Simulating Correctional Disturbances: The Application of Organization Control Theory to Correctional Organizations via Computer Simulation

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Abstract

Inmate group behavior is a complex phenomenon that many researchers have attempted to understand. Most of the individual theories applied to this issue have had limited success. This work uses computer simulation to apply a complex theory of organizational control to the issue of inmate group behavior that incorporates all the major theoretical components found in the individual theories. The complete theory is first presented and then basic simulation results are discussed. The findings show that the simulated theory produced results that are empirically realistic. The control processes used by prisons generally produce compliance from inmates but these same control processes result in episodic periods of negative inmate group behavior. These initial results point to the promise of computer simulation for understanding complex control issues in ways simpler theories cannot.

Keywords:
Computer Simulation, Prison Management, Prison Riots, Organizational Control, Deterministic Systems, General Systems Theory

Introduction

1.1
All organizations must control and coordinate their members to achieve organizational objectives but correctional institutions have codified this into a principle goal. Control and coordination of inmates is ultimately the only effectively attainable goal of prisons and jails (Scharf, 1983) regardless of the rhetoric about punishment and rehabilitation. While all organizations experience disturbances in their control patterns, these disturbances are more visible and disruptive in correctional organizations because of their dependence on coercive control (Etzioni, 1975) to obtain inmate compliance.

1.2
Much of the research and theory on prisons has focused on riots and other disturbances, delineating the two as distinct phenomena (Irwin, 1980). This theoretical work approaches prison disturbances from an organizational control perspective (Patrick, 1991, 1993, 1995) postulating that compliance of members, in this case inmates, with the organization is the key process in control and coordination issues.

1.3

All organizations desire a certain level of compliance from members\(^2\). When members fail to meet this level of compliance organizational processes are invoked in a concerted, deterministic, effort to restore compliance. Considering that inmates are non-voluntary members, prison officials expect rather low compliance levels from them\(^3\). Collins (1988:452) refers to this type as "Dull Compliance". When inmates fail to meet these minimal levels of compliance the control mechanisms of the prison system operate to bring inmates back into compliance. For example, inmate resistance can be met with such responses as lock downs, reclassification, lose of good time or withdrawal of other privileges (Hamm, Coupez, Hoze and Weinstein, 1994). The greater the separation of inmates actual compliance from that level of compliance desired by the prison, the greater or more extreme the efforts taken by officials to restore compliance.

1.4

While prisons are in many ways a unique type of institution, they are organizations subject to all the constrains of other organizational types. They must obtain resources from their environments, they must use these resources to attain organizational objectives, and they must transfer and justify the quality of their outputs back into the environment. They differ only in the specific constrains placed on them from the outside, the nature of their raw materials, and the processes used to obtain organizational goals (Perrow, 1967; Etzioni, 1975). In a theoretical sense the correctional institution differs from other organizations more in degree than kind. Based on these assumptions, we believe a theory of organizational control developed primarily for material organizations can provide significant insights into the compliance patterns of prison inmates.

1.5

A number of traditional theories explaining prison riots and disturbances have been advanced (Martin and Zimmerman, 1990) and found to be premature or lacking at this point when applied to specific and general cases. Martin and Zimmerman (1990) classify these theories into 6 categories: environmental conditions (Fox, 1972), spontaneity (Mahan, 1985), conflicts, collective behavior/social, power vacuum (Barak-Glantz, 1985), and rising expectations (Gurr, 1972). While limited theoretical and empirical support is found for all six of these perspectives, Martin and Zimmerman (1990) argue that a general systems approach to prison riots incorporating parts of all of them would be more effective as a predictive theoretical model. The model advocated here is a step in the direction of a predictive systems model of prison disturbances. Behavioral controls in correctional organizations are highly complex and interactive. This is one reason most single theories are found to be lacking. Computer simulation is one tool by which multiple theories can be brought together and applied to a single topic. Culevier (1991) sees simulation analysis as one method that will be effective in understanding prison processes in the future.

Empirically Based Computer Simulation

2.1

The type of computer simulation used here is empirically driven continuous-time, continuous-state computer simulation. This type of simulation has long been used to model complex dynamic systems (Richardson & Pugh, 1981; Hanneman, 1988; Patrick, 1991). Complex verbal theories are first broken down and then translated into semi-mathematical equations. These equations are then simulated, in this case using Dynamo Professional Plus, and the resulting overtime trends and
patterns are analyzed. While verbal theories are informative, it is only through simulation that all their permutations can be seen over time.

2.2
Dynamo Professional Plus is a computer simulation program based on the general systems theories of Forester (1967) - the same systems theories as advocated by Martin and Zimmerman (1990). Dynamo is a semi-mathematical language consisting of four basic equation types with a large number of functions. Dynamo is a continuous-time, continuous-state simulation language but a number of the functions can be used to emulate discrete-state models. The four basic equations consist of levels, rates, auxiliaries, and constants. Levels are the central equation type. Levels accumulate over time from input, or output, from other equations. Levels are akin to storage tanks. Rates are flows of information from one location to another over time. Rates are akin to valves. Auxiliaries are similar to levels except that they do not accumulate over time. Auxiliaries have no memory of past states as levels do. Constants are predetermined values that do not change over the simulation of the model. Constants are often used to incorporate concepts and processes outside the boundaries of the model or set initial values.

2.3
Organizations, by their very nature, are organized structures with established goals. Organizations are designed to be deterministic, even if this determinism is of a limited nature (Simon, 1976). While organizations are not fully deterministic, and many theories look upon organizations as stochastic, we see organizations as actively pursuing goals. One of these goals, often unstated, is the control of organizational members. The acts of coordination and structuring, for example, are deterministic acts of member control. Based on this we believe deterministic simulation is the most effective method of computer simulation that can be applied to organizational control.

2.4
Additionally, the use of deterministic simulation in the form of Dynamo allows the incorporation of limited stochastic functions. Continuous-time, continuous-state simulation can mimic continuous-time, discrete-state simulation, and, as will be discussed later, the use of empirical data derived from multiple sources can make deterministic simulation mimic a form of pseudo-stochastic simulation. This makes the use of continuous-time models more flexible when dealing with complex, dynamic theories of this type.

2.5
While simulations is not new, the use of empirically driven simulation is a recent development (Patrick, 1991, 1995). Most simulations in the social sciences are theoretical in nature, focusing on the internal consistency of modeled theories. The parameters used to control the simulation are derived from theoretical constructs. The simulation used here uses empirical data gathered from the published literature to obtain empirical parameter estimates (Patrick, 1993). These empirical parameter estimates are used within the model equations to control the relationship between individual variables in the model. They appear in each equation as partial correlations between the modeled variable and each of the variables in the equation.

2.6
The simulation innovation presented in this paper involves the use of empirically driven simulation. All simulations must be parameterized but this method advocates the use of parameters drawn from existing empirical literature. The social sciences have accumulated massive amounts of data on almost every conceivable relationship in formal organizations. These data exist in the published literature.

2.7
The statistical procedure known as meta-analysis was developed as an alternative literature review
method (Hunter & Schmidt, 1980). Meta-analysis allows the statistical combination of existing findings into composite findings that are more reliable than any single empirical measurement. While meta-analytic tools exist to combine many different measures of association, the prevalence of correlations in the published literature lead us to select zero order correlations as the initial measure to be analyzed. Once multiple measures where extracted from the literature for the variables in the model, these zero order corrections were partialled using a standard statistical package, SPSSX, and the resulting partial correlations were then used to parameterize the simulation model. The parameter estimates are placed within the individual model equations to control the magnitude of the relationship between individual variables.

The Relationship between Control and Behavior

3.1 The control of member's behavior is a required goal of all organizations. Whether it is stated or not, if organizations cannot control the behavior of their members they cannot attain any other goals. Collins' work on organizational control is a synthetic work based on the work of others. Collins, taking off from Etzioni (1975) sees all organizations as having three basic methods available to control members behavior; coercive control, material control and normative control. These three control types can be traced back to Weber's (1922/1968) concepts of Power, Class and Status. While all organizations use all three types of control, one type will dominate and flavor the effects of the others. Prison are designed for and depend on coercion to control inmates. While prisons provide material goods, and often attempt to rehabilitate inmates, they are at their core coercive. The coercive foundation is one reason attempts at rehabilitation often fall short.

3.2 Organizations use different control mixes for various reasons. Correctional organizations can be characterized by the non-voluntary nature of inmate membership, by limited resources, and by conflicting goals (Scharf, 1983). Inmates are generally non-voluntary members of the prison. If given the opportunity, they would escape into society. This fact explains the predominance of coercion to control inmates. While correctional organizations are costly, in reality their resources are very limited, considering inmate resistance to control. If resources were unlimited, then we could envision a prison where security personnel outnumbered inmates and each inmate would have individual counseling and tutoring to improve their attitudes and change their behavior. This vision is not likely, and the lack of resources forces prisons to rely on coercion to obtain compliance.

3.3 While prisons protect society and punish criminals, they also are mandated to rehabilitate inmates; criminals sent to prison will eventually be released into society. One goal of prisons is to make the inmates better citizens. This goal is the most difficult to obtain because it requires the use of normative controls (Scharf, 1983; Collins, 1988). For inmates to be rehabilitated they must internalize the ideals of society, the very same ideals they violated in the first place. Rehabilitation is costly and time consuming. Additionally, the use of coercive and normative controls can be counter-active (Irwin, 1980; Toch, 1994). Coercion increases alienation, and alienation prevents the internalization of ideals. Correctional organizations find themselves in a Catch-22 situation and focus on the easiest goals to achieve with limited resources--punishment and separation from society (Scharf, 1983).

3.4 The control processes used in correctional organization are designed to control inmate behavior, and the behavior of inmates determines the extent to which controls are used by the organization. Each control type has a different relationship to behavior and reacts differently to changes in behavior patterns.
Inmate Behavior and Coercive Control

4.1

Theoretically, the use of coercion to control inmate behavior is seemingly straightforward. If members comply at or above the desired level, then coercion will not be used (Collins, 1988). If inmates become non-compliant then coercion will be used to restore compliance. While this may be true in theory, the relationship is more complicated in practice. While coercion cannot be taken back in the same way as extra clothing, coercion can take on a great many levels. Coercion in prison can range from threatening stares at inmates, to verbal abuse, to verbal threats of force, to actual physical force, as well as to any number of ordinally different levels between these acts (Irwin, 1980).

4.2

Different levels of coercion produce different reactions from inmates. One of the most important informal rules security personnel learn is what level of coercion to use in various situations. If inmates are physically beaten for every minor infraction, their behavior will eventually deteriorate. If an inmate is beaten regularly, because no one can follow all the rules all the time, then why shouldn't the inmates make the beatings worthwhile by really not complying? At the other extreme, if inmates are only given verbal threats for all rule violations, even physical assaults, they will continue to increase their level of noncompliance in search of the limits of negative behavior that will be tolerated by the prison authorities (Irwin, 1980; Toch, 1994). Based on theoretical rational, the following Dynamo equation, a Table function, is used to control the relationship between compliance and coercive control. This equation is represented graphically in Figure 1.

\[
\text{A COER.K=TABLEL(CTAB,COMPLY.K,-1,1,2)}
\]

\[
\text{COMPLY} \quad -1, -0.8, -0.6, -0.4, -0.2, 0, 0.2, 0.4, 0.6, 0.8, 1.0
\]

\[
\text{T CTAB} = 0.4, 0.3, 0.3, 0.2, 0.2, 0.2, 0.2, 0.1, 0.05, -0.1
\]
Figure 1: The Relationship between Compliance and the Control Processes

4.3 Generally, we see the pattern between compliance and coercive control as following that shown in Figure 1. The more negative inmate behavior becomes, the more extreme the coercive control will become. Extreme noncompliance will result in extreme coercion. As inmate behavior improves, coercion will not only decrease, but any coercion that does occur will begin to have different kinds of effects on the inmate's behavior. Inmates actively not complying may not like being coerced, but they will expect it. On the other hand, inmates making serious efforts to obey the rules will expect coercion to be minimal, and if more extreme coercion occurs, then inmates will react to this negatively (Barow, 1994).

Inmate Behavior and Material Control

5.1 While correctional organizations are dominated by coercive controls, prisons have significant caretaker duties (Collins, 1988). Prisons must supply inmates with food, housing, clothing, medical care, recreation, and so on. These material resources can be used to either punish or reward inmates. Inmates whose behavior meets or exceeds that expected by the prison will likely be rewarded with better jobs that bring more resources. These inmates may be given access to better food and greater freedom to engage in recreation (Marquart & Crouch, 1994). Inmates whose behavior falls below the desired level, or even becomes negative, can have their recreation rights curtailed. These inmates can be placed in solitary confinement where their food is limited in quantity and quality. Inmates can also be removed from their job assignments, or transferred out of their home cell environment (Marquart & Crouch, 1994).
5.2 Many of the reasons for prison disruptions are rooted in or triggered by the inmate's material conditions, such as their food and housing quality (Martin & Zimmerman, 1990). The relationship between most material sanctions and inmate behavior is straight forward. If inmates consistently comply with instructions, then they will be materially rewarded within the limits of the correctional environment. If inmates behavior is negative, then their material rewards will be reduced or taken away. In conditions of extreme noncompliance, correctional institutions may even interrupt power and water supplies to remove material resources from noncomplying inmates (Martin & Zimmerman, 1990). The following equation represents the table function for the compliance and material control relationship.

\[ A = \text{TABHL}(\text{MTAB}, \text{COMPLY}, -1, 1, 0.2) \]

\[
\begin{array}{cccccccccc}
\text{COMPLY} & -1.0 & -0.8 & -0.6 & -0.4 & -0.2 & 0 & 0.2 & 0.4 & 0.6 & 0.8 & 1.0 \\
\text{MTAB} & -0.4 & -0.3 & -0.2 & -0.15 & -0.1 & -0.05 & 0.1 & 0.2 & 0.25 & 0.15 & 0.05 \\
\end{array}
\]

5.3 Interestingly, as Figure 1 indicates, under extremely positive behavioral patterns material resources will begin to have negative effects on inmate compliance. No matter how much the organization rewards inmate compliance, and this is limited given scarce resources, the prison experience is nonvoluntary and alienating. The more resources inmates have, the more likely they will be to resist control attempts (Collins, 1988).

\section*{Inmate Behavior and Normative Control}

6.1 All organizations attempt to instill selected ideals in their members, but normative control is a two-edged sword (Collins, 1988). If members perceive these controls to be sincere, then they will be effective. But if members believe that the organization is lying, then the normative control attempts will backfire. Normative controls are doubly complex in coercive organizations, like prisons, due to competition between the organization and various inmate groups for ideological control (Irwin, 1980).

6.2 Normative controls can take two forms; rituals and sharing power. All attempts at rehabilitation are ritual normative controls designed to change the inmate's value systems (Collins, 1988). Privileges, such as trustee rights, can be considered a normative sharing of power (Collins, 1988). In some institutions this sharing of power has even included trustee inmates guarding other inmates (Marquart & Crouch, 1994). If inmates are giving orders to other inmates in the name of the organization, then they are more likely to identify with those orders. Due to the strong conflicting normative pull with internal inmate subcultures, normative controls in correctional organizations will not be highly effective in controlling inmates (Irwin, 1980). The only situation where organizational normative controls will be effective is through highly-compliant trustee inmates who share power with the organization. The major drawback here is that the organization may abdicate too much power to inmates and thus lose control of them in the process (Johnson, 1987). Much of the most coercive control applied in prisons has been applied by inmates on inmates in the name of the organization (Hamm et al., 1994). The following equation represents the table function for normative control and compliance.

\[ A = \text{TABHL}(\text{NTAB}, \text{COMPLY}, -1, 1, 0.2) \]
Generally, control in correctional organizations depends heavily on coercive controls. The relationships between inmate behavior and coercive controls is complex; if the interaction between compliance and control were isolated, a series of experiments could determine the best mix necessary to maximize compliance. Unfortunately, the relationship is more complicated and variable. The control processes interact with inmate behavior, but the controls and the control mix used are also the product of the organization's structure. Inmate behavior is not only affected by prison controls, but also by inmate subcultural interaction. The structure of the correctional organization and the interaction patterns of the inmate population also interact to create areas of conflict, such as conflicts over recreation, work, and scheduling decisions. Many variables directly and indirectly affect inmate group behavior. For discussion purposes, these structures and processes that affect the control processes of the organization can be divided into three groups: First, those variables that determine the structure of the organization; second, those variables that determine the interaction patterns of inmates; and third, those variables that mediate between the structure and inmate interaction. As each variable or concept is discussed the Dynamo equation or equations that produce it will be provided. The short Dynamo names appear in table 2 with their verbal names.

By looking at the relationships between the control processes and their antecedent causes, we can more fully understand inmate group behavior. The model presented here is highly complex and consists of almost fifty variables that interact dynamically with one another. The following discussion focuses on these variables and how they affect inmate group behavior.

Inmate Group Behavior

Controlling inmate behavior is a central goal of all correctional organizations (Irwin, 1980). While riots, disturbances, and disruptions are considered rare, hundreds have occurred in the American system in the past few decades (Montgomery, 1994). In reality, these behaviors only seem rare because they are currently difficult to predict and often occur without clear warning. That any of them occur is cause for concern, in that they can be an extremely costly phenomenon (Martin & Zimmerman, 1990). The goal of correctional controls is to maintain positive inmate behavior. A certain control mix exists in correctional organizations. These controls affect inmate group behavior, and inmate group behavior feeds back into the control processes, changing them. The following equations produce the compliance level of inmates. Compliance is produced by the three control types listed here. A list of Dynamo equation types appears in table 1.

Table 1: Dynamo Equation Types and Functions used in this Paper

<table>
<thead>
<tr>
<th>Equations</th>
</tr>
</thead>
<tbody>
<tr>
<td>L = Level</td>
</tr>
<tr>
<td>R = Rate</td>
</tr>
<tr>
<td>A = Auxiliary</td>
</tr>
<tr>
<td>C = Constant</td>
</tr>
<tr>
<td>N = Initial Value</td>
</tr>
<tr>
<td>T = Table</td>
</tr>
</tbody>
</table>

http://jasss.soc.surrey.ac.uk/2/1/1.html 25/08/2014
Functions
Min = Minimum Value
Max = Maximum Value
Delay = Use Value from Future Calculation

L COMPLY.K=COMPLY.J+DT*((COERCIVE.JK*COER.J)+
(MATERIAL.JK*MAT.J)+(delay1(NORM.J,1)*NOR.J))
N COMPLY=.1
R COERCIVE.KL=max((((COMPLY.K*-.43)-(descomp.k*.09))+
(TASKTYP.K*.58)+(STRUCTU.K*.53)+(DELAY1(CONFLICT.K,1)*.57)+
(NORM.K*-.43)+(MATERIAL.KL*.23))*(ORGRES*.5)),0)
N COERCIVE=.1
R MATERIAL.KL=((COMPLY.K*.73)-(descomp.k*.1))+
(TASKTYP.K*-.74)+(STRUCTU.K*-.66)+(CONFLICT.K*.14)+
(RCON.K*1)+(NORM.K*.76)+
(DELAY1(COERCIVE.KL,1)*.14)* (ORGRES*.75)
N MATERIAL=.1
L NORM.K=NORM.J+DT*(((COMPLY.J*.1)-(descomp.j*.11))+
(ORGRES*.26)
N NORM=.1
A DECOMP.K=(DC*.2)*(STRUCTU.K*.2)
C DC=.1
A RCON.K=(DELAY1(MATERIAL.KL,1)*.2)*(TASKTYP.K*.11)

7.2
As Figure 2 illustrates, these control processes are the result of three other sets of processes in the organization: conflictive, structural, and normative. Additionally, the extent of controls used will result in a comparison of actual inmate behavior to that level desired by the organization (Toch, 1994). The use of material control will also be affected by inmate efforts to control the allocation of material resources such as job allocations and other scarce resources (Marquart & Crouch, 1994). The conflictive, structural, and normative controls used, whether positive or negative, interact dynamically with inmate compliance and these other processes. This dynamic relationship will be discussed more fully in later sections of this work.
Conflictive Processes in Correctional Organization

8.1

While many organizations design policies and structures to reduce conflict, conflict is inherent in the process of control (Collins, 1988). This conflict is even more extreme in correctional organizations, given the nonvoluntary nature of inmate membership. Many of the control problems in correctional organizations result from conflicts between inmates and staff over control (Marquart & Crouch, 1994). These conflicts are predominantly the result of inmate alienation, coordination problems, and negotiation issues between the inmates and the organization. The process of conflict within correctional organizations is outlined in Figure 3. The basic equation for conflict is provided below.

A CONFLICT.K=((ALIEN.K*.35)+(COORD.K*-.21))*(NEGO.K*.4)
N CONFLICT=.1

Figure 2: Simplified Path Model of Inmate Group Behavior
(Nonrecursive and duplicate paths not shown to reduce visual complexity)
8.2

Alienation is the feeling of separation and powerlessness that has been illustrated most commonly by the factory assembly line worker (Collins, 1988). Alienation is most extreme in correctional organizations where inmates are separated from all they want and have limited power over their lives. Alienation will increase conflicts between inmates and staff over control issues (Lombardo, 1994). The equation for alienation is provided below.

\[ A_{ALIEN} = ((COMMON.K \times 0.18) \times (DELAY1(SURVEIL.KL,1) \times 0.17)) + (COUNTAG.K \times 0.17) \]
\[ N_{ALIEN} = .1 \]

8.3

Coordination of inmate's activities is variable, but extreme, in correctional organizations. This coordination is the scheduling of inmate activities, often down to a minute-by-minute basis. In some cases, such as minimum security institutions, inmates may be allowed to schedule some of their daily activities; and in other cases, such as maximum security institutions, inmates may have every moment of their daily activities controlled by the organization (Irwin, 1980). The isolated variable, coordination of activities, should have a U-shaped relationship with conflict. Without any coordination, albeit unlikely in correctional organizations, conflict will increase as goals are not met. As coordination increases conflict should drop, due to lack of opportunity for negative behavior. Inmates who are kept busy are less likely to become problems than idle groups of inmates (Martin & Zimmerman, 1990). At the other extreme, high levels of coordination may result in conflict over
the limited areas that remain, such as when inmates can use the rest room, or what they can do with their recreation time (Hamm et al., 1994). On the whole, coordinating activities lowers the overall level of negative group behavior. While small conflicts may occur under high levels of coordination, major episodes of violence should be reduced. The coordination equation is presented in another section.

8.4

Negotiations between the inmates and staff are designed to reduce tensions and prevent conflicts. If inmates are given access to grievance channels, then they will be less likely to behave negatively (Lombardo, 1994). Furthermore, if the negotiations are limited or one sided then noncompliance will increase (Martin & Zimmerman, 1990).

\[ \text{NEGO.K} = ((\text{POWER.K} \times 0.11) \times (\text{CHAIN.K} \times 0.2)) \]

8.5

The three variables discussed above affect conflict in different ways. Alienation increases conflict. Coordination and negotiations generally reduce conflict. In correctional organizations alienation and coordination have the greatest impact (Collins, 1988). To more fully understand why these variables affect conflict as they do, we must look at their antecedent variables. Coordination is closely linked to the structure of the organization and will be discussed in this section of the paper.

8.6

Alienation is endemic in correctional organizations. If inmates share a common outlook toward the organization, such as nonvoluntary confinement, then their level of alienation increases (Wright, 1991). Also, any aggression shown by the inmates will lead to increased alienation (Martin & Zimmerman, 1990), as will the action of being watched by those in authority (Collins, 1988). In correctional organizations surveillance is often extreme, and the lack of privacy leads to alienative feelings toward the organization. Alienation is a phenomenon that cannot be stopped in correctional organizations; it is part of the prison experience.

8.7

Negotiations between the inmates and the staff are strongly affected by the official chain of command (Collins, 1988). If inmates have opportunities to interact with staff, and perceive that the issues important to them will be moved up the chain of command, then negotiations will be seen as productive. Additionally, if an informal power structure exists within the inmate population that is recognized or supported by the organization, more effective negotiations will occur, in that inmate leaders will become central figures in the process (Marquart & Crouch, 1994). However, in correctional organizations negotiations are generally not effective in reducing conflict.

8.8

While the official chain of command will be discussed under the structural model, the inmate's common outlook is produced by three variables. First, the more extensive inmate networks are, the more similar the outlook of the inmate population as a whole will become (Irwin, 1980). Second, the more homogeneous the inmate population is, the more likely they will be to form networks (Wheeler, 1961). Third, the more physical alternatives inmates have, the more they will be able to form networks (Light, 1991).

\[ \text{COMMON.K} = (\text{NETWORK.K} \times 0.15) + (\text{PHYALT.K} \times 0.15) + (\text{HOMO} \times 0.1) \]
\[ \text{NETWORK.K} = (\text{FRIEND.K} \times -0.33) + (\text{INFORG.K} \times 0.65) + (\text{DEP.K} \times 0.36) \]
\[ \text{HOMO} = 0.3 \]
Counter aggression by inmates against the institution is produced by four variables, as shown in Figure 3. Normative controls are used to reduce counter aggression. Coercive controls will work to increase the inmate's desires to counter attack. The two most important variables here are

1. the resources inmates can amass to resist and
2. the physical alternatives available to the inmates (Martin & Zimmerman, 1990).

Inmates will use the resources that they receive from the organization in order to resist control attempts; and, if inmates have alternatives in the physical methods they use to accomplish the actions required by the organization, then they will use these to disrupt the processes of the institution.

Surveillance of inmates in the organization is affected by five different variables. First, the more physical alternative inmates have available in responding to correctional demands, the more effort will be required for the organization to maintain surveillance (Collins, 1988). These alternatives could include decisions such as how to accomplish an assigned task, even something as simple as what direction to sweep the hallway. Second, the use of coercive controls requires the use of more surveillance (Martin & Zimmerman, 1990). Third, increased opportunities to escape the institution reduces the effectiveness of surveillance (Barow, 1994). Fourth, the major factor influencing surveillance will be the structural processes used by the organization. The more structured the institution is, the more surveillance will be used to control members behavior (Collins, 1988). Fifth, the more inmate's react with counter aggression, the more the correctional organization will have to use surveillance to prevent this aggression.

If the organization shares power with the inmates, then an informal power structure will result as inmates use this power to their own advantage (Marquart & Crouch, 1994). Four variables produce the informal power structure of the correctional organization. First, ritual interactions, such as inmates gathering together in common areas, will allow informal power to be exercised and increased. Second, the inmate's level of interdependence in performing organizational jobs affects
the informal power structure (Ouchi, 1977). Sequential interdependence also reduces the informal power structure through reliance on structure (Collins, 1988). Third, reciprocal interdependence increases informal power through the development of reciprocity and paying back favors (Fleisher, 1989). Fourth, the uncertainty faced by the organization in attaining its goals affects the informal power structure within the correctional organization (Crozier, 1964). The more uncertainty that exists, the more the organization will use the informal power structures to reduce the uncertainty.

\[
A \text{ POWER.K} = (\text{SINTER.K} \times .84) + (\text{RINTER.K} \times .43) + (\text{PHYALT.K} \times .4) + (\text{GEO} \times .25) + (\text{UNCERT} \times .53) + (\text{SHARE.K} \times .31) + (\text{RITUALS.K} \times .16)
\]

\[
A \text{ SINTER.K} = (\text{CHAIN.K} \times .04) + (\text{PHYALT.K} \times .02) \times (\text{TASKTYP.K} \times .24)
\]

\[
A \text{ DEP.K} = (\text{SINTER.K} \times -.09) - (\text{RINTER.K} \times .14)
\]

\[
C \text{ UNCERT} = .1
\]

---

**The Structural Processes in Correctional Organization**

9.1

Correctional organizations, like all modern organizations, are bureaucratic in their organizational structure and the structuring of their activities. Therefore, the structure of correctional organizations is very similar to the structure of any other large organization (Collins, 1988). A number of processes produce this structure that, in turn, are produced by other processes or variables. Figure 4 outlines these relationships. Again, the model has been simplified to aid in both visual and verbal discussion. Even though the structure appears to be stable, it, too, is a dynamic process that involves interactive variables.

\[
A \text{ STRUCTU.K} = (\text{UNCERT} \times -.17) + (\text{COORD.K} \times .17) + (\text{COUPLE.K} \times .26) \times (\text{ENVIRON.K} \times -.03)
\]

\[
N \text{ STRUCTU} = .1
\]
9.2
The structure of the organization is produced by four other variables: uncertainty, the environment of the organization, task coupling, and coordination of activities. The uncertainty the organization faces is pictured here as a constant. The more uncertainty an organization faces, the more difficult it will be to structure activities (Collins, 1988). While uncertainty generally lessens the structure of organizations, in correctional organizations it will generally be low. The classification processes in correctional organizations are designed to lower uncertainty in the treatment of inmates and the high levels of control are designed to eliminate exceptions to the rules (Etzioni, 1975).

9.3
The environment of the organization consists of general conditions faced by the correctional organization, such as government budgets, mutual assistance contracts with other agencies, and local infrastructures. In highly stable environments the structuring of organizational activities can be higher (Perrow, 1984). Furthermore, stable environments allow the organization to set standard policies and apply them uniformly. Bureaucratic organizations seek stable environments. However, while correctional organizations face many of the same environmental factors as other government-run bureaucracies, they are even more prone to changes in laws and public opinion.

A \[ \text{ENVIRON.K} = (\text{TECH*.43}) + (\text{HOMO*.08}) + (\text{OUT*.02}) \]

9.4
An organization's environment can consist of many factors, but two stand out in correctional
The first factor that determines the environment of a correctional organization is the homogeneity of the inmate population. While homogeneous inmate populations can give the inmates power, the consistency provides the organization with environmental stability when dealing with the inmates. A variety of different groups ultimately requires more organizational structure to ensure control than a homogeneous group.

9.5

The second factor that affects the correctional environment is the availability of resources outside the organization. Correctional organizations can generally call on extensive resources when faced with environmental instability (Montgomery, 1994). Resources available to correctional organizations in a crisis can include other correctional organizations, such as local law enforcement and, ultimately, the military. This factor stabilizes the environment of the correctional organization.

A COUPLE.K=(TASKTYP.K*.44)+(UNCERT*.8)

9.6

Task Coupling in organizations has to do with the fit between the various tasks an organization engages in. Tasks that are tightly coupled, such as the electrical and surveillance in correctional organizations, require much more structure (Perrow, 1984). Correctional organizations generally have low task coupling because, while correctional organizations have various goals, the goals are often treated independently. For example, the punishment, confinement and rehabilitation of inmates occur at the same time, but can be changed separately.

A TASKTYP.K=(UNCERT*.51)*(TECH*.44)*(OUTPRED.KL*.02)
N TASKTYP=.1
C TECH=.1
R OUTPRED.KL=(PHYALT.K*.21)*(TECH*.41)
Finally, because the outcomes of organizational goals are predictable, they tend to increase coupling. In correctional organizations outcomes vary in predictability; while the goals of punishment and separation are highly predictable, the goal of rehabilitation is very unpredictable (Scharf, 1983).

The coordination of activities is a central factor in the structure of any organization. It has to do explicitly with the how the activities of individuals and groups are scheduled to work together. The coordination of inmate activities is generally both simple and complex (Irwin, 1980). The set of activities that inmates can engage in is limited, and the institutional structure insures that these activities are strictly scheduled. Generally, the higher the activity coordination, the more structured the organization will be.

\[
A_{COORD.K} = ((SIZE^{.22}) + (CENTRAL.K^{.11})) \times (TASKTYP.K^{.09})
\]

The coordination of inmate activities is produced by three other variables in the model. First, the complexity of organizational tasks is related positively to the complexity of coordination. The performance of highly complex tasks requires that the actions of inmates and staff be coordinated. Yet correctional organizations generally do not perform complex tasks, thus reducing the need for coordination. Second, simple mathematics shows that the size of the organization affects coordination of inmate activities. This is a central problem of prison overcrowding (Mahan, 1994). The larger the inmate population, the more coordination problems arise in attempting to maintain security.

\[
C_{SIZE} = .3
\]

Third, centralizing the organizational decision-making process is also related positively to activity coordination. If decisions are made centrally, then the activities for all members on the hierarchical chain must be formally coordinated for smooth operation. Correctional organizations tend to be highly centralized and therefore require that inmate activities be coordinated to maintain control.

\[
L_{CENTRAL.K} = CENTRAL.J + DT*(((ENVIRON.J^{-.2}) + (WRITRULE.J^{.88}) + (POWER.J^{-.27}) + (SINTER.J^{.88}) + (WRITREP.J^{.9})) \times (ORGRES^{-.73}))
\]

A centralized organization refers to the level at which the majority of decisions are made. Centralization is determined by the affects of six different variables. The first and second variables, written rules and reports, are one traditional measure of centralization. In correctional organizations formal written rules exist for most actions, and staff members spend a significant amount of their time filling out written reports. The use of rules and reports is related to the third variable, the formal chain of command. In correctional organizations the formal chain of command is patterned after the military model (Irwin, 1980). The longer and stronger the chain of command, the more centralized the decision making process can be. The equation for the chain of command will be presented in the
A fourth significant factor in correctional organizations is the extent to which members' actions are related sequentially. The greater use that can be made of sequential dependence, the more decisions that can be made at higher levels of the organization (Collins, 1988). While written rules and reports are important in correctional organizations and increase centralization, many studies show that the informal power structures of the inmates are vital to control (Light, 1991). The fifth variable, the informal structure of power, tends to reduce centralization by changing the decisions made at higher levels.

Finally, the sixth variable is the resources of the organization and how they influence centralization. The more resources the organization has, the less centralized the decisions will be (Collins, 1988). Based on the levels of these variables, correctional organizations are highly centralized, but not so high as the military.

The Structure of Normative Processes in Correctional Organization

Normative processes in organizations are unique. These processes are both the most powerful means of control and the most difficult to use effectively (Collins, 1988). If an organization can internalize its ideals within its members, then they will possess self-control; but if members perceive the normative efforts of the organization as insincere, then they will be counterproductive, producing alienation towards the organization and its ideals (Irwin, 1980). One central reason for the difficulty involved in using normative processes to control members are the two, often conflicting, methods of attaining normative control. Organizations can either share power with members, or they can create ritualistic environments that link members emotionally to the organization. Sharing power links small numbers of members to the organization by giving orders in the name of the organization (Collins, 1988). This method is limited in that only a small proportion of members can give orders. On the other hand, rituals link large numbers of members to the organization by providing conditions under which some members can create emotional bonds with other members who are dependent on the organization (Irwin, 1980).

10.2 In correctional organizations, the sharing of power is the most effective method of attaining normative control. It involves giving inmate trustees extra power which they can execute in the
name of the organization (Hamm et al., 1994). This method controls those members that are given power, as well as those members that perceive the likelihood of attaining power in the future (Marquart & Crouch, 1994). Unfortunately, this sharing of power with some inmates may serve to alienate the majority of inmates that do not anticipate sharing in this power relationship.

\[
A \quad \text{SHARE.K} = ((\text{PROMO*.45}) + (\text{DEF*-.13}) + (\text{GIVORDS.K*-.12}) \times (\text{COORD.K*.32})
\]

Using rituals in correctional organizations is highly problematic, due to conflicting interests. The correctional organization rightfully fears the creation of highly-cohesive inmate groups inside the institution (Irwin, 1980). These groups are unlikely to transfer their membership solidarity to the organization both because they are non-voluntary members and because these groups threaten the coercive control processes of the organization. Generally, normative control processes based on the sharing of power work to control the inmate trustees, but the ritually-based normative controls are usually counter productive in maintaining positive inmate behavior. Because the two types of normative control work against one another in correctional organizations I will discuss them separately.

\[
A \quad \text{RITUALS.K} = (\text{ISOLATE*.19}) + (\text{CONDIT.K*.12}) + (\text{DELAY1(FRIEND.K,1)*.12})
\]

\[
N \quad \text{RITUALS} = .1
\]

---

**Figure 5:** Simplified Path Model for Normative Processes
(Nonrecursive and duplicate paths not shown to reduce visual complexity)
Power-Sharing Normative Control

11.1 The sharing of power in any organization is limited because as more members are given power this power becomes weaker. In correctional organizations, the sharing of power is limited to inmate trustees and the sharing of power is based on the effects of four variables. First, the correctional organization sets up official rules for the instatement of inmates as trustees. These rules can be regarded as promotion opportunities that inmates must be aware of and follow if they desire the position. The more promotion opportunities that exist, the more sharing of power that can take place.

\[ C \quad \text{PROMO} = .1 \]

11.2 Second, these promotion opportunities based in part on the coordination of inmate activities. The more coordination required, the more inmate power positions will be setup. Correctional organizations have limited resources, and many depend on the use of inmate trustees to organize some of the actions of other inmates.

11.3 Third, with these promotion opportunities inmates must also perform deference rituals (Marquart & Crouch, 1994). Because trustee positions are limited, just following the rules is not enough to attain them. Inmates must pay deference to security personnel and current trustees. This helps to prove the inmate's worthiness to be a trustee. It also makes the position of trustee more significant. Trustees are seen as having paid their dues and the actions of paying ritual deference will serve to internalize the ideals of the organization.

\[ C \quad \text{DEF} = .6 \]

11.4 Fourth, inmates who are given opportunities to give orders to other inmates will eventually identify with those orders and with the correctional institution. Giving orders is an outward manifestation of power. Those who give orders will be more likely to believe in those orders because they are the bases of the inmate's power. The only potential problem is that inmate trustees may co-opt this power for their own benefit (Berk, 1966). One major problem in using trustees in power positions is that trustee's actions often become too extreme, and they can then use their power to obtain other resources from powerless inmates. As all these variables increase, the sharing of power will also increase.

\[ A \quad \text{GIVORDS.K} = (\text{CHAIN.K} \ast .22) + (\text{PROMO} \ast .13) \]

11.5 The opportunity to give orders in the name of the organization is based partly on the official chain of command, because the more extensive the chain of command, the more opportunities will exist to give orders. The chain of command is produced by three variables. First, the size of the institution is related positively to the length of the chain of command (Collins, 1988). Second, the more sequential interdependence that exists in the organization's operations, the more dependence that can be placed on the chain of command to control the operations of the organization (Collins, 1988). If
the outcomes of various inmate actions flow naturally into one another, then these actions can be controlled more effectively in an hierarchical fashion. Third, the more extensive the informal power structures of the organization are, the less effective the chain of command will be (Collins, 1988). The informal power structure of inmates tends to circumvent the chain of command.

\[ L \quad \text{CHAIN.K} = \text{CHAIN.J} + DT \times ((\text{WRITRULE.J} \times 0.31) + (\text{POWER.J} \times 0.06) + (\text{SIZE} \times 0.24) + (\text{SINTER.J} \times 0.04)) \]
\[ N \quad \text{CHAIN} = 0.3 \]

**Ritual Normative Control**

12.1

The purpose of ritual normative control is to create an emotional solidarity and cohesion that is dependent on the organization. In most organizations friendships form; and these friendships create a network of interactions that are dependent on the common organizational environment. If members leave the organization, then they are removed from these strong bond networks. The non-voluntary nature of correctional organizations reduces the benefits of these developing networks. While friendships and associations will form among inmates, these networks will be based on non-organizational factors, such as racial and social-class relationships (Irwin, 1980). In correctional organizations ritual interactions among inmates are only indirectly effective in controlling members. While they link inmates to each other, they may also create conflict with either other inmate groups or the organization.

12.2

Inmate ritual interaction is created by three variables. First, conditions conducive to friendship formation must exist (Toch, 1994). In correctional organizations where there is no contact between inmates, few friendships can form. However, in most correctional organizations conditions do exist that encourage friendships, such as common recreational areas, open bay cells, and so on. Second, under these conditions, friendships between inmates will form. Friends interact and develop bonds. Third, the more isolated inmates are from the outside, the more dependent they will become on the interactions that take place inside the organization.

\[ A \quad \text{FRIEND.K} = ((\text{INFORG.K} \times 0.24) + (\text{RITUALS.K} \times 0.19)) \times (\text{HOMO} \times 0.17) \]
\[ N \quad \text{FRIEND} = 0.1 \]
\[ C \quad \text{ISOLATE} = 0.6 \]

12.3

Besides specific conditions conducive to friendship, two variables must exist for friendships to form among inmates. One factor is the homogeneity of inmates. Racial divisions within correctional organizations is a major issue (Irwin, 1980). Most friendships form within ethnic groups. Also, the gatherings where inmates interact must be considered as informal and not as forced by the organization. Friendships are voluntary relationships and, while they may be dependent on the organization, they cannot be forced.

\[ A \quad \text{INFORG.K} = (\text{CONDIT.K} \times 0.61) \times (\text{TASKTYP.K} \times 0.17) \]
\[ A \quad \text{CONDIT.K} = (\text{PHYALT.K} \times 0.27) \times (\text{TECH} \times 0.07) \]
\[ N \quad \text{CONDIT} = 0.1 \]
12.4
The conditions that lead to ritual interactions depend in part on two final variables. One, inmates must have limited physical alternatives for organizational conditions to produce friendships. Two, the technology used by the correctional organization must be advanced.

| C       | GEO=.1 |

12.5
This theoretical discussion of a model of organizational control applied to correctional organizations is more complicated than has been presented here; however, this presentation does show the complexity and interactive nature of the control process. Because of the model's level of complexity, this discussion may be hard to follow and appear contradictory. However, the following sections of this work will introduce a methodology that will clarify and simplify the subject at hand.

External Variables

13.1
While the complex and interactive figures discussed above include many variables, any model's boundaries must be drawn (Hanneman, 1988). These boundaries occur where a series of external, or exogenous, variables enter the model. These variables are part of the model in that they feed into the processes but their causes remain outside the scope of the model's interactions.

Table 2: Variables within the Model

| COMPLY     | Compliance of organizational members |
| DESCOMP    | Desired level of compliance          |
| COERCIVE   | Organizational coercion               |
| MATERIAL   | Organizational use of material rewards|
| RESCON     | Control of resources by the organization's members |
| NORM       | Normative control in the organization |
| TASKTYP    | Task type                             |
| *TECH      | Technological production              |
| STRUCTUR   | Structuring processes in the organization |
| *UNCERT    | Uncertainty in the organization       |
| COORD      | Coordination processes within the organization |
| CENTRAL    | Centralization                        |
| COUPLE     | Complexity of the task coupling in the organization |
| ENVIRON    | Environment of the organization       |
| *HOMO      | Homogeneity of the environment        |
| *OUT       | Resource base outside the organization |
| CONFLICT   | Conflict over control within the organization |
| ALIEN      | Member's alienation                   |
| SURVEIL    | Surveillance conducted by the organization |
| COMMON     | Member's common outlook               |

http://jasss.soc.surrey.ac.uk/2/1/1.html
22 25/08/2014
Even the most complex theory cannot contain all possibly relevant variables; a boundary must be drawn around the theory. At the boundary, there will be variables that feed into the model, but are not defined within the model. These are external variables. In this model, these variables are set as constants, whose values are based on estimates of their levels when compared to other organizations. Eleven external variables in this model link it to processes outside the theory.

1. While the technology of correctional organizations is advancing, it is generally low when compared to the level of technology in all other organizations.
2. The same relationship applies to uncertainty.
3. Homogeneity, on the other hand, is somewhat high when compared to all other possible organizations, due, in part, to the gender segregation of correctional organizations and the over representation inmates with lower socio-economic status.
4. Unlike many organizations, correctional organizations can quickly call on extensive outside resources, if needed.
5. Yet such calls are costly and correctional organizations have only moderate overall resources.
6. One advantage of correctional organizations is that inmates are highly constrained geographically, and
7. inmates have comparatively low resources.
8. Over time, correctional organizations have been growing in size.
9. Inside, inmates have very limited promotion opportunities and
10. must pay high levels of ritual deference to trustees and staff.
11. Inmates are isolated to an extreme degree form the outside.

These variables are marked with an * in table 2.

Presentation of General Simulation Findings

14.1
In order to see the power of this method of theory presentation, we will look at both long term
general effects, and then focus the analysis on a shorter period of simulation time. This theory is
complex in the verbal presentation but the simulation is dramatic and generally clear. This is the
advantage of simulation for complex theories. While the verbal model may be complex, the
simulation results are usually simple and straight forward.

Analysis of General Patterns

14.2
When this model is simulated over 750 time points, allowed to interact dynamically, a very
distinctive set of patterns appears for inmate group behavior and the control processes. Inmate group
behavior remains positive and seemingly stable for over 500 time points. At approximately 500 time
points, inmate behavior becomes unstable, rapidly rising beyond the level desired by the
organization and then dropping below the desired level. At just over 600 time points, inmate group
behavior suddenly turns dramatically negative. Over the next fifty time points, inmate behavior
becomes very negative and then returns to positive values. Upon return to positive values, another
period of instability occurs before stable and positive inmate compliance with organizational wishes
resumes.
What we believe we are seeing here is a stable inmate behavior pattern punctuated by an episode of extreme noncompliance. We could interpret this episode as a riot or other serious disturbance. Generally, it appears that inmates comply with organizational wishes, but periodically revolt against the controls enforced on them. The control processes work, while inmate behavior fluctuates, the majority of the time stability prevails. This long period of stability is what the theory would predict but, the interactive nature of the simulation process shows that these same processes also produce episodes of noncompliance.

Simulation time points are arbitrary units used by the computer to calculate equations. While at this time these units cannot be translated into real time (to do so would require both organizationally specific data and history for calibration), inmate behavior does remain positive for 89 per cent of the simulation time points. This shows that negative inmate behavior is a rare occurrence even in simulations using generalizations from organizational research. This factor shows the potential predictive power of simulation. In a cross sectional analysis, riots would be rare and even
longitudinal analysis would potentially take may years to complete. Simulation allows the analysis of theory in a very short time frame.

14.5

Let us now turn to the control processes that produce the behavioral pattern. While coercive control remains low, it continues to rise over the first 500+ time points. This is interesting for a number of reasons. First, in coercive organizations, coercion is dominate and generally an effective form of control. Coercion does not have to be extreme to be effective. Even more interesting, while inmate behavior is both stable and positive, coercion increases. The theory of the relationship between coercion and behavior states that positive behavior should reduce coercion. Instead, the simulation model shows otherwise. The simulation pattern shows what appears to be a much more complex and empirically realistic relationship between behavior and coercion. As a group, inmates comply, but the control process for coercion continues to remind inmates of their situation (Irwin, 1980).

14.6

Material control processes generally behave as the theory predicts: the more positive and stable inmate behavior becomes, the more positive material rewards are given. When inmate behavior becomes unstable, material rewards are first lowered, then taken away, and then taken back, becoming negative. As inmate behavior improves, so does the value of material controls.

14.7

In comparison to other control processes in Figure 6, normative controls rise very high. While this may be somewhat unrealistic empirically, remember that normative controls are generally ineffective in coercive organizations, so that only a limited amount of the rituals and sharing of power will affect inmate behavior. The more interesting factor concerning normative control is that it appears to have a different pattern than either coercive or material controls. Normative control remains positive even after inmate behavior become negative; and once normative control becomes negative, it takes a much longer time to return to positive values. This factor relates empirically to a general pattern found in correctional disruptions (Montgomery, 1994). When inmate group behavior becomes negative the general coercive controls stop, and the organization withdraws material resources from inmates. The normative control process is the only alternative left to the organization. For example, once inmates have taken over a portion of the institution, then the organization will often attempt to engage in ritual interactions and negotiations with the noncomplying inmates. Not until the situation becomes hopelessly out of balance will the organization use negative normative controls.

14.8

In Figure 6 a long-term pattern has developed: inmate behavior is generally positive, but periodically will become negative. From this pattern the model predicts that correctional organizations, while generally stable, experience episodes of negative inmate group behavior. To better understand the unusual occurrence of negative behavior we will now look more closely at the eighty time points surrounding the non-compliant episode.

14.9

Figure 7 shows the patterns of behavior and control over the eighty time points encompassing the period of negative group behavior. Over time, as the control processes rise an instability in inmate behavior is produced that in turn generates a series of reactions in the control process. These control reactions ultimately create conditions that result in an episode of negative inmate behavior. The increase in both coercive and material control creates alienation in the inmates who have gathered resources to resist. The continual use of normative control attempts further increases the inmate's distrust. When all values reach a threshold a negative behavior episode is triggered. The control processes respond to this trigger and ultimately return inmate behavior to positive values. The situation makes empirical sense, but is not directly predicted by Collins' verbal theory. This
phenomenon shows the power of simulation. While the individual theoretical propositions do not predict negative inmate behavior, they do produce it when combined (See Patrick, 1995 for an application of this model to material organizations).

![Graph](http://jasss.soc.surrey.ac.uk/2/1/1.html)

**Figure 7**: Behavior and Control Patterns for Noncompliance Episode

14.10

The model shows an interesting process that partially mirrors empirical evidence (Montgomery, 1994). Control processes in correctional organizations are both proactive and reactive. Inmate group responses to control are mostly reactive. When these reactive responses are combined, a set of patterns develop in the figures. The correctional controls operate proactively to remind inmates of control issues and to fulfill rules and regulations. Inmates, in turn, respond to these continual proactive controls. Inmate group responses build until correctional controls react. These correctional reactions, often in the form of crack downs, produce inmate group responses and the cycle continues. This system could be set up to produce stability, except for a phenomenon endemic to formal organizations—organizational inertia (Hannan & Freeman, 1977). The larger and more bureaucratic an organization becomes, the slower it will respond to changes either internally or in the environment. This inertia, significant in all correctional organizations, affects the control reactions of the organization (Irwin, 1980). This produces a lag effect in the proactive control,
inmate response, reactive controls, and the inmate response cycle of control. The reactive controls can become out of sync with the inmate responses, initially producing inmate group instability and potentially creating episodes of extreme negative inmate group behavior. Ideally, the control actions of the organization should mirror the responses of inmates, but inertia can produce control reactions that do not match inmate reactions and that do not have this lag effect (Martin & Zimmerman, 1990). The result could produce a whiplash effect that can trigger riots or other disruptions.

Conclusions

15.1
On the basis of this research, it seems that the basic model produces processes that lead to positive inmate group behavior; however, the same processes periodically produce episodes of negative inmate behavior. Although unpredicted by the verbal theory, and even the individual model equations, computer simulation does produce noncompliance on the part of inmates when formalized and allowed to operate over time. This result fully agrees with the empirical findings. Correctional disturbances are rare events that can often only be explained after the fact. This model shows that these rare events can be seen as normal and, with further research, may even be predictable and/or preventable.

15.2
These findings point to a need for further research. Organizationally specific data for all the variables in this model must be collected from correctional organizations, so that the patterns can be calibrated and further analysis can be done. This model behaves in a fashion that generally agrees with the empirical evidence. This behavior further justifies research. If the patterns seen here continue, then it may be possible to change the control systems in correctional organizations and prevent, put off, or lessen, the periods of negative inmate behavior.

Notes

1Some see inmates as clients of correctional organizations but I believe inmates stand in a unique position within coercive organizations. They are both clients and members, how be it non-voluntary, in the same since that slaves and civilians drafted into the military are organizational members. The true clients of correctional institutions are the civil population.

2In this theory organizations are divided, by dominant type of control used, into coercive, material, and normative. All organizations use all type of control but one will be dominant. Each type of organization requires a different minimal level of compliance from members. Coercive organizations, due to their conflictive nature, require the lowest level of minimal compliance. I prisons for example inmates are expected only to follow given orders to the letter and then only in the presents of coercive agents. Material organizations require higher minimal levels in that members are expected to follow written rules without direct supervision. Normative organizations required the highest minimal compliance in that members are expected to be self regulated and act in the best interests of the organization.

3Inmates are the organizational members whose compliance is of interest here. This same model could be applied to guards or other organizational members but the behavior of inmates is of key interest here. Other organizational members are seen as parts of the control process itself. Administrators set rules and guard enforce them.

4It should be noted that the use of constants for these eleven variables is empirically unrealistic.
The constants are used initially to analyze this model. With the collection of organizationally specific data, it would be possible to introduce variation into these external variables based on changes in the model. As discussed below, this model produces more frequent periods of negative inmate group behavior than observed in the environment. Often, periods of inmate behavioral instability, such as overcrowding, are observed and can be quickly reduced or the organization can receive a sudden influx of extra resources. Future analysis will incorporate these variations, but for this first application it illustrates more to hold them constant and see what the model produces.

5Normative controls are the most difficult to obtain in any organization. The fact that they are so high in this simulation may be because of the organizational data, mostly from material organizations, that is used to parameterize the model. When correctional data is gather we will be able to determine if this is the result of problems in the model or in the data.

References


