and other duties or restrictions of confinement.

Prison rioting is binary coded (0, has not received an official infraction for rioting; 1, has received an official infraction for rioting). Logistic regression is the appropriate analytical technique for a dichotomous, binary-coded dependent variable that represents the log of the odds of having been cited for prison rioting. The probability of prison rioting can be assessed with the formula:

Probability (Inmate Involvement in a Prison Riot) =  $e^{\beta_0 + \beta_1 x_1} / [1 + e^{\beta_0 + \beta_1 x_1}]$  where the coefficients  $\beta_0$  and  $\beta_1$  are estimated by the method of maximum likelihood (Bachman & Paternoster, 1997, p. 666). The regression diagnostic of ( $M$  VIF = 2.59) indicated that multicollinearity was not a problem.

#### RESULTS

As shown in Table 1, the model produced mixed findings on the utility of individual-level inmates' characteristics in explaining involvement in prison riots. Nine significant effects emerged. Infractions for criminal violations were the most robust predictors of prison rioting, specifically weapons possession (OR = 4.88,  $z = 5.92$ ,  $p < .001$ ), theft (OR = 2.13,  $z = 3.69$ ,  $p < .001$ ), threatening staff (OR = 1.61,  $z = 2.86$ ,  $p = .004$ ), and drug possession (OR = 1.23,  $z = 2.15$ ,  $p = .03$ ). A fifth criminal infraction, arson, was negatively related to prison rioting (OR = .002,  $z = -4.70$ ,  $p \leq .001$ ). None of the remaining infraction offenses were significant predictors of prison rioting; including two of interest, inmates with violations for fighting (OR = 1.53,  $z = 1.49$ ,  $p = .137$ ) and homicide (OR = 40.48,  $z = 1.46$ ,  $p = .145$ ).

The infraction effects are noteworthy because they present criminal violations. The bulk of inmate misconduct is comprised of relatively benign violations of prison rules and procedures related to insubordination (Bottoms, 1999; DeLisi, 2003). Of course, officials also have greater discretion in citing and sanctioning these offenses, but none, including disobeying, obstructing, and disrespecting an officer, statistically influenced riot involvement. Among the other covariates, social risk factors were significantly related to prison rioting. Inmates assessed as low risk on work skills (OR = 0.19,  $z = -3.61$ ,  $p < .001$ ) and those with poor vocational history (OR = 3.78,  $z = 3.06$ ,  $p = .002$ ) were more likely to riot. Only one of the criminal history or criminal career measures was significantly related to prison rioting albeit in the unexpected direction. Arrest history (OR = 0.46,  $z = -2.16$ ,  $p = .03$ ) was negatively related to prison rioting as inmates who were scored as low risk

were more likely to riot. Although the model ( $\chi^2_{44} = 159.77$ ,  $p < .001$ ) produced an assortment of null and counterintuitive findings, the overall explained variance was 40%. Full regression output appears in Table 1.

TABLE 1  
LOGISTIC REGRESSION MODEL FOR PRISON RIOTING (N = 831)

Variable	Odds Ratio	SE	z
Criminal History			
Severity of offense	1.54	.53	1.26
Arrest history	.46	.17	-2.16†
Weapons history	.77	.26	-0.79
Violence history	.92	.25	-0.31
Confinement history	1.35	.41	1.00
Probation/parole	1.15	.38	-0.65
Street gang	1.38	.48	0.95
Substance abuse history	1.19	.33	0.63
Escape	1.67	2.20	0.39
Social Demographic			
Race/black	.40	.47	-0.79
Race/Hispanic	5.08	4.82	1.75
Race/white	1.60	1.58	0.47
Alien status	1.71	.99	0.91
Age	1.70	.74	1.24
Social Risk			
Education	.59	.19	-1.65
Vocational	3.78	1.64	3.06‡
Work skills	.19	.09	-3.61‡
Residency	1.34	.34	1.17
Infraction History			
Threaten staff	1.61	.27	2.86†
Homicide	40.50	102.71	1.46
Rape	6.85	11.78	1.12
Aggravated assault	.65	.29	-0.96
Arson	.002	.003	-4.70‡
Weapons possession	4.88	1.30	5.92‡
Fighting	1.53	.43	1.49
Drug possession	1.23	.12	2.15†
Disobey officer	.95	.05	-0.81
Obstruct officer	1.26	.30	0.98
Theft	2.13	.44	3.69‡
Disrespect officer	1.30	.30	1.13
Gambling	.18	.29	-1.05
Disorderly conduct	1.49	.84	0.70
Physical contact staff	1.08	1.19	0.07
Contraband possession	.97	.24	-0.12
Bartering	1.26	.37	0.81
Unauthorized area	.84	.12	-1.24

(continued on next page)

† $p < .05$ . ‡ $p < .01$ .

TABLE 1 (CONT'D)  
LOGISTIC REGRESSION MODEL FOR PRISON RIOTING (N = 831)

Variable	Odds Ratio	SE	z
Institutional Risk			
Sentence	5.65	6.62	1.48
Time served	.91	.25	-0.36
Detainers	1.78	.80	1.28
Prior adjustment	.78	.26	-0.74
Security threat group	.99	1.09	-0.01
Adjust classification	.71	.38	-0.65
Institutional risk	.76	.38	-0.55
Model $\chi^2$	159.80		
Log likelihood	-119.90		
Pseudo $R^2$	.40		

† $p < .05$ . ‡ $p < .01$ .

#### DISCUSSION

Prison rioting is a critically important area of research given the enormous human, fiscal, and systemic costs riots inflict. Most prisoners and correctional staff live in fear of them, and a prison riot strikes at the very legitimacy of the criminal justice system, rightfully sparking correctional reform (Useem & Kimball, 1989; Acorn, 1991). Based on a probability of 831 male inmates selected from a southwestern area of the United States, the current study was done to identify aspects of inmates' misconduct that relate to prison riots. The exploratory analyses indicated maybe individual inmates' characteristics, specifically infractions and social risk factors, are promising variables to incorporate into theoretical and empirical investigations of rioting in correctional facilities.

Methodological limitations of the current study should be considered before delving into the substantive importance of the findings. First, the generalizability of the findings is limited to male inmates from one state. Although the current dataset contained female inmates, the incidence of rioting among women was zero, so they were omitted from the analyses. Investigators should strive to obtain diverse samples, heterogeneous by sex, race, and ethnicity, criminality, infraction history, and geographic region to replicate these analyses.

Second, the data were cross-sectional, so examining stability of study variables over time was not possible. This could explain some of the current null effects. For instance, a number of studies (Gendreau, *et al.*, 1997; Gaes, *et al.*, 2002; Homant & Witkowski, 2003; DeLisi, *et al.*, 2004) have shown that preprison measures of criminal history, such as arrest record, history of violent crimes, prison history, prior convictions, and the like, were among the most important predictors of inmates' violence and misconduct. Yet in

the current study, these factors were not significantly related to the prison rioting. However, it is likely that preprison measures of criminal history were mediated by facility-level variables for which, unfortunately, data were lacking. For instance, inmates' classification, security, and housing are not random phenomena inside prisons. It is likely that inmates who posed the greatest risks were placed in more administratively secure housing units and thereby were limited from initiating or participating in a riot. Prior researchers (DeLisi, *et al.*, 2004) reported that inmates with histories of involvement in street gangs and security-threat groups were placed in secure units which limited their ability to interact with other inmates, let alone participate in a riot. This could also explain the unexpected negative effects of arson misconduct on prison rioting. Indeed, penologists (e.g., Camp & Gaes, 2005) have reported classification systems of inmates are very effective at placing offenders appropriately into facilities in which security procedures and inmates' risk are matched. With longitudinal data empirical examination of linkages between importation factors (e.g., criminal history), inmates' classification, and deprivation variables (e.g., security-level of prison) would be possible. Regrettably, no control for facility security was feasible as relatively frequent transfers of inmates occurred between facilities.

Concomitantly, the current analyses contain only individual-level measures of inmates so no assessment of potential connections of inmate and facility on rioting was made. Indeed, penological investigations of inmate behavior must include both individual and structural variables to permit more sophisticated multilevel analyses (Wooldredge, Griffin, & Pratt, 2001). It is particularly important to integrate literature on prison riots as it is steeped in the structural tradition with literature on inmates' infractions which emphasizes individual factors, such as those examined here.

Despite these important caveats, the current model explained 40% of the variation in prison rioting among male prisoners sampled from one southwestern state in the USA. This is an impressive empirical feat with individual-level data and can be placed into context by comparing the current results to recent structural or institutional-level investigations of prison riots. For instance, Useem and Reisig's comparative study (1999) of the inmate-balance and administrative breakdown explanations explained just 20% of the variation in correctional rioting. Moreover, several theoretically important structural variables, such as crowding, security, inmate organization, and administrative practices, were not related to rioting. Clearly, inmates' characteristics contribute to the empirical study of prison riots. Although the current study explicitly focused on inmates' characteristics as correlates of prison rioting, other criminologists are certainly aware of their potential. For example, Useem and Kimball (1989) interviewed inmates who had participated in prison riots and noted that they were disturbed people who were

prone to behave erratically and often violently. Methodological and theoretical advances have called for the unification of individual (e.g., importation) and structural (e.g., deprivation) theories to arrive at integrated explanations of inmate behavior. A similar integration is needed for the empirical study of prison riots, events which are among the most destructive, costly, and calamitous in criminal justice.

## REFERENCES

- ACORN, L. R. (1991) Camp Hill riots lead to Pennsylvania DOC overhaul. *Corrections Today*, 53, 72-74.
- BACHMAN, R., & PATERNOSTER, R. (1997) *Statistical methods for criminology and criminal justice*. New York: McGraw-Hill.
- BERK, R. A., LADD, H., GRAZIANO, H., & BAEK, J. (2003) A randomized experiment testing inmate classification systems. *Criminology & Public Policy*, 2, 215-242.
- BOTTOMS, A. E. (1999) Interpersonal violence and social order in prisons. *Crime and Justice*, 24, 205-281.
- CAMP, S. D., & GAES, G. G. (2005) Criminogenic effects of the prison environment on inmate behavior: some experimental evidence. *Crime and Delinquency*, 51, 425-442.
- CAMP, S. D., GAES, G. G., LANGAN, N. P., & SAYLOR, W. G. (2003) The influence of prisons on inmate misconduct: a multilevel investigation. *Justice Quarterly*, 20, 501-534.
- CAO, L., ZHAO, J., & VAN DINE, S. (1997) Prison disciplinary tickets: a test of the deprivation and importation models. *Journal of Criminal Justice*, 25, 103-113.
- CLEMMER, D. (1940) *The prison community*. New York: Holt, Rinehart, & Winston.
- COLVIN, M. (1992) *The penitentiary in crisis: from accommodation to riot in New Mexico*. Albany, NY: SUNY Albany Press.
- DI IULIO, J. J. (1987) *Governing prisons: a comparative study of correctional management*. New York: Free Press.
- DELISI, M. (2003) Criminal careers behind bars. *Behavioral Sciences and the Law*, 21, 653-669.
- DELISI, M. (2005) *Career criminals in society*. Thousand Oaks, CA: Sage.
- DELISI, M., BERG, M. T., & HOCHSTETLER, A. (2004) Gang members, career criminals, and prison violence: further specification of the importation model of inmate behavior. *Criminal Justice Studies*, 17, 369-383.
- FLANAGAN, T. J. (1980) Time served and institutional misconduct: patterns of involvement in disciplinary infractions among long-term and short-term inmates. *Journal of Criminal Justice*, 8, 357-367.
- FLANAGAN, T. J. (1983) Correlates of institutional misconduct among state prisoners: a research note. *Criminology*, 21, 29-39.
- FLEISHER, M. S., & DECKER, S. H. (2001) An overview of the challenge of prison gangs. *Corrections Management Quarterly*, 5, 1-9.
- GAES, G. G., WALLACE, S., GILMAN, E., KLEIN-SAFFRAN, J., & SUPPA, S. (2002) The influence of prison gang affiliation on violence and other prison misconduct. *Prison Journal*, 82, 359-385.
- GENDREAU, P., GOGGIN, C. E., & LAW, M. A. (1997) Predicting prison misconducts. *Criminal Justice and Behavior*, 24, 414-431.
- GOETTING, A., & HOWSEN, R. M. (1986) Correlates of prisoner misconduct. *Journal of Quantitative Criminology*, 2, 49-67.
- GOLDSTONE, J. A. (2001) Toward a fourth generation of revolutionary theory. *Annual Review of Political Science*, 4, 139-187.
- GOLDSTONE, J. A., & USEEM, B. (1999) Prison riots as micro-revolutions: an extension of state-centered theories of revolution. *American Journal of Sociology*, 104, 985-1029.
- HARER, M. D., & STEFFENSMEIER, D. J. (1996) Race and prison violence. *Criminology*, 34, 323-351.
- HAYNER, N. S., & ASH, E. (1940) The prison as a community. *American Sociological Review*, 5, 577-583.
- HOCHSTETLER, A., & DELISI, M. (2005) Importation, deprivation, and varieties of serving time: an integrated-lifestyle-exposure model of prison offending. *Journal of Criminal Justice*, 33, 257-266.
- HOMANT, R. J., & WITKOWSKI, M. J. (2003) Prison deviance as a predictor of general deviance: some correlational evidence from Project GANGMILL. *Journal of Gang Research*, 10, 65-75.
- HUEBNER, B. M. (2003) Administrative determinants of inmate violence: a multilevel analysis. *Journal of Criminal Justice*, 31, 107-117.
- IRWIN, J., & CRESSEY, D. R. (1962) Thieves, convicts and the inmate culture. *Social Problems*, 10, 142-155.
- LOVELL, D., & JEMELKA, R. (1996) When inmates misbehave: the costs of discipline. *Prison Journal*, 76, 165-179.
- MACDONALD, J. M. (1999) Violence and drug use in juvenile institutions. *Journal of Criminal Justice*, 27, 33-44.
- MCCORKLE, R. C., MIETHE, T. D., & DRASS, K. A. (1995) The roots of prison violence: a test of deprivation, management, and 'no-so-total' institution models. *Crime and Delinquency*, 41, 317-331.
- REISIG, M. D. (1998) Rates of disorder in higher-custody state prisons: a comparative analysis of managerial practices. *Crime and Delinquency*, 44, 229-244.
- SCHRAG, C. (1954) Leadership among prison inmates. *American Sociological Review*, 19, 37-42.
- STEPHAN, J. J., & KARBERG, J. C. (2003) *Census of state and federal correctional facilities, 2000*. Washington, DC: U.S. Department of Justice, Office of Justice Programs, Bureau of Justice Statistics.
- SYKES, G. M. (1958) *The society of captives: a study of a maximum security prison*. Princeton, NJ: Princeton Univer. Press.
- USEEM, B. (1985) Disorganization and the New Mexico Prison Riot of 1980. *American Sociological Review*, 50, 677-688.
- USEEM, B., & GOLDSTONE, J. A. (2002) Forging social order and its breakdown: riot and reform in U.S. prisons. *American Sociological Review*, 67, 499-525.
- USEEM, B., & KIMBALL, P. A. (1989) *States of siege: U.S. prison riots, 1971-1996*. New York: Oxford Univer. Press.
- USEEM, B., & REISIG, M. D. (1999) Collective action in prisons: protests, disturbances, and riots. *Criminology*, 37, 735-760.
- WANG, E. W., & DIAMOND, P. M. (1999) Empirically identifying factors related to violence risk in corrections. *Behavioral Sciences and the Law*, 17, 377-389.
- WHEELER, S. (1961) Socialization in correctional communities. *American Sociological Review*, 26, 697-712.
- WOOLDREDGE, J. D. (1991) Correlates of deviant behavior among inmates of U.S. correctional facilities. *Journal of Crime and Justice*, 14, 1-25.
- WOOLDREDGE, J. D. (1994) Inmate crime and victimization in a southwestern correctional facility. *Journal of Criminal Justice*, 22, 367-381.
- WOOLDREDGE, J. D., GRIFFIN, T., & PRATT, T. C. (2001) The relevance of hierarchical models for empirical study of inmate behavior. *Justice Quarterly*, 18, 901-929.
- ZAMBLE, E. (1992) Behavior and adaptation in long-term prison inmates: descriptive longitudinal results. *Criminal Justice and Behavior*, 19, 409-425.

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