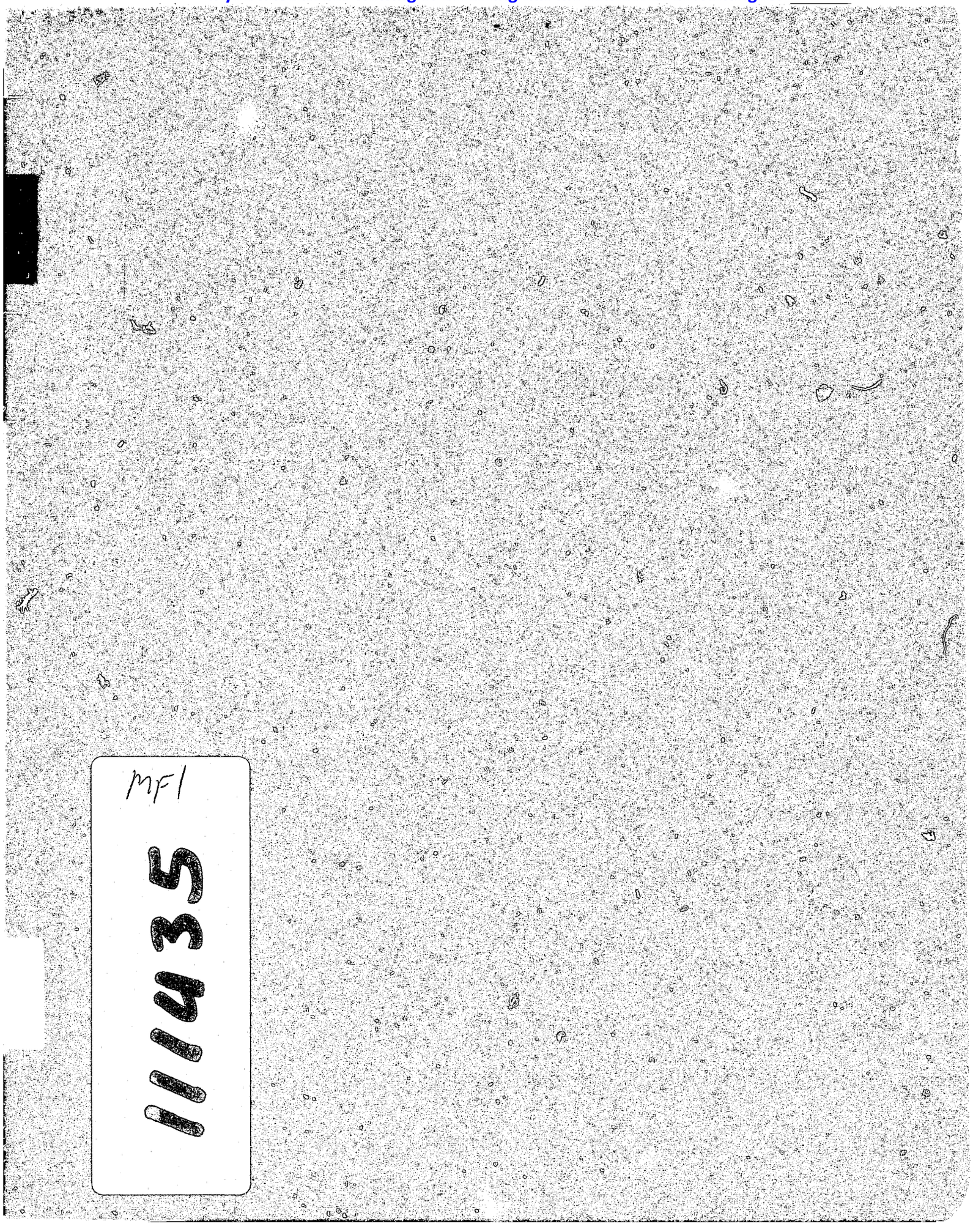

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INDIVIDUAL AND CONTEXTUAL EFFECTS ON INMATE ASSAULTS ON STAFF*

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Stephen C. Light
Old Dominion University

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ABSTRACT

Utilizing data from the New York State prison system, this study examines individual-level (inmate) and contextual-level (prison) characteristics as predictors of inmate assaults on staff. Separate sub-analyses examine 1) inmate's odds of assault involvement, and 2) severity of assault incidents. Results indicate that inmate attributes influence the odds of assault involvement, but not the severity of assaults. Prison-level factors influence both the odds of assault involvement and severity. The importance of studying variables at multiple levels is stressed.

INTRODUCTION

Beginning in the 1940s, several influential studies were undertaken that applied careful sociological scrutiny to the previously hidden world of the penitentiary. Most important among these are the works of Clemmer (1940), and, later, Sykes (1958).

Out of the work of Sykes and others (i.e., Goffman, 1961) came a body of theory and research known as the indigenous origin or deprivation approach. Research in this tradition has focused attention on inmate adaptations to unpleasant aspects of the prison environment arising from caste-based inequalities of power and authority. In short, according to this view, the prison creates the deviant.

An alternative explanation was developed by Irwin and Cressey (Irwin and Cressey, 1962; Irwin, 1970). Scoring Sykes and his followers for an overemphasis on the influence of the prison milieu, Irwin and Cressey advocated a complementary focus on the socialization processes that inmates experience before entering the prison world. It is a mistake, they argued, to see most inmate activity as arising in adaptation to prison conditions. Rather, inmates are also subject to pervasive influences of previous socialization from parents, peers, school, and other agents, just as all members of society are subject to the same influences. In this view, inmates enter prison as products of previous socialization experiences that are conducive to deviant behavior in prison just as these same experiences are conducive to deviant behavior on the street. Irwin's approach has become known as the direct importation model.

Following the development of the two theoretical approaches, a series of studies were conducted in order to analyze their implications

(see Thomas and Petersen, 1977). These studies produced a good deal of information regarding the development of prison inmate social structures, but they failed to explicitly address the theories' implications concerning the appropriate level of analysis of variables. Ellis et. al. lamented this state of affairs in their important 1974 paper: "The possibility that valuable insights into inmate behavior may be gained by measuring and relating properties of groups and of individuals has been largely ignored" (17).

Since that time, some research has examined variables at both individual and aggregate levels. None, however, has included variables of both types in a simultaneous design, a strategy which is necessary if their relative effects are to be evaluated. The present paper therefore, represents a first attempt at elaborating the implications of importation and deprivation theories regarding multilevel variables through explicit inclusion of multilevel indicators in a simultaneous design.

THEORETICAL PERSPECTIVES AND LEVELS OF ANALYSIS

The logic of contextual analysis is founded on the assumption that attributes of an organization or group may influence the behavior of members of that group, and that these contextual-level effects operate independently of characteristics of individual group members.[1] An example from Peter Blau (1960) highlights the uniqueness of individual and contextual ("structural") influences:

> The structural effects of a social value can be isolated by showing that the association between its prevalence in a community or group and certain patterns of conduct is independent of whether an individual holds this value or not.... If we should find that regardless of whether or not an individual

> has an authoritarian disposition, he is more apt to discriminate against minorities if he lives in a community where authoritarian values prevail than if he lives in one where they do not, we would have evidence that this social value exerts external constraints upon the tendency to discriminate--structural effects that are independent of the internalized value orientation of individuals.

In the present study, it is recognized that the importation and deprivation theoretical perspectives, when viewed together, imply the use of a contextual-analysis model of prison inmate behavior. First, since importation-related factors are generally descriptive of individual prison inmates, most empirical indicators implied by importation theory are measured at the individual (inmate) level of analysis. An inmate's previous history of violent behavior, for example, may be indicated by his possession of a prior criminal record, which is an individual-level variable. Deprivation-related influences, on the other hand, tend to be operative at the contextual (prison) level. Overcrowding or density, for example, is a condition experienced in common by all inmates at a given prison facility, and is therefore represented by a variable measured at the prison, and not the inmate, level. Variables that are created by aggregation over all of a prison's inmates represent an exception to the above scheme. These aggregated characteristics, although describing an influence at the prison level, represent the combined effects of inmate characteristics which are "imported" into the prison environment. Attributes that are aggregated over all of a prison's inmates, therefore, are best viewed as representing processes of importation rather than deprivation. An example is mean inmate age.

INDIVIDUAL-LEVEL (INMATE) CHARACTERISTICS

It is clear that age plays a strong role in the etiology of inmate violence at both individual and contextual levels. Younger inmates can be expected to behave more violently than older inmates, and prisons that house higher proportions of younger inmates can be expected to exhibit higher rates of inmate violence than prisons whose inmates are older.

Ellis et. al. (1974), note that aggression is often seen by inmates as instrumental -- as a way of acquiring material goods, status, sexual favors, or other scarce prison commodities. Younger inmates tend to reward aggressive behavior by conferring status, while older inmates often tend to look down upon overt aggression, seeing it as unwise in many situations. In their pioneering study of the North Carolina prison system, Ellis and his associates found age to be a strong predictor of inmate aggression at the individual level, and of prison aggression rates at the aggregate level of analysis. Skelton (1969) examined the differences between inmates who had assaulted staff members during a 1968 riot at the El Reno, Oklahoma penitentiary and inmates who had acted to defend staff members. He found the difference in mean age between assaulters and defenders to be significant, with assaulters tending to be younger. In Davis's (1968) study of sexual assaults in the Philadelphia correctional system, both victims and aggressors were generally younger than other inmates. Flanagan (1983) studied data from 758 inmates who were released from 14 prisons in a Northeastern state during the years 1973-1976. Using the annual disciplinary infraction rate as the dependent variable, he found age at commitment to be the strongest correlate of infraction frequency. Porporino and Dudley (1984) examined rates of

violent inmate incidents at each of 24 prisons in the Canadian system, where the average age of the inmate population was found to be significantly correlated with the dependent variables.

In contrast to findings for age, research results concerning individual-level and prison-level effects of race are ambiguous. At the individual level, the question is whether members of one racial group have individually higher probabilities of becoming involved in violent incidents than do members of other racial groups. Several studies have found no significant race effect at this level (Ellis et. al., 1974; Skelton, 1969; Adams, 1977). In fact, Ellis et. al. (1974: 38-39) conclude that "Race would not seem worth including in an individual-level theory because it is neither directly nor indirectly related to aggressive behavior." Although two studies did find race to have an effect, both found that this influence may be due to a propensity of guards to report blacks more than whites (Poole and Regoli, 1980; Bolte, 1978) and to perceive black inmates to be more dangerous than white inmates (Held and Swartz, 1979).

The logic of the importation approach suggests that a further important influence on challenges to staff authority is the inmate's pre-prison history of violence. This argument is straightforward: those inmates who were violent outside of prison will be the most likely to exhibit similar behavior while incarcerated.

Research findings, surprisingly, have been mixed. Skelton (1969) found that, as compared with inmates who defended officer hostages in a prison riot, inmates who had assaulted other hostages were more likely to have engaged in assaults outside of prison. In addition, assaulters had

histories of crimes against persons while defenders generally had prior records of property-related offenses. Skelton concluded from his analysis that "The judgment of potential for violence on the basis of past assaultive behavior is realistic" (Skelton, 1969: 360). A recent prison-level study by Gaes and McGuire (1985), using rates of four types of inmate assault as dependent variables, found only one indicator of prior record to have any effect. The first indicator, percentage of inmates with a crime against persons, was positively related to assault rates. The second, average number of preincarceration commitments, was not. Flanagan's (1983) analysis of individual inmate data from 14 prisons in a Northeastern state showed offense type to be a significant predictor of participation in infractions. In addition, the assaulter group in Quinsey and Varney's (1977) study of Canadian maximum security psychiatric units significantly differed from the non-assaulter group in terms of having a greater likelihood of criminal behavior prior to hospital admission.

Contrasting with the above are a number of studies that have reported negative findings. Carr (1980) found no effect of prior record at either individual or aggregate levels, although results concerning his dependent variable are ambiguous since it is a measure of total infractions committed by inmates, regardless of seriousness or type of infraction.[2] No effect, on disciplinary infractions, of percent inmates committed for crimes against persons was found on the aggregate level by Cox and his associates (Cox et. al., 1984). Adams' (1977) study of North Carolina inmates found prior record to be non-significant in differentiating between high-infraction and low-infraction groups.

The importation perspective leads theorists to search for indications that prison inmates have had experience with deviant groups and activities before entering prison. One such characteristic is a history of drug addiction or drug abuse, which is prima facie evidence that the inmate has participated in illegal activities. In addition to the fact that heroin and other hard drugs are illegal, those who use such drugs must often support their addiction by engaging in theft or other criminal activities in order to earn the necessary funds. Inmates who have participated in repeated extra-legal drug-related activities can be expected to associate themselves with prison drug sales and use, activities which may lead to violence as inmate leaders attempt to maintain favorable market conditions and as buyers and sellers endeavor to preserve their rights and territories.

ORGANIZATIONAL-LEVEL (PRISON) CHARACTERISTICS

Inmates in today's prisons are generally no longer subjected to the brutal bodily punishments and tortures of past ages (Bowker, 1980; Foucault, 1977; Jacobs, 1977; Rothman, 1971).[3] However, Sykes (1958) and Goffman (1961), among others, have emphasized that the prison environment has always exerted a subtle yet profound brutalizing influence on its inmates.

> [The deprivations of the modern prison]... are less easily seen than a sadistic beating, a pair of shackles on the floor, or the caged man on a treadmill, but the destruction of the psyche is no less fearful than bodily affliction... (Sykes, 1958: 64).

An implication of the deprivation model is that organizations can and do change the persons within them, and that this process occurs

regardless of the characteristics that such persons bring into the organization with them. A striking confirmation of this hypothesis was provided by Zimbardo (Haney et. al., 1973), who set up a mock prison at Stanford University, using randomly assigned college students as inmates and guards. After a short period the project was abandoned because both "inmates" and "guards" began to experience traumatic effects, with several student inmates becoming passive, withdrawn, and "zombie-like," and student guards displaying cruelty and the capricious abuse of power.

In the dangerous world of the prison, many interactions -- between inmates or between inmates and staff -- carry the implication of threat. Although the majority of interactions proceed smoothly and are routine, the possibility always exists that the next encounter will involve aggressive or provocative behavior. The number of interactions that must be negotiated, and the type of person who must be dealt with in them, are influenced by several prison-level factors. First among these influences is the size of the prison's inmate population. It is a simple fact of mathematics that the more persons in a given space, the greater the potential number of two-way interactions possible among them. However, research bearing on this issue has been sparse. Megargee (1977) examined the effects of prison size on incident reports at the Federal Correctional Institution at Tallahassee. Although a significant correlation was found between size and the number of incident reports, this relationship disappeared when the rate of incident reports (per hundred men) was substituted and the amount of available space was partialled out. Farrington and Nuttall's (1980) analysis of British prisons uncovered a tendency for larger prisons (over 400 inmates) to have lower rates of

inmate assaults, but the authors suggest that this may be due to a tendency of staff at larger institutions to "turn a blind eye to all but the most flagrant violations." Farrington and Nuttall further conclude that "The widespread belief [that size influences inmate behavior] is not based on empirical evidence." Paulus et. al. (1981), however, found that institutions with higher absolute numbers of prisoners produce nearly ten times as many suicides per inmate as smaller prisons.

Ellis (1984) suggests that increased prison population levels make the staff's job of controlling inmates more difficult, and that "Associated with decreases in the effectiveness of social control strategies is an increase in violent interactions." Paulus et. al. (1981) similarly warn that increases in prison population size can be expected to lead to "social disorganization," where the presence of many strangers results in a lessening of the clarity of roles and role expectations.

Just as the size of a prison's population affects the number of interactions between organizational incumbents, the degree of overcrowding (density) influences the number of interactions that must be successfully negotiated. Experimental research with human subjects has shown that density may have little direct effect on human behavior but that it often acts in conjunction with other variables to produce significant effects. Griffitt and Veitch (1971) found that, among 121 college students, high density and high temperature act to increase antisocial feelings. Freedman et. al. (1972) observed no direct effect of density but found that in high density conditions males become more aggressive and females less so. Similar findings were observed by Stokols and his associates (1973). Galle et. al. (1972), using data on community areas

of Chicago, attempted to replicate the findings of an earlier study by Calhoun (1962). They found that, after social class variables were controlled, neighborhood density effects reduced to zero. Other researchers have shown high density in prisons to be related to the frequency of disciplinary infractions (Megargee, 1977), institutional misconduct (Nacci et. al., 1977; Jan, 1980), recidivism (Farrington and Nuttall, 1980), assaults (Gaes and McGuire, 1985), illness complaint rates, death rates, suicide rates (McCain et. al., 1980), and negative reactions to the living environment (Paulus et. al., 1981).

Reviews of the density literature are critical of extant research. Lawrence (1974) concludes that "There is no clear demonstrable relationship between high density and aberrant human behavior...", while Ellis' (1984) review leads him to support the view that density and infraction rates in prison are associated. Both Ellis (1984) and Smith (1982) conclude that previous density models have been inadequate and that further conceptual clarification and model specifications are needed.

Whereas size and density may act to increase the number of potentially dangerous interactions between prisoners and between prisoners and staff, the amount of inmate transiency serves to make such interactions as do occur more problematic. Transiency, the rate at which inmates enter and leave the prison, causes more interactions to be conducted with strangers, thus lessening even further any predictability and routinization that has developed. New inmates enter to begin their sentences or as transfers from other prisons. They leave as they are paroled, released, or as they die. Temporary periods of time are spent away from the prison at court appearances, work sites, furloughs, or for stays at

outside hospitals or clinics. The prison guard force is also in a constant state of change, with new officers arriving to replace those who have resigned, retired, died, or who have been injured. Prison transiency levels therefore include both inmate and guard components.

Ellis (1984) has noted that transiency is a factor often associated with loss of inmate control over social interaction patterns and their predictability. The many and varied aspects of the prison's social structure which inmates come to depend upon may be rendered problematic by the presence of many new faces, which may lead to the loss of market ties (such as implicit credit relationships), an undermining of personal trust in processes of social exchange, and a general loss of predictability in everyday interaction.

Although a theoretical case for transiency effects has been proposed, the only study to date that has empirically examined this issue is Porporino and Dudley (1984). Operationalizing transiency in terms of transfers and releases, their research suggests that prisons with the highest transiency scores tend to exhibit the highest rates of violence.

A further prison-level factor that can be expected to lead inmates into rule-breaking activities is the absence of programming available for inmate involvement. During the past decade, prison programming has failed to keep pace with burgeoning population levels and, as a result, inmates are often left idle for extended periods of time.

An institution's relative emphasis on program availability may be measured by its ratio of program to custody staff members. This variable, suggested by Gaes and McGuire (1985), taps the dimension of inmate idleness, which may act to increase the frequency and severity of

challenges to staff authority. Ellis et al. (1974) examined the effects of inmate idleness in both felon and misdemeanant prisons. Idleness, operationalized as "total number of activities provided by the correctional facility," did not reach statistical significance as a predictor of aggressive transactions in the 29 felon facilities studied. However, in misdemeanant facilities only, idleness accounted for nearly two-thirds of the explained variance. The only other variable in the model to directly affect aggressive transactions was the percentage of inmates with a parole date one year or more away. Interestingly, age was the strongest predictor of aggressive transactions in the felon prisons, but idleness was strongest in misdemeanant prisons.

Prisons are often classified by corrections administrators as maximum security, medium security, or minimum security facilities, with these designations corresponding roughly to the physical security of architectural features. Although the effect of prison security level on inmate violence is unclear, it may be reasonable to expect that the more a prison conforms to the stereotype of the walled fortress, the greater the level of violence there if for no other reason than that a self-fulfilling prophecy may be operative (Schrag, 1977).

The presence of a strict social control atmosphere on the other hand might seem to result in a lessening of inmate violence, but research bearing on this issue has not been conclusive. In fact, Bidna's (1975) has been the only research to date which addresses the effects of increased social control measures on violence rates. His report shows that, in the California prisons studied, a strengthening of institutional

security policies had no effect on rates of fatal stabbings or assaults on staff.

Existing research has identified other variables that may operate as contextual influences on inmate violence levels. Since these prison characteristics describe each prison environment and point to ways in which prisons differ within the same prison system, they are assumed to represent contextual variations related to processes suggested by the deprivation approach.

One class of such variables concerns the effects of time, which of course is a primary concern in inmates' lives (Irwin, 1970; Toch, 1977). Sentences are meted out in units of time, and parole hearings (which hold out the hope of early release) are set for certain regular dates. Ellis et. al. (1974) have pointed to the possible effects of the amount of time remaining until an inmate's parole hearing date. Both Ellis et. al. (1974) and Ekland-Olson et. al. (1983) recognize the potential importance of the presence of many inmates who have long periods of time left to serve.

An additional prison-level influence concerns facets of the relationships between guards and inmates. The ratio of white guards to nonwhite inmates, for example, hints at the dichotomy existing between the culture of the officers and those of the inmates in their charge. Some evidence exists (see Marquart, 1986) to suggest that white correction officers in particular may exhibit more unofficial punitive violence directed at inmates, and that such incidents are routinely justified by accusing the inmate victim of assault.

The state of prison affairs may be influenced by the tenor of relations between administration and lower-level staff. Variables which tap this dimension include staff turnover, the presence of relatively inexperienced guards, and the rate of disciplinary terminations of officers. Prison institutions also vary in terms of staffing levels. The staff/inmate ratio is a variable that measures the extent to which prisons are operating with less than a full complement of staff, with potential consequences for both security and program areas.

DATA

The data analyzed here are drawn from the archives of the New York State Department of Correctional Services and describe all inmates under the jurisdiction of the New York prison system during a one-year period (1983), along with characteristics of the facilities where these prisoners are housed.[4] In order to examine multilevel influences, data are gathered at both inmate and prison levels.

Dependent variables in this analysis are, first, the presence or absence of each inmate's involvement in an alleged assault upon a member of the prison staff, and second, the severity of the assault. Independent variables are drawn from previous empirical research and theory. These variables are implied by both the importation and deprivation perspectives and represent characteristics of individual prison inmates (Figure 1) and of prison contexts (Figure 2). Analyses reported here proceed in several stages. First, inmates who were reported to have engaged in an assault are compared with their non-assaultive peers. Second, the assault incidents are examined in terms of the severity of

their outcomes. Whenever possible, both inmate-level and prison-level attributes are examined simultaneously.

FACTORS DISTINGUISHING ASSAULTIVE AND NON-ASSAULTIVE INMATES

Of the 29,688 male inmates under the jurisdiction of the New York State Department of Correctional Services at the close of 1983, 600 were reported to have assaulted a prison employee during that year. This proportion results in a highly skewed distribution of the assaulter variable, which precludes the use of familiar Ordinary Last Squares (OLS) regression techniques. An appropriate alternative method is logit analysis.

Following the method suggested by Fienberg (1977), various logit models were examined in a hierarchical fashion in order to identify a model that best fits the observed data. All models include three individual-level (inmate) variables: age, race, and crime type. These variables were identified in preliminary analyses as important predictors of inmate assaulter status. The crime type variable is a proxy for inmates' pre-prison involvement in deviant behavior and, along with race and age, serves to indicate influences related to processes implied by the importation theoretical perspective. A prison variable is also included. This indicator was created by coding the prison in which each inmate is incarcerated, and serves to indicate the extent of overall contextual-level prison effects.

Table 1 illustrates the results of an estimation of logit effects for parameters of the best-fitting model. As the table shows, both inmate-level and prison context variables affect inmates' odds of being

involved in an assault on a member of the prison staff. Examination of the rightmost column of Table 1 suggests that inmate race is related to involvement in assault incidents. As compared to white inmates, being black multiplies an inmate's odds of involvement by 1.294, while being hispanic multiplies his odds by 1.188. Crime type is also shown to be important. Inmates who have been convicted of a violent crime (against persons) are approximately one and one-half times as likely to assault prison staff as inmates convicted of a property crime. Not surprisingly, younger inmates are more likely to become involved in assaults than are older prisoners. Inmates aged 16-29 experience an increase in their odds of becoming an assaulter by a factor of 1.347 in comparison to inmates 30 years of age or older.

In addition to the three individual-level variables in the model (age, race, and crime type) the overall contextual effect of prison location is examined. As compared to prison M9 (the reference category), six of the thirteen prisons examined act to increase the odds of inmate assault involvement and six act to decrease these odds. For example, transferring from prison M9 to prison X1 multiplies the odds of an inmate becoming involved in an assault on staff by 2.280, while transfer to prison X7 reduces these odds by a factor of .524. The importance of the prison estimates lies in their effects above and beyond those of the individual-level variables included in the model. In other words, prison context is shown here to be related to odds of assault involvement even when individual characteristics of inmates are taken into account.

Since these analyses have shown that being incarcerated in a certain prison exerts a contextual effect on each inmate's odds of involvement in

an assault on staff, one might then ask which specific characteristics of certain prisons exert these contextual influences. In order to examine this issue, preliminary logistic regression equations (not shown) were estimated for each prison-level variable (see Figure 2) in the model. Each equation includes the three inmate-level variables serving as baseline indicators, and also includes one prison-level variable, which is either an aggregated inmate characteristic (such as percent white, for example) or a global prison characteristic that has no inmate-level counterpart (such as density).[5]

Results of the logistic regression estimations indicate that of the 26 prison-level variables examined, only three exhibit an important effect on assaulter status. These are prison security level, mean length of inmate maximum sentence, and overcrowding (density). Therefore, all inmates (regardless of their age, race, or previous history of violence) may be expected to experience increased odds of becoming involved in an assault on a member of the prison staff if the prison to which they are sentenced is a maximum-security institution, contains a high proportion of inmates who are serving long sentences, or is overcrowded. Analysis of these prison-level factors is ongoing as of this writing, but the preliminary results discussed above affirm that both individual-level and contextual-level (inmate and prison characteristics) are operative in determining the odds that a prison inmate will assault a member of the prison staff.[6]

PREDICTORS OF ASSAULT SEVERITY

In order to examine predictors of assault severity (Table 2) at the multiple levels of inmate and prison, a multi-stage contextual analysis strategy is employed.[7] At the first stage, a multiple regression equation is estimated, with inmate's severity score as the dependent variable. Independent variables are inmate-level characteristics, with dummy variables added to represent the overall influence of each prison context. At this stage, the relative effects of inmate-level characteristics may be observed, and coefficients for the prison variables indicate the overall effect of each prison context on assault severity, net of the effects of the individual-level attributes included in the model. After the first regression equation has been estimated, the unstandardized regression coefficients for the prison variables become the values of the dependent variable at stage two. At this second stage, correlations between the prison coefficients (the dependent variable) and specific prison attributes serve to identify aspects of the prison context which influence the severity of assault incidents. The unit of analysis at this stage is the prison context (N=14).

This method of contextual analysis, developed by Alba (see Blau and Alba, 1982), offers several advantages over more traditional techniques. Whereas a single-equation method is commonly used, the present method allows a clearer exposition to be made of individual and contextual effects. In addition, the number of degrees of freedom present in the equation is always easy to determine. The degrees of freedom for the individual-level equation equals the number of individuals, and the degrees of freedom for the contextual-level equation equals the number of contexts.

Table 3 displays the N of cases, means, and standard deviations for variables in the model. Correlations among these variables are displayed in Table 4.

In Table 5 the results of the regression estimation are presented. It is evident from these estimations that inmate-level attributes included in the model do not significantly affect the severity of assaults on prison staff. The R^2 statistic for the individual-level variables taken alone (equation without prisons) is .02, a small figure, and none of the coefficients for these variables approach statistical significance. For inmates who have been accused of assaulting a member of the prison staff, then, personal characteristics do not significantly influence the severity of their most serious assault. Individual-level variables found to be unrelated to assault severity include race, age, type of crime, previous prison or jail sentence, number of prior arrests, and drug use history.

On the right side of Table 5 results of the equation including prison variables are shown.[8] When prison contextual influences are taken into account, inmate-level characteristics remain unimportant, as indicated by the non-significant value of the sheaf coefficient, which summarizes the effect of a block of variables and which is analogous to a standardized regression coefficient (Heise, 1972).[9]

Coefficients for the prison variables represent effects of the various prison environments on incident severity, with the inmate-level attributes in the equation held constant. In the equation with prisons included (Table 5), the prison variables contribute a significant increment to the amount of variance explained by the equation. The sheaf

coefficient for the prison variables taken as a block is significant at the p=.01 level, and the magnitude of the R^2 statistic has increased substantially to .12 (p = .001).

The coefficients in this table therefore suggest that inmate-level characteristics of race, age, crime type, recidivism, crime severity, number of prior arrests, and drug use history explain little of the variance in severity of assaults, but chat contextual attributes of prisons do influence the relative severity of assault outcomes. These findings confirm that additional analyses of specific attributes of the prison environment are warranted.

CHARACTERISTICS OF PRISON CONTEXT

In Table 6, initial results of the stage two analyses are displayed. At this stage, each attribute of prison context is correlated with the unstandardized regression coefficients (bSEV) for the prison dummy variables taken from stage one (see Table 5).[10] This correlation serves as an indicator of the relationship between the specific prison attribute and the severity of the incidents, net of the effects of individual-level variables in the model.

The first column of coefficients in Table 6 displays zero-order correlations between prison bSEV coefficients and prison-level attributes. These statistics identify prison-level contextual factors that are related to assault severity.

A careful examination of the table reveals that many of the prison context variables exhibit high intercorrelations with mean inmate age. As the first column of Table 7 indicates, most of these intercorrelations

with mean age are at the .55 level or greater. For example, the variables serving as indicators of aggregated inmate deviance history (mean number of previous arrests, percent recidivists, and percent inmates with drug abuse history) are each correlated with mean inmate age at .90 or above. The presence of such high correlations between mean age and other independent variables in this analysis precludes the attribution of observed effects on assault severity to any one specific age-related variable. It is possible, however, to view age-related prison attributes as acting together to influence the severity of assaults.

The second column of Table 6 displays partial correlation coefficients for the relationship between bSEV and each prison attribute, controlling for mean age. The only prison contextual attribute to remain significantly associated with bSEV, when mean inmate age is held constant, is social density. The correlation between bSEV and most prison variables reduces to non-significance in the face of controls for mean age.

The zero-order correlation between bSEV and mean inmate age is -.64, which is substantial. The stability of this coefficient is highlighted by the coefficients presented in the second column of Table 7 which examine the results when partial correlations are computed between bSEV and mean inmate age with each prison attribute used separately as a control variable. In the face of such controls, the partial correlation coefficients remain very close to the value of the zero-order correlation, except in cases where the control variable is one that is highly correlated with mean age. These results suggest that the observed relationship between aggregate inmate age and assault severity is not

explained by other contextual variables included in the model, and provides further evidence that the contextual influence of mean inmate age is not spurious.

As indicated in column two of Table 6, the only attribute of prison context to show a significant association with assault severity, after mean inmate age, is social density level, which is related to bSEV in a positive direction. That is, inmate assaults on staff that take place in overcrowded prisons tend to be more serious than incidents occurring in less dense prisons.

The far right column of Table 7 displays the partial correlation coefficients between bSEV and density, with each contextual variable once again introduced separately as a control in an attempt to "explain away" the relationship. As with the inmate age variable, the correlation of bSEV with density is remarkably stable in the face of controls for other contextual factors, lending additional support to the conclusion that prison density levels positively influence the severity of assaults on staff.

Several variables are highly correlated with density in these data. Specifically, the percent of inmates with one year or more remaining until parole hearing date (r=-.69 with density) and prison security level (r=.70 with density) are sufficiently correlated with density to call into question the ability of a correlational analysis to reliably identify their separate effects. The results shown here do suggest, however, that prison density, and factors related to density, act to exacerbate the severity of assaults directed at prison staff.

Results of the partial correlation analysis lend support to the originally-hypothesized relationships between assault severity and aggregated inmate age, and between assault severity and social density level. It is clear that reported incidents of assault on prison employees are most serious in prisons that are overcrowded and in prisons that possess characteristics related to the youthfulness of the inmate population (lower mean age, higher percentage of black inmates, lower mean number of previous arrests, higher percentage of inmates with a history of drug abuse, higher rate of misbehavior reports per inmate, and greater emphasis on program availability.

On the one hand, the lack of inmate-level effects on assault severity suggests that individual-level or "imported" characteristics are not influential in determining the outcome of authority-challenge incidents. The severity of inmate challenges to guard authority is found to vary independently of the individual-level attributes of inmates involved. On the other hand, attributes of the prison context are very important in shaping the outcome of these interactions. One such prison-level attribute is an aggregation of inmate characteristics -- inmate youthfulness. As such this prison-level attribute is best viewed as an indicator of the processes associated with importation theory. Inmate age, therefore, does not act to influence assault severity at the individual level, but it is a major predictor of assault severity at the aggregate or prison level.[11] The other prison-level attribute that is found to be a significant predictor of assault severity -- density -- is a variable implied by the deprivation approach. It is a characteristic of prison environments and has no corresponding inmate-level counterpart.

Density and mean age effects observed in the severity analyses confirm hypothesized relationships set forth in the theoretical model. The lack of effect of inmate characteristics on assault severity, however, is surprising. We know from results presented earlier that certain of these inmate-level attributes are prime determinants of the odds of inmates becoming involved in assaults on staff. Once the inmate assaulters have been chosen, however, characteristics of the prison context act to determine the outcome of the authority-challenge interaction. It is as if the actors are chosen on the basis of their abilities and prior experience, but the character of the play is determined by attributes of the troupe as a whole and by peculiarities of theaters in which it is performed.

DISCUSSION

A measure of caution is appropriate when evaluating the implications of these results. Important in this regard are the presence of high coorelations among certain of the independent variables, which is a common problem encountered in multilevel analyses. Although it is possible to identify the presence of broad contextual processes related to groups of correlated variables, collinearity does not permit fine distinctions between unique effects of certain specific variables. In addition, any study of contextual-level influences must assume that the individual-level model is fully specified. To the extent that important individual-level variables are inadvertently omitted from the model, estimates of contextual effects may be misleading (Blalock, 1979).

This study has demonstrated that both individual-level and contextual-level factors may operate simultaneously to influence the behavior of prison inmates, and that such influences may be viewed as direct implications of the importation and indigenous origin (deprivation) theories of prisoner action. It is suggested that a close affinity exists between connotations of the two theories and contextual models, which implies that explanations of inmate action which do not account for both inmate and prison attributes may be incomplete.

Research utilizing contextual models suggests that the whole organizational environment may truly be more than (or less than, or simply different from) the sum of its individual parts. Public policy implications of such results have not been fully specified, and should not be hastily constructed given the complexity of human behavior within organizational contexts.

Theoretical inferences may clearly be drawn, however. Nearly forty years have passed since Kendall and Lazarsfeld (1950:196) reminded us that "Just as we can classify people by demographic variables or by their attitudes, we can also classify them by the kind of environment in which they live." The idea is straightforward, and may be seen as a logical extension of Durkheim's (1938) insistence on the reality of social facts. In this light, the present study provides evidence that the contextual-effects model may constitute a conceptual framweork within which the two traditional theories of prison inmate behavior may be joined. Full specification of a combined theoretical structure is beyond the scope of this paper, but further elaboration of this scheme might bring researchers and policy makers closer toward improved explanations of prison-

centered behavior, and therefore closer toward the discovery of effective means of improving the dismal quality of prison existence.

NOTES

1. Early expositions of the logic of contextual analysis may be found in Kendall and Lazarsfeld (1955), P.M. Blau (1957, 1960), and Davis et. al., (1961). For an extended discussion of the methodological and statistical bases of contextual analysis see Boyd and Iversen (1979).

2. Carr's infraction variable includes both violent and nonviolent incidents, ranging from contraband to assault. Relative frequencies are not reported.

3. For a recent account of routine punitive violence directed at inmates by guards in a Texas prison, see Marquart (1986).

4. The author wishes to express his gratitude to Mr. Frank Tracy, Director of Program Planning, Research, and Evaluation at the New York State Department of Correctional Services in Albany. Mr. Tracy was instrumental in providing access to the data analyzed in the present study.

5. Since the N of cases is small at this stage (N=13 prisons), each equation includes only one contextual variable at a time, except where additional variables are included as controls.

6. For a more detailed analysis of these data in relation to specific prison contextual factors predicting assaulter status, see Light (1988).

7. The severity item used here is based on a similar measure developed by David Aziz of the New York State Department of Correctional Services.

8. Due to the skewed distribution of the severity measure, it is possible that a logarithmic transformation of this variable might yield more valid and reliable results. In order to examine whether in fact this is the case for the present data, the analyses reported in Table 5 were re-analyzed after logarithmically transforming the severity variable. No appreciable differences were observed between the two analyses.

9. The sheaf coefficient was introduced by Heise (1972) as a measure of the effect of a block of variables taken as a whole. It is estimated according to the formula:

$$p^2 = B^2_{w1} + B^2_{w2} + B^2_{w3} + 2(B_{w1}B_{w2}r_{w1w2} + B_{w1}B_{w3}r_{w1w3} + B_{w2}B_{w3}r_{w2w3})$$

where:

p = the sheaf coefficient,
B_{w1}, B_{w2}, and B_{w3} are standardized regression coefficients,
r_{w1w2} = the correlation coefficient between variables 1 and 2,
r_{w1w3} = the correlation coefficient between variables 1 and 3,
r_{w2w3} = the correlation coefficient between variables 2 and 3.

This formula, which is for the case of three independent variables, is simply extended for equations involving an additional number of variables.

The statistical significance of the sheaf coefficient is evaluated by examining the increment to R^2 produced by the variables as a block, with the null hypothesis being that the sheaf coefficient equals zero (see Heise, 1972: 161-163 and Blalock, 1979: 494 for formulas).

10. The coefficient for the omitted category (Prison M9) is included in the correlations at stage two with a value of zero.

11. One may ask whether a prison-level attribute, created by aggregating over an individual-level characteristic, should be considered an importation variable if the corresponding inmate-level characteristic is not found to be a significant correlate of the dependent variable. Should mean age (the prison-level variable) be treated as an importation variable if inmate age (the inmate-level variable) does not exert a significant effect?

The position taken here is that the inmate-level and prison-level variables are logically and empirically distinct. The fact that the aggregated variable is created from an "imported" characteristic makes it theoretically closer to the processes of importation than of deprivation.

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Figure 1. Independent Variables Characteristic of Individual Prison Inmates

Variables
Age of Inmate
Race of Inmate
Previous Deviant History:
Crime Type (Person or Property)
Seriousness of Crime of Conviction
Drug Abuse History
Recidivist (Previous Jail and/or Prison Sentence)
Number of Previous Arrests

Figure 2. Independent Variables Descriptive of Prison Contexts

AGE:
- Mean Age of Inmates

RACE:
- Percent Black Inmates
- Percent Hispanic Inmates
- Percent White Inmates

INMATE PREVIOUS DEVIANCE HISTORY (Aggregated)
- Mean Number of Previous Arrests
- Percent Recidivists (Previous jail or prison sentence)
- Percent With Drug Abuse History
- Percent Incarcerated for a Violent (against persons) Crime
- Mean Severity of Crime For Which Sentenced

TIME-RELATED VARIABLES:
- Mean Amount of Time Served
- Mean Sentence Length (Maximum Sentence)
- Percent Inmates With Parole Date Greater Than One Year Away

TRANSIENCY-RELATED VARIABLES:
- Percent of Total Inmates Admitted to Facility During Past Year
- Correction Officer Turnover) (Two times the number of Correction Officer separations during study period, divided by average Correction Officer staffing level)
- Percent Correction Officers With Less Than Two Years of Service

CROWDING:
- Social Density (Population divided by capacity)

SIZE:
- Number of Inmates (12/31/83)
- Capacity of Special Housing Unit(s) or Cell Blocks

INMATE SATISFACTION/DISSATISFACTION:
- Number of Misbehavior Reports per Inmate
- Inmate Grievances Filed per Inmate

CORRECTION OFFICER SATISFACTION/DISSATISFACTION:
- Correction Officer Grievances Filed per Officer

PROGRAM AVAILABILITY AND IDLENESS:
- Ratio of Program Staff to Inmates
- Correction Officer Program Hours Spent per Inmate

GEOGRAPHIC LOCATION OF INMATES:
- Percent Inmates Sentenced From New York City

Table 1. Estimated Coefficients and Logit Effects for Best Fitting Model Predicting Assaulter Status

		Coefficient	S.E.	Additive Effect	Multiplicative Effect
	(Constant)	-2.101	.036	-4.202	.015
Race	Black	.129*	.033	.258	1.294
	Hispanic	.086*	.041	.172	1.188
	White	---	---	---	---
Crime Type	Property	-.104*	.028	-.208	.812
	Person	.104*		.208	1.231
Age	16-29	.149*	.026	.298	1.347
	30-64	-.149*		-.298	.742
Prison	X1	.412*	.057	.824	2.280
	X3	.068	.067	.136	1.146
	X10	.069	.072	.138	1.148
	X2	.194*	.074	.388	1.474
	X8	.332*	.064	.664	1.943
	X9	-.222*	.094	-.444	.641
	X7	-.323*	.101	-.646	.524
	X4	-.164	.108	-.328	.720
	M3	-.423*	.142	-.846	.429
	M7	-.113	.132	-.226	.798
	M5	-.138	.094	-.276	.759
	X5	.191*	.093	.382	1.465
	M9	---	---	---	---
		G^2 = 145.790	df = 139	p = .330	

* Coefficient $\geq$ twice its standard error

Table 2. Severity and Frequency of Inmates' Most Severe Assault-on-Staff Incident*

	Severity	f	%
1.	Thrown object: no injury	37	7.9
2.	Use of body: no injury	169	36.2
3.	Use of object: no injury	16	3.4
4.	Thrown object: minor injury	12	2.6
5.	Use of body: minor injury	125	26.8
6.	Use of object: minor injury	10	2.1
7.	Thrown object: moderate injury	4	.9
8.	Use of body: moderate injury	66	14.1
9.	Use of object: moderate injury	13	2.8
10.	Thrown object: serious injury	1	.2
11.	Use of body: serious injury	13	2.8
12.	Use of object: serious injury	1	.2
		467	100%

* For prisons containing six or more alleged inmate assaulters

Table 3. N of Cases, Mean, and Standard Deviation of Variables in Severity Model

Variable	N of Cases	Mean	s.d.
SEVERITY	467	4.270	2.665
*WHITE	541	.128	.334
*BLACK	541	.560	.497
*HISPANIC	541	.189	.392
AGE	475	27.383	6.650
CRIME TYPE	474	1.776	.417
RECIDIVIST	438	.772	.420
CRIME SEVERITY	463	4.434	1.527
PRIOR ARRESTS	473	1.930	1.201
DRUG USE HISTORY	466	1.410	.492
*PRISON:			
1. X1	105	(19.4%)	
2. X3	64	(11.8%)	
3. X10	60	(11.1%)	
4. X2	54	(10.0%)	
5. X8	74	(13.7%)	
6. X9	35	(6.5%)	
7. X7	23	(4.3%)	
8. X4	18	(3.3%)	
9. M3	8	(1.5%)	
10. M7	13	(2.4%)	
11. X6	6	(1.1%)	
12. M5	32	(5.9%)	
13. X5	31	(5.7%)	
14. M9	18	(3.3%)	
	541	(100%)	

* dummy variables

Table 4. Correlations Among Individual-Level Inmate Characteristics and Between Prison Context Dummy Variables and Inmate Characteristics

	VARIABLES	1	2	3	4	5	6	7	8	9	10
1.	SEVERITY	--									
2.	WHITE	-.07	--								
3.	BLACK	-.00	-.43	--							
4.	HISPANIC	.07	-.18***	-.54***	--						
5.	AGE	-.06	.10*	-.12**	.06	--					
6.	CRIME TYPE	-.06	-.01*	.10*	-.12*	.03	--				
7.	RECIDIVIST	-.06	-.03	.07	-.05	.25***	-.12**	--			
8.	CRIME SEVERITY	-.03	.00	.02	-.03	.12**	.45***	-.12*	--		
9.	PRIOR ARRESTS	-.04	-.04	.04	-.01	.32***	-.12***	.45***	-.19***	--	
10.	DRUG USE HISTORY	-.04	-.07**	.12*	-.08	.13**	.01	.04	-.04	-.03	--
	PRISON:										
11.	X1	-.11*	.01	-.01	.00	.05	.08	.08	.14**	.06	.06
12.	X3	.12*	.14	-.01	.04	.04	-.04	.07	-.03	.02	.06
13.	X10	-.02	-.05	-.02	.01	-.04	-.03	.09	-.02	.14**	-.00
14.	X2	.04	.02	-.08	.08	.06	.01	-.05	.09	-.06	.04
15.	X8	-.17*	.03	.05	-.05	-.02	-.00	.03	.00	.03	-.07
16.	X9	-.07	-.01	-.04	-.01	.22***	.02	.02	.10*	.01	-.06
17.	X7	.11*	-.05	.08	-.05	-.19***	.04	-.12*	-.02	-.10*	-.04
18.	X4	.16***	-.04	.08	-.06	-.20***	.04	-.14**	-.02	-.16***	-.06
19.	M3	-.04	.09*	-.05	.02	.06	.03	-.06	-.05	-.02	-.01
20.	M7	.11*	-.02	.02	.02	-.05	-.07	.02	-.05	.02	-.03
21.	X6	.05	.13**	-.05	-.01	.05	-.03	-.12**	.01	-.06	.02
22.	M5	.08	-.00	-.05	.04	-.08	-.02	-.16***	-.09	-.11*	.05
23.	X5	-.05	-.05	.07	-.04	.03	.05	.09	-.13**	.07	.01
24.	M9	-.01	.02	-.00	-.01	-.01	-.18	-.02	-.10	-.02	-.04

*p ≤ .05 **p ≤ .01 ***p ≤ .001

Table 5. Multiple Regression of Severity of Most Severe Assault on Individual-Level Variables and Prison Facility Dummy Variables

Independent Variables	Equation without Prisons			Equation with Prisons		
	B	b	s.e.	B	b	s.e.
WHITE	--	--	--	--	--	--
BLACK	.054	.2872	.315	.042	.2253	.305
HISPANIC	.092	.6233	.394	.080	.5453	.380
AGE	-.038	-.0154	.022	.012	.0047	.022
CRIME TYPE	-.058	-.3688	.351	-.054	-.3461	.346
RECIDIVIST	.012	.0769	.350	.055	.3470	.346
CRIME SEVERITY	-.007	-.0115	.097	.023	.0400	.097
PRIOR ARRESTS	-.048	-.1074	.128	-.013	-.0288	.125
DRUG USE HISTORY	-.038	-.2030	.269	-.049	-.2644	.262
		R^2 = .02 (n.s.)		Sheaf = .011 (n.s.)		
PRISON:						
1. X1		--		-.052	-.3499	.755
2. X3		--		.130	1.0727	.779
3. X10		--		.009	.0796	.789
4. X2		--		.068	.5998	.799
5. X8		--		-.114	-.8865	.768
6. X9		--		-.046	-.5031	.856
7. X7		--		.128	1.6951	.925
8. X4		--		.182	2.6957**	.985
9. M3		--		-.021	-.4680	1.238
10. M7		--		.111	1.9362	1.051
11. X6		--		.069	1.7541	1.372
12. M5		--		.105	1.1807	.860
13. X5		--		-.020	-.2258	.872
14. M9		--				
(Constant)		5.4516 (1.137)		4.6145 (1.259)		
				Sheaf = .37**		
				R^2 = .12***		

*p ≤ .05 **p ≤ .01 ***p ≤ .001

Table 6. Correlations Between Prison bSEV Coefficients and Specific Attributes of Prison Contexts (N=14)

Attribute	Context Variable	r	r Controlling: Mean Age	r Controlling: Density
Age	MEAN AGE	-.64***	---	-.67***
Race	% NONWHITE INMATES	.11	-.36	.17
	% BLACK INMATES	.45*	.04	.48**
	% HISPANIC INMATES	-.40*	-.37	-.39*
	% NONWHITE GUARDS	-.02	.11	-.18
	% BLACK GUARDS	-.01	.12	-.20
	% HISPANIC GUARDS	-.05	.03	-.11
	WHITE GUARDS/NONWHITE INMATES	-.05	-.05	.03
Aggregated Inmate Deviance History	MEAN # PREVIOUS ARRESTS	-.66***	-.23	-.73***
	% RECIDIVISTS	-.66***	-.23	-.68***
	% INMATES WITH DRUG HISTORY	.49**	-.30	.51**
	% SENTENCED FOR VIOLENT CRIME	.07	.03	.36
	MEAN SERIOUSNESS OF CRIME	-.20	.05	.00
Time	MEAN TIME SERVED	-.20	.26	-.11
	MEAN SENTENCE LENGTH (MAX)	-.31	.04	-.17
	% INMATES WITH 1 YEAR OR MORE TO PAROLE HEARING DATE	-.31	-.22	-.09
Transiency	% INMATES ADMITTED IN PAST YEAR	-.03	-.33	-.09
	CORRECTION OFFICER TURNOVER	-.05	.01	-.06
	% GUARDS WITH LES THAN 2 YEARS SERVICE	.01	.07	.03
Crowding	SOCIAL DENSITY	.37*	.43*	--
Size	SIZE (# OF INMATES)	-.25	-.09	-.13
	CAPACITY - SPECIAL HOUSING	-.05	-.28	.13
	OFFICER/INMATE RATIO	-.06	.01	-.18
Inmate Misbehavior	MISBEHAVIOR REPORTS PER INMATE	.51**	.01	.58**
	INMATE GRIEVANCES PER INMATE	-.19	-.00	-.08
Inmate Morale	ADJUSTMENT COMMITTEE HEARINGS PER INMATE	.49**	-.07	.53**
Officer Morale	OFFICER GRIEVANCES PER OFFICER	-.29	-.29	-.21
	ABSENCE HOURS PER OFFICER	-.22	-.22	-.26
Programs/ Idleness	# PROGRAM STAFF PER INMATE	.39*	.04	.51**
	OFFICER PROGRAM HOURS PER INMATE	.14	.19	.19
Inmate Location	% INMATES SENTENCED FROM NEW YORK CITY COURTS	-.05	-.22	.03
Security Level	(1=Medium, 2=Maximum)	-.03	-.07	.34

***p ≤ .01 **p ≤ .05 *p ≤ .10

Table 7. Correlation of Prison Density and Mean Inmate Age with Specific Attributes of Prison Contexts (N=14 Prisons), and Partial Correlation of Prison bSEV Coefficients with Density and Mean Inmate Age, Controlling for Prison Contextual Attributes.

Attribute	Context Variable	r Mean Age with...	r bSEV with Mean Age Controlling...	r Density with...	r bSEV with Density Controlling...
Age	MEAN AGE	1.00	---	-.05	.43*
Race	% NONWHITE INMATES	-.55**	-.70***	-.11	.38*
	% BLACK INMATES	-.66***	-.52**	-.00	.41*
	% HISPANIC INMATES	.19	-.63***	-.10	.36
	% NONWHITE GUARDS	.15	-.65***	.38*	.40*
	% BLACK GUARDS	.16	-.65***	.43*	.41*
	% HISPANIC GUARDS	.11	-.64***	.14	.38
	WHITE GUARDS/NONWHITE INMATES	.01	-.64***	-.19	.36
Aggregated Inmate Deviance History	MEAN # PREVIOUS ARRESTS	.93***	(a)	.05	.53**
	% RECIDIVISTS	.90***	(a)	-.06	.43*
	% INMATES WITH DRUG HISTORY	-.91***	(a)	.05	.39*
	% SENTENCED FOR VIOLENT CRIME	-.07	-.65***	-.56**	.49**
	MEAN SERIOUSNESS OF CRIME	.36	-.65**	-.54**	.31
Time	MEAN TIME SERVED	.57**	-.66***	-.27	.33
	MEAN SENTENCE LENGTH (MAX)	.53**	-.59**	-.48**	.26
	% INMATES WITH 1 YEAR OR MORE TO PAROLE HEARING DATE	.24	-.62**	-.69***	(a)
Transiency	% INMATES ADMITTED IN PAST YEAR	-.33	-.69***	.16	.38
	CORRECTION OFFICER TURNOVER	.09	-.64***	.04	.37
	% GUARDS WITH LES THAN 2 YEARS SERVICE	.06	-.64**	-.04	.37
Crowding	SOCIAL DENSITY	-.05	-.67***	1.00	---
Size	SIZE (# OF INMATES)	.28	-.62**	-.36**	.31
	CAPACITY - SPECIAL HOUSING	-.26	-.68***	-.42*	.38*
	OFFICER/INMATE RATIO	.09	-.65***	.29	.40*

Table 7. Continued

Attribute	Context Variable	r Mean Age with...	r bSEV with Mean Age Controlling...	r Density with...	r bSEV with Density Controlling...
Inmate Misbehavior	MISBEHAVIOR REPORTS PER INMATE	-.81***	(a)	-.06	.47*
	INMATE GRIEVANCES PER INMATE	.29	-.63**	-.33	.33
Inmate Morale	ADJUSTMENT COMMITTEE HEARINGS PER INMATE	-.81***	(a)	-.01	.43*
Officer Morale	OFFICER GRIEVANCES PER OFFICER	.10	-.65***	-.28	.31
	ABSENCE HOURS PER OFFICER	.07	-.64***	.07	.39
Programs/ Idleness	# PROGRAM STAFF PER INMATE	-.57**	-.56**	-.21	.50**
	OFFICER PROGRAM HOURS PER INMATE	.01	-.65***	-.09	.38*
Inmate Location	% INMATES SENTENCED FROM NEW YORK CITY COURTS	-.18	-.66***	-.23	.36
Security Level	(1=Medium, 2=Maximum)	-.04	-.64***	-.70***	(a)

***p ≤ .01 **p ≤ .05 *p ≤ .10

(a): partial correlation not computed due to high correlation of context variable with control variable (.70 or greater)