

Towards a Fair and Balanced Assessment of Supermax Prisons

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Supermaximum ("supermax") security prisons have become a common feature of the corrections landscape. Despite their substantial costs, questions about their constitutionality, growing fiscal and managerial challenges confronting correctional systems, and increased demand for evidence-based practices, little systematic empirical research about their effectiveness exists. Against this backdrop and a debate often framed in ideological terms, we identify five dimensions that we argue should be taken into account to provide a fair and balanced assessment of supermax prisons. Our study draws on a comprehensive analysis of existing research, site visits to three states, and interviews with 60 corrections policymakers, officials, and practitioners. We conclude with recommendations for research and policy.

Keywords assessment; supermax prisons; supermaximum security prisons

Introduction

In the last two decades, supermaximum ("supermax") security prisons—facilities that house inmates indefinitely in single cells for 23 hours per day, allow inmates minimal contact with others, and provide few if any services—have proliferated in the United States. Twenty years ago, there was one, a federal facility in Marion, Illinois (Kurki & Morris, 2001, p. 385). Today, the country has at least 57 supermax prisons that house approximately 20,000 inmates (Briggs, Sundt, & Castellano, 2003; Irwin, 2005; King, 1999; National Institute of Corrections, 1997). Mears' (2005) national survey of state prison wardens indicates that over 40 states now

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have supermaxes. This growth suggests that states view supermaxes as an effective strategy for improving their correctional systems. Yet, as many scholars have emphasized, we know little about these prisons, including their goals, unintended impacts, and operations (Austin & Irwin, 2001; Austin & McGinnis, 2004; Austin, Repko, Harris, McGinnis, & Plant, 1998; Briggs et al., 2003; Kurki & Morris, 2001; Pizarro & Stenius, 2004; Rhodes, 2004; Riveland, 1999b; Rocheleau, Forcier, & Jackson, 1998; Ward & Werlich, 2003; Wells, Johnson, & Henningsen, 2002).

The dearth of research is striking. First, supermaxes raise constitutional and humanitarian concerns (Collins, 2004; Haney, 2003; Irwin, 2005; King, 1999). As Riveland (1999a) has noted, critics charge that supermaxes "constitute cruel and unusual punishment, are inhumane, and violate minimum standards of decency" (p. 191). In addition, state governments are aggressively emphasizing accountability and the need for agencies to justify expenditures through reference to evidence-based practices (Campbell, 2003; Preer, 2004; Riveland, 1999a). Notably, then, not only do supermax prisons entail substantial construction and operational costs, but their effectiveness has gone largely unexamined. At the same time, prison populations have grown exponentially (Caplow & Simon, 1999), contributing to a spectrum of managerial challenges, including increased inmate violence, overcrowding, staff turnover, and gang activity, and a greater demand for drug treatment, physical and mental health services, and educational and vocational training (Austin & Irwin, 2001; Bruton, 2004; Dilulio, 1987; Ekland-Olson, 1986; Elsner, 2004; Mears, Moore, Travis, & Winterfield, 2003; Ralph & Marquart, 1991; Riveland, 1999a). In the face of such concerns and critical challenges, states can ill afford to make substantial long-term commitments to correctional policies that may be costly and ineffective.¹

Against this backdrop, the question naturally arises: Should states invest in supermax prisons? To protect against ideologically driven assessments and to provide a fair and balanced answer requires, in our view, five dimensions to be considered: (1) The goals and intended impacts of supermax prisons; (2) unintended impacts, both positive and negative; (3) explanations and tests of the causal logic by which supermax prisons achieve specific goals; (4) barriers to these goals being achieved; and (5) the political, moral, and fiscal dimensions of supermax prisons. Below, we examine each dimension in detail, drawing on a comprehensive analysis of existing research, site visits to three state correctional systems, and focus groups and interviews with 60 corrections policymakers, officials, and practitioners. We begin first by describing supermax prisons, research about their goals and impacts, and the study's data and methods. We then present our analyses and conclude by discussing their implications for research and policy.

1. One reviewer noted that little research exists on penal policies in general, citing Simon's (2000) article to that effect. The lack of research on supermax prisons is especially striking because these prisons have so rapidly become common, and they are costly and controversial.

Background

Investment in supermax prisons is one of the most prominent trends in corrections. Twenty years ago, no states had supermaxes; today, over 40 of them do (Mears, 2005), collectively holding close to 2 percent of all state and federal inmates serving one or more years (King, 1999). But what is a supermax? There is, in fact, no widely agreed-upon definition. Some states call their facilities "supermax prisons" when outside observers would not, and some eschew the supermax terminology even though others would apply it (King, 1999). Such differences should not, however, obscure the trend towards investing in specialized housing with security measures that significantly exceed those of maximum security prisons or traditional segregation cells (National Institute of Corrections, 1997, p. 1; see also Henningsen, Johnson, & Wells, 1999; Riveland, 1999b). Not only do they incarcerate inmates in single-cell confinement for up to 23 hours per day, but they have substantially higher staff-to-prisoner ratios than most other prisons, offer few, if any, programs to prisoners, restrain prisoners with handcuffs during any out-of-cell movement, permit few, and only non-contact, visits, and typically are more technologically advanced than other prisons (Austin & McGinnis, 2004; Hershberger, 1998; Irwin, 2005; Kurki & Morris, 2001; Rhodes, 2004). Although states have always placed their most serious prisoners in one or two prisons, "seldom have those prisons operated on a total lockdown basis as normal routine. Even prisons designated as maximum security have generally allowed movement, inmate interaction, congregate programs, and work opportunities" (Riveland, 1999b, p. 5).

Several accounts suggest that the growth in supermax prisons emerged because of at least two factors—a general "get tough" orientation in criminal justice that characterized many of the policies pursued in the 1980s and 1990s, and a concern among corrections officials that prison disorder and violence were increasingly a problem (Riveland, 1999a; Toch, 2003). Modeled after federal prisons such as Alcatraz and the Marion, Illinois "control unit," supermax prisons seemed to be a promising solution. Ward and Werlich (2003) have noted, for example, that "when state prison wardens visited and observed the unprecedented degree of control the Marion staff had over prisoners, several commented they 'had died and gone to heaven'" (p. 58).

Yet, such accounts leave many questions largely unanswered. First, the precise goals and associated impacts of supermax prisons remain unclear. Many correctional department and research reports state that supermax prisons have been built to house the "worst of the worst" inmates. But this is a strategy, not a goal. That said, systemwide prison order and safety constitute prominent concerns linked to supermax prisons (Hershberger, 1998; Logan, 1993; Riveland, 1999b; Sheppard, Geiger, & Welborn, 1996). Other goals have been suggested, as well, including "normalizing" the prison system environment, managing gangs, and increasing public safety (Henningsen et al., 1999; National Institute of Corrections, 1997).

How these goals ought to be assessed—what impacts are relevant—remains to be examined. For example, although prison safety can be measured by “common sense” indicators, such as staff and inmate assaults, operationalizing order, control, normalization, and other goals is difficult because of the lack of widely accepted and validated empirical measures (Dilulio, 1987; Sparks, Bottoms, & Hay, 1996). To illustrate, Ward and Werlich (2003) found that 16 percent of inmates released from a federal supermax facility returned to it from other prison facilities, and viewed this as evidence that the remaining 84 percent of the inmates improved their behavior upon release to the other facilities. However, whether that measure is a valid indicator of the success of supermaxes depends on the goals one associates with these prisons and whether it accurately reflects the behaviors of supermax inmates released to general population facilities.

Second, evidence suggests that supermax prisons contribute to unintended effects, such as increasing mental illness among supermax inmates and disorder in general population facilities (Haney, 2003; Irwin, 2005; Rhodes, 2004).² For example, Briggs et al. (2003) used an interrupted time-series analysis to examine changes in inmate-on-inmate and inmate-on-staff assaults, respectively, in four states. They found that the opening of supermax prisons had no effect on, and may have increased, systemwide violence, except in one state where a sustained decline in inmate-on-staff assaults occurred. Whether such effects are actually caused by supermaxes is unknown. The concern, however, is that collectively they may offset the benefits of supermaxes. On the other hand, there may be positive unintended effects that would help bolster the case for these prisons and that thus should be included in any balanced assessment.

Third, scant attention has been given to how supermax prisons achieve specific goals, thus undermining the plausibility of causal claims about the effectiveness of these prisons. How, for example, is concentration of the most disruptive and violent inmates supposed to reduce disorder? One possibility is that the inmates can no longer incite others. But does disorderly behavior typically arise that way? A large literature suggests not (Adams, 1992; Sparks et al., 1996). Perhaps supermax prisons create a general deterrent effect. Inmates may fear placement in a supermax and so behave better than they would if this threat did not exist. But the effect assumes that supermaxes are viewed by inmates as punitive and that severe sanctions actually deter. Other mechanisms, such as incapacitation, could be posited, but the point is that without a clear causal model, researchers cannot easily develop theories and test hypotheses about how supermaxes produce particular effects. Articulating these links is critical, however, for policy, not just theory. If, for example,

2. Ward and Werlich (2003) found that fewer than 10 percent of inmates in Alcatraz were “clinically diagnosed as manifesting evidence of psychosis” and suggest that “most of the men ... were able to survive their years in supermaximum custody without suffering psychological damage serious enough that they could not adjust to life in other prisons or in the free world after release, as measured by prison conduct, parole supervision and arrest records” (p. 65). Their findings suggest that supermaxes do not create or aggravate mental illness (cf. Haney, 2003).

supermaxes create order through deterrence, then conditions such as swift and certain placement could be emphasized to yield greater impacts.

Finally, there have been no systematic empirical accounts of supermax prisons along the dimensions above, and few attempts to factor in political, moral, and economic considerations relevant to assessing whether they should be built. The concern, then, is that decisions about whether to build or close supermaxes will rest primarily on ideological or personal views. Advocates, for example, can assume that supermaxes increase order, while opponents can assume that they increase mental illness. An additional concern is that researchers lack a systematic foundation for examining the diverse issues that supermax prisons raise. As a result, assessments about the wisdom of these investments are likely to be arbitrarily and perhaps unknowingly selective in their emphases, thus impeding productive discussions about the merits of these prisons. The goal of this paper is to promote more empirically based and balanced debates, and to highlight the opportunities for theoretical and empirical research.

Data and Methods

For the analyses that follow, we collected and examined three sources of data. First, we undertook a comprehensive review of research, agency and legislative reports, and media accounts of supermax prisons. Second, we visited three states with supermaxes—one in the south, one in the mid-west, and one in the northeast—and conducted focus groups and interviews with corrections policy-makers, officials, and practitioners ($n = 39$). Third, we interviewed, by telephone, similar individuals in eight other states from all regions of the country, and one former warden of a federal supermax ($n = 21$). In total, we interviewed 60 people.

Respondents in the site visit and telephone interviews included correctional staff at many organizational levels, allowing us to obtain a range of perspectives about supermaxes. These individuals included correctional system executives, supermax and maximum-security wardens, officers, program services and legal staff, budget officers, mental health professionals, and researchers, all uniquely situated to shed light on either the possible goals or systemwide operational effects of supermaxes. Each site visit involved in-person interviews, including 10 in one state, 11 in the second, and 18 in the third. These interviews typically occurred as a part of focus groups that lasted 1-2 hours. During each visit, we also interviewed state legislators (Democrats and Republicans) who sat on criminal justice committees. Their perspectives helped provide insight into the political dimensions of supermax prisons. The interviews generally were conducted in private in legislators' offices and lasted 15 minutes. Each telephone interview was approximately 20-30 minutes in duration.

Of the 60 people interviewed, 16 were corrections executives (i.e., directors or commissioners, or their deputies), 16 were wardens, 8 were members of

state legislative criminal justice committees, and the remaining 20 were roughly evenly distributed across the range of other positions noted above. Many of the executives and wardens had held diverse positions in corrections that, in addition to their current jobs, informed their views.

Nine of the 60 individuals we interviewed were females. We did not systematically collect information on respondents' ages. However, because we purposely sought interviews with experience in the criminal justice system, the respondents typically were in their 40s and 50s. Also, we did not code the race or ethnicity of respondents in the in-person interviews, nor did we ask individuals with whom we conducted telephone interviews to report this information. Non-White respondents were, however, interviewed in several states. Extant theoretical and empirical research provides little basis for expecting that the responses to this study's particular questions would have varied along demographic lines, and our analyses suggested no insights or observations that appeared to be a function of respondents' demographic characteristics.

Using a pre-established protocol to guide the interview process,³ respondents were asked to describe the goals and impacts of supermax prisons, how these were achieved, and potential alternatives to supermaxes. We also asked them to describe why their states built supermaxes, the defining characteristics and the operating policies and practices of these prisons, strategies for improving their effectiveness, and any cost-benefit studies with which they might be familiar. To obtain responses that were as candid as possible, we informed participants that their comments would be kept confidential. For some interviews, and consistent with recommended guidelines for conducting qualitative research (see, e.g., Caudle, 2004; Goldenkoff, 2004; Scheirer, 1994), we pursued certain avenues of inquiry based on the expertise of the respondent and the unique perspectives they offered. Legislators, for example, frequently were better able to speak to the official reasons given for building supermax prisons and some of the political dimensions associated with their construction. By

3. Specific questions that were used in the interview protocol included the following: (1) Please introduce yourself by telling us a bit about yourself, such as your title and responsibilities. (2) To start things off, I'm curious about what you'd say a supermax prison is-i.e., what are the characteristics that somehow differentiate a supermax prison from other types of correctional facilities, and what kind of inmates belong in them? (3) What are the goals of (your) supermax facilities? (4) What are the impacts of (your) supermax facilities? How do you know there have been these impacts? How large do you think each impact has been? How do you think supermax facilities caused each impact? Are there other groups, apart from supermax inmates and those you have identified to this point, who are affected by supermax facilities? (5) What do your state's supermax facilities do particularly well? (6) Have there been impacts of (your) supermax facilities that you did not anticipate or expect? (7) If money wasn't an issue, what changes would help improve the impacts of your supermax facilities? (8) Which goals and impacts do you think are most important to, and are the best measures for, assessing the effectiveness of (your) supermax prisons? (9) If you did not have supermax facilities, what alternatives might achieve similar goals or impacts? (10) Are you aware of any cost-benefit studies of supermax facilities in your state? If yes, who did the studies, and what were the main conclusions? If no, do you think a cost-benefit study would help and, if so, how? Who should be responsible for conducting a cost-benefit study in your state? (11) Are you aware of documents that would help us better understand supermax facilities in your state? Do you have copies of admissions/release criteria for your supermax facilities?

contrast, supermax wardens were better situated than other respondents to discuss criteria for admission and release to their facilities.

In a policy situation as exists with supermax prisons, where little guidance exists about the range of possible goals and impacts and *how* these are achieved, qualitative research serves as an essential exploratory tool that can establish a foundation for guiding future efforts to systematically and empirically evaluate the policy (Babbie, 1995; Mohr, 1995; Rossi, Freeman, & Lipsey, 1999). In such endeavors, it generally is not appropriate to present statistics about how many respondents mentioned, say, a particular goal (Caudle, 2004). In our study, for example, we relied on open-ended questions. We did not, and could not, list every possible category and then seek a response for each. Indeed, the aim of the study was to use the focus groups and interviews (along with the review) to identify such dimensions so that future research would know what questions were relevant to ask (see Goldenkoff, 2004, p. 342). Further, since we relied on a convenience sample, using a snowball method of selection (Newcomer & Triplett, 2004)⁴, and not a random sample, any statistics would be potentially misleading or inaccurate as a basis for generalization (Feagin, Orum, & Sjoberg, 1991).

In short, given the goals of our study, we identified individuals who we felt would offer unique, insider perspectives on the five dimensions of our study. For example, senior corrections officials are well situated to discuss the “behind the scenes” reasons for the construction of supermax prisons, while wardens are uniquely positioned, because of their management responsibilities, to comment on the impacts that supermax prisons may have on their facilities. For example, some of the most frequently mentioned outcomes associated with supermaxes, such as improving systemwide prison order and safety, are those that are the responsibility of wardens and senior officials to achieve (Bruton, 2004; Knight, 2000). In addition, because supermaxes exist nationwide, we wanted to interview respondents from as many states as possible to ensure that we recorded most or all possible goals and impacts. This approach largely precluded interviewing inmates, given that gaining access to what, in human subjects review boards, are termed “vulnerable populations” involves overcoming substantial barriers (e.g., official permissions from each and every state where inmate interviews would occur, inmate permissions in advance of and at the time of interviews), to say nothing of the logistical challenges and costs of attempting in-person or telephone interviews with supermax inmates (who typically have minimal to no visiting and telephone privileges). Although excluding this group

4. After selecting specific states in which to conduct site visits, we compiled a list of individuals recommended to us as potential interview respondents. At the same time, we identified corrections officials, supermax wardens, and criminal justice legislative committee members in other states. We then conducted interviews with individuals on this list until we no longer heard new or different responses to our questions. After 60 interviews with respondents across 11 states, we judged that this process—when coupled with the comprehensive review of documents—was sufficient to have likely identified the bulk of potential impacts and issues relevant to providing balanced assessments of supermax prisons. It is not sufficient for assessing whether supermax prisons are actually effective.

from our interviews was unfortunate, we attempted to offset the omission by reviewing many documents that presented prisoners' perspectives, including summaries of inmate lawsuits and prison investigations, and research, such as the recent ethnography by Rhodes (2004) and other work that has entailed extensive interviews with inmates about their experiences in supermax confinement (e.g., Grassian, 1983; Haney & Lynch, 1997; Irwin, 2005; Kurki & Morris, 2001). This body of work provides a substantial foundation for identifying potential impacts on supermax inmates. By contrast, almost no studies have tapped into the experiences and views of corrections staff. Furthermore, although inmate views are important to examining the impacts of correctional policies, their views are by no means the only or most relevant ones. To illustrate, supermax inmate views' likely have little relevance for assessing the impact of supermaxes on systemwide levels of disorder and violence.⁵

Our analysis of the literature, site visits, and interviews focused on identifying—along the five dimensions of our study—potentially relevant considerations for creating a balanced assessment of supermax prisons. Our aim was not to determine which goals or impacts were perceived to be the most common or important, nor to establish whether specific accounts were accurate. Qualitative data typically are ill-suited to arrive at such assessments, which generally require quantitative data from random samples (Goldenkoff, 2004). Rather, we aimed to identify the full range of issues that future assessments should take into account (e.g., all possible goals and unintended impacts).⁶ *Thus, the items listed in tables 1-4 and discussed below should not be assumed to be of equal relevance to assessments of supermax prisons.* Rather, they provide the foundation for guiding balanced assessments of the merits of supermax prisons. Empirical assessments would need to apply appropriate weightings, which may depend on the emphases in particular states. Having made this caveat, we should emphasize that in some instances, we indicate when we believe there is relatively clear consensus in the literature or the interviews about a particular

5. One reviewer expressed surprise at this assessment, and suggested that inmate views, especially supermax inmate views, are the most important to obtain because it is these inmates who are most affected by supermaxes. As we emphasize throughout this paper, assessment of supermax prisons should be based on their goals and unintended impacts. If supermax prisons exist solely to improve systemwide order and safety, then supermax inmate views matter little. However, their views do matter substantially when discussing potential unintended impacts. In these cases, we have drawn on a number of extremely extensive ethnographic accounts of supermax inmates and their experiences, as well as research on extended solitary confinement.

6. One concern with qualitative research involving contentious issues is the possibility that respondents will provide "official" or "on the record" responses. As with conventional surveys, this issue cannot always be avoided. We took several steps to address it: Promising confidentiality; asking probing questions; using humor to put respondents at ease; and interviewing individuals who represented a diverse range of occupations and life experiences (see Caudle, 2004; Rossi et al., 1999). Our assessment is that the responses we received were honest reports. First, with rare exception, respondents were keen to discuss supermaxes and often expressed surprise at the views they heard others express in, for example, focus groups. Second, respondents expressed a wide range of views, one sufficiently large to cast doubt on the possibility that a consistent "official" voice was being expressed. Third, almost all the respondents mentioned at least one or more negative aspects of supermax prisons, suggesting a departure from any "official" view.

issue. Even in these instances, however, caution should be exercised given that neither the existing literature nor the interviews may accurately reflect the universe of views about supermax prisons.

Although qualitative research does not involve the use of random samples, it can be fruitful to explore whether some groups provide different insights than others. By and large, we found little evidence of variation, save that individuals sometimes emphasized particular issues related to their occupational position. General counsels for prison systems, for example, tended to focus on lawsuits. Yet, they also raised many other points not obviously linked to their occupation. Perhaps one of the most interesting issues to investigate would be whether states differ from one another or the federal system in their responses to the dimensions we examined. We could discern no obvious differences from our review of the literature, and the people we interviewed with knowledge of state and federal systems did not highlight any notable differences either. Clearly, some states emphasize certain goals more than others. But here, again, future studies using random samples would be better suited to such assessments.

The analytic strategy we adopted accords with those recommended for exploratory qualitative studies (see, e.g., Caudle, 2004; Mohr, 1995). Specifically, after each focus group and interview, we transcribed our notes and identified themes that emerged. For example, we reviewed each respondent's comments about potential goals and added new ones to a master list of goals. Similarly, all identified unintended effects were added to a list. By the time we concluded the interviews, few additional insights were being offered to add to the lists, suggesting that we had largely identified the range of considerations relevant to an assessment of supermax prisons. A similar approach was used prior to the visits and interviews to code the information from the documents, reports, and articles that we reviewed. All findings then were categorized into a matrix according to (1) the key populations affected (e.g., prisoners, correction officers, policymakers, communities, businesses, and residents), (2) the goals involved, and (3) whether specific impacts were positive and intended, positive and unintended, or negative (and thus presumably unintended). The dimensions in the matrix emerged from our initial review, which suggested that different populations might be affected in different ways by supermax prisons. We also described the causal logic associated with specific goals, and when none was provided in the literature or interviews, we speculated about potentially plausible mechanisms. Separately, we created lists of potential barriers to the success of supermax prisons, and political, moral, and fiscal dimensions that might bear on assessing the effectiveness of these prisons.

For this study, we defined a goal as the intended purpose of a supermax and an impact as the more specific measure or manifestation of that goal. For example, a goal of supermax prisons may be to increase public safety. The intended impacts of that goal may include reducing prisoner escapes and recidivism. *It should be emphasized that identifying the specific impacts that could or should serve as measures of goals is critical to evaluating a policy by helping to minimize the possibility that inappropriate or misleading measures are used* (Rossi et al., 1999).

We asked respondents to provide their own definitions of supermaxes. In general, they identified dimensions suggested in the literature, including the concentration of particular types of inmates for indefinite periods of time in the equivalent of a permanent lock-down mode. Several emphasized that in their view, supermax prisons are simply the concentration of the segregation cells that typically are dispersed throughout prison systems. With rare exception, respondents stressed that supermaxes differ markedly from most maximum security prison operations in the greater level of restrictions, such as the movement only with handcuffs and several officers, limited visitation and programming, and lack of congregate activity. We did not ask respondents to identify how exactly their supermaxes differed from those in other states. However, based on our site visits, as well as King's (1999) analysis, it is evident that supermaxes can vary along several dimensions, including whether they operate as standalone units or as a part of other facilities, their architectural design, and the types of inmates they house.

The Goals and Intended Impacts of Supermax Prisons

Table 1 summarizes the goals of supermax prisons, and potential impacts associated with these goals, identified in our study. *Increasing prison safety* is one of the most widely cited goals in the literature (Riveland, 1999b, p. 1; see also Briggs et al., 2003; Hershberger, 1998; Johnson, 2002; Pizarro & Stenius, 2004; Sheppard et al., 1996; Ward, 1995). For example, two-thirds (36) of departments of corrections in a National Institute of Corrections (1997) survey considered management of violent inmates a main reason for creating supermax prisons. As one respondent in our study explained, "by locking up the riskiest inmates, there is greater safety in the prison environment. This is the most general reason for having these types of units". Other respondents said that supermax prisons contribute to a sense of safety. An administrator explained, "It makes staff feel that we're providing them a safer environment in which to work. The riot made them think about safety a lot." Several respondents linked staff safety concerns to a specific violent incident, such as a riot or murder, that preceded construction of a supermax.

Table 1 lists several impacts that the literature and our interviews indicated might be viewed as measures of prison safety, including fewer murders, assaults, and riots, and an increased sense of safety among staff and inmates systemwide. Depending on one's definition of safety and the actual effects of supermax prisons, it is conceivable that some of these impacts might occur, while others might not. For example, assaults might remain unchanged, and riots might decline, or inmate-on-inmate assaults might decrease while inmate-on-staff assaults increase.

Increasing systemwide prison order and control of prisoners is also a commonly cited goal of supermax prisons (Kurki & Morris, 2001, pp. 416-417; see also Franklin, 1998; Hershberger, 1998; Riveland, 1999b), and, like safety, it

Table 1 Goals and intended impacts associated with supermax prison goals*Increase prison safety*

- Fewer murders of staff and prisoners
- Fewer assaults on staff and prisoners
- Fewer riots
- Less concern and fear among inmates and staff about threats to personal safety

Increase systemwide prison order and control of prisoners

- Greater compliance with rules by prisoners
- Greater and more consistent fulfillment of daily routines and obligations by prisoners
- Fewer disruptions and outbursts
- Fewer lockdowns in general population prisons
- Fewer use of force incidents by staff
- Fewer warning shots fired by staff

Improve supermax prisoners' behavior

- More successful reintegration of supermax inmates into other prisons and society
- Greater rule compliance following release from supermax prison
- Less violence following release from supermax prison
- Fewer returns to supermax prisons

Reduce the influence of gangs

- Less gang involvement
- Less intimidation by gang members of fellow prisoners
- Less drug trafficking

Punish violent and disruptive prisoners

- Increase level of punishment for violent and disruptive inmates
- Increase perceived level of punishment among violent and disruptive inmates

Increase public safety

- Fewer escape attempts
- Fewer successful escapes
- Lower recidivism rates among supermax and general population prisoners
- Less crime
- Less fear of crime among residents

Improve operational efficiencies

- Reduce delays for prisoners awaiting placement into some type of segregation
- Reduce costs by operating fewer segregation cells and blocks in different facilities
- Reduce staff time devoted to transporting prisoners from facility to facility

was mentioned by two-thirds of the departments of corrections in the National Institute of Corrections (1997) survey. Interestingly, though, there remains little agreement in the literature regarding definitions of these two concepts (Logan, 1993; Sparks et al., 1996). During interviews, the meaning of the terms sometimes seemed interchangeable. In general, practitioners appear to view order much like one might view it in a classroom—namely, as consistent adherence to rules and procedures and fulfillment of daily routines and obligations. By contrast, control typically appears to suggest the ability to manage specific inmates (e.g., “seriously disruptive” inmates—National Institute of Corrections, 1997, p. 3) and, in particular, to prevent them from committing unsafe

behaviors or from instigating others (Stickrath & Bucholtz, 2003). Conceptually, the two may be viewed as sequentially ordered: Supermax prisons may serve to control certain inmates, in turn creating greater order.

Examples of impacts that might be used to measure either order or control include the extent to which prisoners comply with rules (e.g., number of infractions and disruptions) and fulfill daily routines and obligations. Other impacts may include fewer lockdowns, use-of-force incidents, and warning shots fired by staff. (Within a supermax, the extent of order and control may be reflected in the physical requirements of staff. For example, one prison administrator explained, "The rule of thumb is that hundred-pound women should be able to run a supermax.")

Without a clear definition or guidance from theory about appropriate measures, selecting any particular impact or measure can involve a certain level of arbitrariness. For example, Dilulio (1987) has defined "order" as the "absence of individual or group misconduct that threatens the safety of others" (p. 11). Under this definition, one likely would not include program participation. Yet active involvement in programs and expected routines would seem to capture, at least in part, everyday notions of "order." Here, then, as with all of the impacts listed in Table 1, we have provided examples that illustrate some of the impacts that research and our interviews suggested. A fuller account of potential measures of order and control, as well as of the other goals discussed here, can be found in Burt (1981) and Logan (1993).

Another cited supermax goal is to *improve the behavior of violent and disruptive prisoners* (Atherton, 2001, p. 100). One respondent explained, "The prisoner is here because of how [he] behaved in the past. The goal is that [inmates] change their behavior to return to the general population and improve their behavior following their return." Corrections staff in several prisons reported that behavior modification was a critical measure of supermax prisons' success. Short- and long-term specific impacts were mentioned in association with this goal, including improved reintegration into general population prisons and the community, greater rule compliance while in other prisons, and reduced levels of violent activity. Some respondents viewed rates of return to supermax confinement as a key measure of improved behavior (Preer, 2004; Ward & Werlich, 2003), even though no obvious basis of comparison exists, and factors such as limited capacity might influence whether ex-supermax inmates return to a supermax.

Supermax prisons also are associated with the goal of *reducing gang influence* (Austin et al., 1998; Pizarro & Stenius, 2004). The goal stems in part from concerns that the power of gangs in American corrections has increased in recent decades (Riveland, 1999b), and that they operate with impunity, killing staff and inmates alike (Grann, 2004). Support for this goal is relatively widespread: In the National Institute of Corrections' (1997) study, 17 departments of corrections reported that managing "gang activists" was a primary reason for having a supermax (p. 3). This view was echoed by several respondents, who explained that supermax prisons allow administrators to proactively reduce

gang activity by targeting leaders. To the extent that these prisons affect gang influence, relevant impacts might include the extent of systemwide gang membership and activities, such as gang-initiated murders and assaults and distribution of drugs.

Punishment of violent and disruptive prisoners is mentioned as a goal of some supermax prisons (Ohio Department of Rehabilitation and Correction, 1998, p. 1). Some states, like Texas, explicitly disavow this goal and prohibit the use of supermaxes for punishment (Texas Department of Criminal Justice, 2002, p. 1). In these cases, it is, of course, still possible that inmates view supermax restrictions as punishment. But whether supermax restrictions or conditions of confinement constitute punishment, or increased punishment over other forms of incarceration, remains open to debate. Clearly, and as several respondents noted, not all inmates experience supermax confinement similarly (Lovell, Cloyes, Allen, & Rhodes, 2000). And we know that, in general, perceptions of sanction severity can vary across different populations (Akers & Sellers, 2004). At a minimum, then, studies would want to include measures of the perceptions supermax inmates have about their experiences in supermax confinement, and the extent to which they view such confinement as more or less punishment than other forms of incarceration.

Increasing public safety is yet another goal that some respondents, including wardens, corrections officials, and policymakers, mentioned. One legislator emphasized, for example, that, if asked about whether the state's supermax prison is "working," the public would respond affirmatively, pointing to the prison's low escape rate. As a commonly studied criminal justice outcome, public safety is, of course, associated with other potential impacts, including not only reduced prison escape attempts, but also fewer successful escapes, lower recidivism rates among ex-prisoners, lower crime rates in society, and less fear of crime among citizens.

Finally, some accounts suggest that a goal of supermax prisons is to *improve the efficiency of correctional system operations* (Florida Corrections Commission, 2000; Hershberger, 1998). The increased efficiency reflects the advantages of centralized administration, in this case the concentration of certain inmates in one place. For example, fewer staff must develop specialized skills for working with especially violent inmates. Rules and policies can be more consistently implemented and monitored. And economies of scale may emerge—rather than many prisons building similar high-security cells and purchasing similar equipment, one prison can serve as the single repository of such cells and technology. In turn, general population prisons may be freed to manage their inmates with fewer staff, to operate more frequently under non-lockdown conditions, and to ease restrictions on prisoners' access to programs and services. Impacts associated with operational efficiencies can, we were told, include reduced wait-times for placing inmates in segregation, costs associated with operating fewer segregation cells across a large number of facilities, and staff time devoted to transporting prisoners from one facility to another.

Table 2 Unintended positive impacts of supermax prisons*General population prisons*

- Improve living conditions and outcomes for general population prisoners
- Improve work conditions for staff and reduce staff stress and turnover
- Improve public and political support and financial standing of departments of corrections

Supermax prisons

- Improve quality of life and prosocial outcomes among supermax prisoners
- Improve mental health outcomes among supermax prisoners and protect the mentally ill
- Improve work conditions for staff and reduce staff stress and turnover

State and local community (residents, businesses, and government)

- Increase local economies (e.g., jobs and business development)
- Improve policymakers' standing with the public by appearing tough on crime
- Assist with prosecutorial efforts

The Unintended Impacts of Supermax Prisons

In our analyses of the literature, site visits, and interviews, a range of potential unintended impacts of supermax prisons emerged. Some are positive (see Table 2), and some are negative (see Table 3). Below, we summarize, by three units of analysis—general population prisons, supermax prisons, and state and local communities—some of the most prominent impacts we discovered, underscoring in the text those that appear in tables 2 and 3. The negative impacts consist of outcomes that are the opposite of what supermax prisons were designed to achieve (e.g., decreasing rather than increasing prison order) or that have little bearing on the goals of supermax prisons but nonetheless constitute a harm to one or more populations. We do not know the prevalence or magnitude of any of these impacts, only that they may exist.

Unintended Positive Impacts

General population prisons. *Supermax prisons may improve the living conditions and thus outcomes of general population prisoners.* As Boin (2001) has emphasized, “[many general population prisoners] suffer from constraints designed for individual problem cases” (p. 337). One prison administrator we interviewed described the effects of such cases:

Lockdowns are ordered when there is violence or the threat of violence. There is no movement and no programming, education, or services. Inmates become agitated. It puts stress on the staff because they had to take on the inmates' work details. At one maximum-security prison, there were over 200 lockdown days per year just prior to opening the supermax. The number of lockdown days systemwide then decreased.

Another respondent stated more succinctly, “An inmate is not going to attend school if he's afraid of getting a shank in his back.” In short, removing violent

and disruptive inmates may reduce restrictions of other inmates' freedoms, privileges, and access to programs and services by creating a more "normalized" prison environment characterized by less chaos, violence, intimidation, and harassment (Hershberger, 1998; Kurki & Morris, 2001; Sheppard et al., 1996). In addition, removing "bad apples" may reduce negative inmate influences and allow prosocial inmates to exert greater influence, thereby contributing to rehabilitation and reduced recidivism.

Supermax prisons may also improve work conditions and inmate-staff relations in general population prisons, in turn reducing staff fear, stress, and turnover. The staff may, for example, contend with fewer disruptions and assaults. And, as one respondent noted, supermax prisons allow staff additional time to focus on other inmates and to have more positive interactions with them. He explained, "[Supermax] prisoners take away from the normal operation of a prison. [Without a supermax], one whole day would be taken up with dealing with one prisoner."

In addition, *supermaxes may benefit the entire prison system by increasing public and political support for correctional departments and decreasing system-wide costs.* Such benefits may arise to the extent that supermaxes reduce violence, riots, escapes, recidivism, and other indices of success. Escapes can, for example, erode public confidence in the prison system, as several respondents noted. Moreover, when states face severe budget constraints, the ability to highlight operational efficiencies can be instrumental in maintaining political and fiscal support (Riveland, 1999b). Although cost reductions remain undocumented, several respondents said that their supermaxes led to fewer personnel and medical costs and worker compensation claims.

Supermax prisons. The review and respondents suggest that *supermax prisons may improve the quality of life among inmates placed in them.* Supermax inmates have greater privacy; they are not required to work or participate in as many programs (which some inmates may perceive as benefits); they can enhance their reputations as "dangerous inmates"; they may have their own television sets; they can eat privately, without intrusion; they may have less chance of being victimized or injured or of committing infractions that might lengthen their prison stay; and they generally reside in newer, cleaner facilities (Rhodes, 2004; Singer, 2003;). In addition, they may avoid the stigma of protective custody (Briggs et al., 2003, pp. 1348-1349). Such benefits, from the inmates' perspective, are not hypothetical: In one state, a corrections official apprised us that there was a waiting list of inmates who had volunteered for placement in the state's supermax. Another respondent explained that many of their supermax inmates actually "asked to go to [the supermax] so they'd stay out of trouble and go home [faster]" (see also Gonnerman, 1999).

Supermax prisons may improve the mental health of some inmates and protect the mentally ill. Although non-intuitive, the possibility arises from the potential to be protected from victimization. As Rhodes (2004) has emphasized,

"Large living units can be dangerous for prisoners with psychiatric problems or other vulnerabilities; even fairly minor aberrant behavior may cause an inmate to be rejected or injured by his peers" (p. 13). Several respondents echoed this view, citing cases in which inmates at greater risk of attack seemed to feel safer in a supermax. One mentioned that the surveillance in a supermax reduces the risk that suicide attempts will go unnoticed. And several others mentioned that mentally ill inmates may receive better care than in general population prisons, a belief expressed publicly by one supermax warden (Jones, 2001).

Staff in supermax prisons may experience better and more favorable working conditions, which, in turn may improve their job satisfaction and reduce turnover. This unexpected benefit, mentioned by several respondents, may arise from the restricted interactions with prisoners and the more controlled and predictable work environment. A respondent explained, for example, that inmates were more likely to arrive at other prisons on drugs, which can lead to unpredictable assaults and serious disruptions. He noted that, by contrast, "[In the supermax], you know what you're getting." In addition, supermax staff be promoted more often and more rapidly. At Colorado's supermax facility, for instance, correctional officers "enjoy the highest promotion rate of all [Colorado Department of Corrections] facilities" (Atherton, 2001, p. 100).

State and local communities. Communities, too, may benefit from supermax prisons through improvements to local economies (CNN.com, 2000; Gonnerman, 1999). These prisons have high staff-to-prisoner ratios, which can translate into more local job creation than a lower security prison would. Several respondents emphasized that supermax prisons provide the main source of employment for their communities. Increased employment in turn may improve the local economy, contributing to business development and greater tax revenues.

Supermax prisons may also strengthen the political standing of some policy-makers. If the local economy improves, support for state representatives from the area increases. Even if the representatives initially oppose supermax prisons, they may leverage the openings for political support. As one policymaker explained, "Politicians who were against [the supermax] were at the ribbon-cutting ceremony because this place brought 500 well-paid jobs with benefits." In addition, supermax prisons help policymakers appear "tough on crime," a politically popular stance during the last decade (Kalman, 2001; Riveland, 1999b). In the words of one official:

Politically, [a supermax] is a really easy sell. There is an appetite for punishment. It taps into public fear without much cost and with a big political gain. Even though it's relatively expensive, the cost is still a drop in the bucket. There's not a huge difference between the Democrats and the Republicans on this issue.

Andrew White, a former federal prosecutor, has described another example of an unintended, and surprising, positive impact—*supermax prisons may assist with prosecutorial efforts*:

[A supermax] is not your typical prison. It can have a psychological effect on people. I have had a number of people go in for the weekend and come out and be very willing to cooperate with law enforcement. For the untrained prisoner it can be quite a shock. (James, 2002, p. 8A)

The example, perhaps not typical, nonetheless illustrates the potential for supermax prisons to affect local law, state, and federal enforcement efforts and additional criminal justice outcomes beyond those usually associated with supermaxes.

Table 3 Unintended negative impacts of supermax prisons

General population prisons

- Increase disorder, violence, and likelihood of a riot
- Damage prisoner and staff relations
- Reduce resources for other uses, including programs, services, and staff salaries

Supermax prisons

- Exacerbate or cause mental illness among supermax inmates
- Increase staff abuse and inmate victimization
- Impede inmate reintegration into other prisons, communities, and families
- Create disproportionate punishment for inmates
- Decrease inmate physical health
- Increase management challenges, contributing to decreased staff safety and retention

State and local communities (residents, businesses, and government)

- Increase crime and decrease successful reintegration of supermax prisoners into society
 - Increase taxpayer burdens and shift resources from other state-funded programs and services and prison populations
-

Unintended Negative Impacts

General population prisons. Examples from the literature and our respondents point to the possibility that in some cases, *supermax prisons may actually contribute to riots and decrease rather than increase systemwide order and safety.* A recent journalistic account provides one vivid illustration. In describing the efforts of Assistant US Attorney, Gregory Jessner, to indict “the entire suspected leadership of the [Aryan Brotherhood gang]” (p. 158), Grann (2004) has observed:

In many cases, officials in the correctional system seemed powerless to stop the gang. At Folsom prison, after Aryan Brotherhood leaders were sequestered from the general population, the gang’s associates protested by indiscriminately stabbing rapists and child molesters until the leaders were released. (p. 169)

The restrictions of the prison—including supermax-like conditions, such as extended isolation in solitary confinement—reportedly were unable in similar circumstances to stop gang leaders from influencing other gang members (e.g., sending execution orders) (p. 158).

Because of the literature's relatively greater emphasis on order and safety as goals of supermax prisons, discussion of how these prisons may contribute to disorder and violence is warranted. One respondent noted that some inmates purposely commit violent or disruptive acts so they can be placed in supermax confinement. Alternatively, Abramsky (1999) has suggested that supermax inmates may become so angry that upon release, they commit extreme acts of violence with little thought about the consequences of the acts for the victims or themselves, a variant of what Ward and Werlich (2003) have termed the "rage hypothesis" (p. 62). In addition, few supermax inmates participate in rehabilitative programs that might reduce their more negative impulses (Toch, 2003). And many of them may develop antisocial tendencies due to long-term isolation and abuse. One respondent explained, for example, that supermax security staff will sometimes respond to "antagonistic inmates by lashing out [and] becoming aggressive and verbally abusive." Indeed, some accounts suggest that inmates may experience more abuse in supermax prisons than in other facilities (Fellner, 2000; Kurki & Morris, 2001; Rhodes, 2004).

Disorder and violence in general population prisons may also increase if inmates view supermax confinement as violating due process and human rights, or assignment to supermaxes as unjust or unfair (Abramsky, 2002; Bottoms, 1999; Clarke, 2001; Good, 2003; Jackson, 2002; Rebman, 1999). Inmates' concerns about the placement process may be heightened due to the deprivations associated with supermaxes, the indefinite confinement, and the potential for admissions and releases to appear or be arbitrary. Kurki and Morris (2001) have noted that "administrative admission and transfer criteria and procedures typically allow wide discretion to the prison authorities and need not provide even the same attenuated due process protection that must be provided before an inmate can be transferred to punitive segregation" (p. 389; see also King 1999:163). Such discretion need not necessarily lead to unfair admission and release decisions. However, as one prison administrator explained, "The inmate population is very concerned about the decision-making process [related to the supermax prison]. There is an assertion of unfair bias."

Not least, supermax prisons may increase disorder and violence by reducing the amount of bed space available for general population inmates. As state correctional systems confront one of the primary causes of prison disorder and violence, overcrowding, they also are increasingly facing budget shortfalls (Campbell, 2003; Hammack, 2004). Because supermax prisons are built to house only one inmate per cell, are not easily converted to house two inmates per cell, are costly to operate, and reportedly attract lawsuits, states with these prisons have a reduced ability to expand bed space capacity and thus are less able to respond to overcrowding.

A second unintended negative effect of supermax prisons on general population prisons may be that staff and inmate relations become damaged. Although, as described above, this effect may influence systemwide levels of order and violence, it stands as an important potential impact on its own because of the central role of staff-inmate relations in virtually all aspects of prison system

operations (Sparks et al., 1996). The potential harms from poor inmate-staff relations extend, for example, to prisoners (e.g., more abuse), staff (e.g., more injuries), and the system at large (e.g., an inability to provide services, limitations on inmate visitation, more lawsuits).

The potential for supermax prisons to reduce the resources available to general population prisons bears emphasizing as an unintended effect (Kurki & Morris, 2001, p. 385). As mentioned, one consequence of reduced resources may be increased disorder and violence. But, as with staff-inmate relations, changes in resources can have a more generalized impact because they are so central to effective prison system operations. When, as they currently do, states face budget reductions, the costs associated with a supermax necessarily must divert resources from support for other operational activities. Staffing levels, services, programs, employee benefits, monitoring and supervision, and other such activities must be affected in some way. And any reductions among one or more of them can cause a ripple effect of negative impacts, including recidivism, likely the most salient criminal justice outcome to the public.

Supermax prisons. One of the most cited unintended negative impacts of supermax prisons is that they exacerbate or cause mental illness (Pfeiffer, 2004; Pizarro & Stenius, 2004; Preer, 2004). Research identifies several conditions of supermax prisons that may contribute to the problem, including long-term isolation, limited activities and exposure to sensory stimuli, and higher rates of staff abuse (Fellner, 2000; Haney & Lynch, 1997; Rhodes, 2004). Some researchers argue that mentally ill inmates are more likely to be sent to a supermax (Kurki & Morris, 2001, pp. 409-412). As one respondent stated, "A prisoner's behavior is what gets him classified to [a supermax], but the behavior may be caused by a mental health problem." The question arises as to whether supermax confinement is appropriate in such instances. Critics argue it is not, a view echoed by some court decisions and countered by others (Henningsen et al., 1999; Walters, 2002), and contradicted by those who point to mental health benefits of supermaxes (e.g., Jones, 2001).

Confinement in supermax prisons may increase staff abuse and victimization of inmates. Such effects may result, we were told during interviews, from the greater authority staff have to use force in supermax settings and from the possibility that inmates may be more likely to provoke staff (Riveland, 1999b, p. 1).

Supermax prisoners also may experience greater difficulty reintegrating into other prisons, the community, and family and peer contexts as a result of limited social interactions and access to rehabilitative services (King, 1999, p. 173; see also Gaes, Flanagan, Motiuk, & Stewart, 1999). One prison administrator explained:

I shudder to think about [supermax] inmates going back to the general population from here. We need group therapy so that they can have some social interactions. But the facility is built for punishment alone, so there's not even room to have classrooms.

Without rehabilitative and re-entry programs and services, supermax prisoners may confront additional barriers to finding and securing employment, housing, and health services upon release. And transitions back to families may be especially difficult because of the limited visitation privileges of supermax inmates, creating more stress on the inmate and removing a potentially critical source of support (Boin, 2001; Hershberger, 1998; Kurki & Morris, 2001).

Adding to reintegration challenges is the fact that some states do not transition supermax inmates back into general population prisons prior to release (King, 1999). The National Institute of Corrections (1997) survey revealed that 22 corrections departments allowed inmates to “complete their sentences in supermax housing and be released to the community directly from supermax” (p. 4).⁷ Chase Riveland (1999b), a former corrections official, has commented on both the apparent lack of programs and a transition period, stating, “Corrections professionals agree that, ideally, dangerous inmates should not be released directly to the community from extended control and that transition and pre-release programming would prepare them for reintegration” (p. 10).

Reintegration may also be more challenging for supermax prisoners because they are isolated for long periods of time, which may lead to anti-social behavior (Grassian, 1983; Grassian & Friedman, 1986; Haney & Lynch, 1997; Miller & Young, 1997). One prison psychologist who had worked for many years with supermax inmates articulated what he saw as the consequence:

I feel like many [released supermax prisoners] are more anti-social when they are returned to general population prisons. Five years out, even if they haven't returned [to the supermax], they may not be getting involved [i.e., in programming and with other inmates]. *We make loners here, not better people.* (Emphasis added.)

Some accounts suggest that *supermax inmates may be subject to disproportionate punishment* (King, 1999, p. 182). One survey found, for example, that 40 percent of supermax inmates were placed in a supermax for “rule violations” (Wells et al., 2002, p. 176). The National Institute of Corrections (1997) survey found that 12 departments of corrections have used supermax beds to “compensate for a shortage of segregation beds” (p. 3; see also Associated Press, 2002; Davis, 1999). According to Riveland (1999b), “As comforting as it may be to an institution staff to be rid of such persons, the use of costly high-custody beds for this population is probably not only inefficient, but arguably overkill. These facilities are inappropriate for the nuisance inmate” (p. 7). Indeed, critics assert that using supermax beds for inmates who have committed rule violations rather than serious or violent offenses is tantamount to dispensing disproportionately harsh punishment (Lovell et al., 2000, p. 37).

7. As one reviewer emphasized, although no systematic study has been conducted, states appear to vary in their stated and actual supermax entry and release criteria, as well as the transitional assistance that may be provided. Actual practices would affect, of course, the reintegration success of supermax inmates into other prisons, as well as communities and families.

Confinement in supermax prisons may also negatively affect the physical health of supermax inmates. For example, accessing medical care quickly is a challenge because several staff must accompany supermax inmates at all times (Kurki & Morris, 2001, p. 407; see also Timberg, 2001; Zahn, 2003). In addition, inmates may receive less adequate health care since medical personnel in some facilities must examine them through cell doors (Riveland, 1999b, p. 11). One respondent said that the health care available to elderly or physically disabled supermax inmates is markedly less adequate than in general population prisons. Opportunities for physical exercise are limited as well—prisoners are only able to exercise out of their cell for up to an hour a day, and some respondents said that even this length of time was possible only when sufficient staff were available. Finally, some supermax prisons seal cell doors shut, limiting the supply of fresh air and, it is claimed, compromising inmates' health (Corrections Digest, 2002, p. 6).

Several respondents expressed concern, echoed by research, that *supermaxes pose unique management challenges that have adverse effects on the personnel who work in them, including increased abuse, injury, and stress, and, in turn, decreased staff satisfaction and retention.* For example, some studies point to a "we/they syndrome" that develops between supermax prisoners and staff, which can contribute to hostilities between the two groups (Kurki & Morris, 2001, pp. 417-418; Riveland, 1999b, p. 2; see, generally, Conover, 2000). This syndrome may result from staff knowing that some prisoners have attempted to kill or injure other staff and from prisoners' perceptions of unjust decision-making (Sparks et al., 1996; Steinke, 1991; Ward, 1995). It also may emerge from the structure of supermax confinement. One officer we interviewed stated, "I thought it was easier to manage the inmates in a general population facility because you interact with them more in that type of setting. Here, they are almost always in their cell behind the wall." Echoing this view, another respondent said, "When prisoners' minds have something to occupy themselves with, they harass [staff] less." A correctional administrator felt that the "borderline mentally ill" inmates in supermax prisons presented particular management challenges, explaining that these inmates often "lose control and lash out due to a lack of stimulation." Given the significant restrictions on supermax prisoners' freedom of movement, it may seem odd that supermax staff could be at greater risk of injury. However, the literature and respondents alike suggest that these prisoners still have opportunities to harm staff (Austin et al., 1998; Gonnerman, 1999; National Institute of Corrections, 1997; Rhodes, 2004; Webb, 2001).

Stress and turnover among staff may also result from the heavier workload required of supermax personnel. Typically, inmates perform many of the tasks required to run an institution, such as delivering meals. But in a supermax, inmates perform virtually none of these tasks. Some respondents also indicated that there were few opportunities for supermax staff to rotate to other prisons, and that treatment and program personnel were more prone to experience burnout due to the limited opportunities to provide services to supermax inmates.

State and local communities. Some respondents indicated that *supermax prisons might increase crime in the community* by increasing the recidivism of released supermax inmates (Briggs et al., 2003; Toch, 2001; Ward & Werlich, 2003). According to several respondents, the problem is more general. Because *reintegration* outcomes may be worse among supermax inmates, the neighborhoods to which they return may experience higher rates of unemployment, homelessness, health risks, and crime.

In addition, *supermax prisons may adversely affect state and local communities through the costs associated with them and the corresponding diminished investment in other public services.* Additional costs accrue if supermaxes increase the mental and physical health or court processing caseloads communities face. These costs then translate into tax burdens for businesses and residents and fewer state-funded programs and services.

The Causal Logic of Supermax Prisons

To this point, several questions dimensions along which a fair and balanced assessment might occur have been identified. Here, we return to a focus on goals, and examine several potential problems associated with the causal logic of supermaxes (see Table 4). This issue has received scant attention in the literature (see, however, Mears & Reisig, 2006), perhaps reflecting the view that the causal logic is self-evident. As one practitioner noted: "The use of [a] supermax just makes sense. Administrators know from experience that if you take out the worst, you can manage the rest more openly." However, we suggest that the causal logic is not self-evident in many cases, and that once a logic is identified questions arise about whether the use of supermaxes in fact "makes sense."

Supermax prisons have been argued to advance *prison safety, prison order, and control* through at least three mechanisms: (1) Incapacitation of the most disruptive and violent inmates, (2) general deterrence (i.e., deterring general population inmates from engaging in behaviors that might lead to placement in a supermax), and (3) specific deterrence (i.e., deterring inmates who are released from a supermax from committing additional misconduct). The critical question is whether, from a causal standpoint, the conditions necessary for these mechanisms to increase safety, order, and control typically are present.

Incapacitation would be an effective mechanism if supermax prisons successfully constrain inmates in them from hurting others. However, some accounts indicate that inmates in these facilities are still able to extend their influence beyond their cells, in some cases ordering murders of general population inmates and staff. In addition, any incapacitation effect is premised on placing the most violent and disruptive inmates in supermax confinement. Yet, classification instruments for so doing are far from well developed (Austin, 2003), and some respondents said that supermax prisons sometimes were used to house less serious offenders to manage overflow problems in other institutions. Still

Table 4 Causal logic of how supermax prisons achieve their goals

<i>Increase prison safety, systemwide prison order, and control of prisoners through</i>	
	<ul style="list-style-type: none"> • Incapacitation • General deterrence • Specific deterrence
<i>Improve supermax prisoners' behavior through</i>	
	<ul style="list-style-type: none"> • Rehabilitation • Isolation (self-reflection) • Specific deterrence
<i>Reduce the influence of gangs by</i>	
	<ul style="list-style-type: none"> • Incapacitation • General deterrence • Specific deterrence
<i>Increase public safety by</i>	
	<ul style="list-style-type: none"> • Reducing escapes • Reducing recidivism of released offenders • General deterrence of non-incarcerated populations
<i>Improve operational efficiencies by</i>	
	<ul style="list-style-type: none"> • Allowing immediate placement of violent and disruptive inmates in segregation • Increasing economies of scale that come from operating a single large segregation facility rather than many separate ones • Increasing ease of transportation, with all violent and disruptive inmates sent to one facility rather than being transported to different facilities throughout the state
<i>Punish violent and disruptive prisoners by</i>	
	<ul style="list-style-type: none"> • Restricting inmate movement and privileges • Isolating inmates from others • Increasing time served by reducing parole eligibility and credits for good behavior

others stated that death row inmates were one of the populations targeted for supermaxes because such inmates are among the primary contributors to prison violence. This view, echoed by popular accounts of death row inmates (e.g., Jackson & Burke, 1999), generally is not supported by research on inmate adjustment and violent behavior (Adams, 1992, p. 305; see also Cunningham & Vigen, 2002).

Incapacitation may also increase prison safety, order, and control by reducing the influence that certain inmates have on other inmates. One respondent explained, "By concentrating those with bad behavior, you prevent their behavior from spreading. Before, problem inmates were rotated through the system. This led to a lot of copycat behavior. Now, inmates don't influence others and don't have a chance to build a reputation." Another respondent echoed this opinion: "Removing instigators has a calming effect on the general population." But the effect of incapacitation may be minimal if removing problem prisoners results in others taking up that role—a substitution effect. One respondent argued just this point, asserting that the administration had to routinely (around every 6 months) remove new problem prisoners who had replaced the previous "problem prisoners."

For general deterrence to work, the targeted population presumably must perceive supermax confinement as a punishment and must believe that it will quickly and likely result from the commission of disruptive or violent behaviors (Pizarro & Stenius, 2004). And, indeed, some respondents indicated that many inmates do not want to be placed in a supermax because of the restrictions on their freedoms. Yet, as discussed earlier, some inmates may *not* actually consider supermax confinement to be punishment. Such cases may be isolated, but they also could be relatively widespread and undermine a general deterrent effect. In addition, even if they perceive supermax confinement as punishment, general population inmates must consider the punishment likely or possible for there to be a deterrent effect. However, as one respondent observed:

I don't think that the general population prisoners think about [supermax prisons]. A prisoner can commit a major infraction and never get classified to [one]. Staff write up hundreds of prisoners a day and most never get to [a supermax]. They really don't use it much as a punishment; they use it more for gangs and long-term behavior problems, which are often mental health cases.

Of course, to the extent that prison safety, order, and control are affected by gangs, even a modest general deterrent effect might yield considerable returns. Successful targeting of gang members might, for example, deter other gang members from violent or disruptive behavior and other inmates from joining gangs. But since few states can incarcerate more than a small percent of their inmates in supermax facilities, the vast majority of inmates presumably know that they can commit disruptive and even violent acts, and still not be sent to a supermax. One respondent echoed this view: "I doubt the supermax has a deterrent effect. Inmates know there is a limited number of beds." Another indicated that any deterrent effect was impeded by the fact that many prisoners "have learned what line they can come up to without crossing it."

The specific deterrent effect of supermax prisons is also, it seems, debatable (Pizarro & Stenius, 2004). Some practitioners we interviewed felt strongly that such an effect exists; others argued that it does not. One respondent said, for example, "I have heard inmates say, 'I'll do anything I have to do to stay here.'" Another explained:

About 10 to 15 percent of supermax inmates are "perennial PC [protective custody]" inmates who are scared to death in general population [prisons] but don't want to be labeled PC, so they do something to get in [the supermax]. It's hard to get them out of there because they'll just do something to get back there.

The share of prisoners who fit this profile is unknown. But to the extent that prisoners want to return to supermax confinement, any specific deterrent effect would be undermined. It also might be limited by the alleged harmful psychological impact of these facilities on inmates. And, as the rage hypothesis discussed earlier suggests, a specific anti-deterrent effect might actually exist, leading to increased disruption and violence.

Another goal of supermax prisons is to *improve supermax prisoners' behavior*, presumably through rehabilitative programs, specific deterrence, and self-reflection (Atherton, 2001; Briggs et al., 2003; Suedfeld, Ramirez, Deaton, & Baker-Brown, 1982; Walters, 2002). We have discussed the limited evidence for specific deterrence, and mentioned that few rehabilitative programs reportedly are offered in supermaxes. In addition, inmates typically have few incentives, such as parole or credits for good behavior, to participate even when programs are available. And self-reflection of the kind that leads to improved behaviors does not appear to be common, though few studies document the thought processes of supermax inmates. Further, the limited evidence to date suggests that, if anything, extended isolation reduces inmate sociability and mental health, which belies the notion that supermax prisons improve inmate behavior.

Supermax prisons may reduce *gang influence*—another goal of supermaxes—by incapacitating gang leaders so that they are unable to influence others, and through specific and general deterrence. But such effects require the ability to identify leaders and prevent substitution. The federal government's attempt to isolate leaders of the Aryan Brotherhood gang illustrates the difficulty in accomplishing this goal. It also highlights that the benefits of gang membership (e.g., status and physical protection) might outweigh the perceived costs of supermax confinement (Grann, 2004, pp. 159, 164). Finally, substitution effects seem likely. Research suggests, for example, that gangs often have multiple leaders (Shelden, Tracy, & Brown, 1997). So, any reduction in gang influence would require incapacitating all gang leaders, a difficult, though not impossible, challenge for prison systems (Ralph & Marquart, 1991).

Supermax facilities may increase *public safety* through several mechanisms. One is by incapacitating escape-prone prisoners. Another is by deterring released supermax prisoners from committing further crimes. And a third is by deterring would-be offenders in the community who might believe that they could face supermax confinement. Here, again, several critical issues arise. Few states have documented their ability to effectively identify and incapacitate escape-prone inmates who threaten public safety (Austin & McGinnis, 2004). Reductions in recidivism through specific deterrence are questionable, as discussed earlier. And the general deterrent effect of supermax prisons on offending remains largely unstudied. Some respondents felt confident that such an effect exists. Yet, most would-be criminals likely operate with little regard for or awareness of supermaxes. If, in fact, they are familiar with most prison systems, they know that the chances of supermax placement are low (Pizarro & Stenius, 2004).

Supermax prisons are thought to increase *operational efficiencies* within the prison system, creating benefits that come from centralizing certain efforts. However, this benefit hinges in part on placing specific types of inmates, such as those who incite disturbances, in supermax prisons. If, as we discuss below, states are precluded from placing such inmates in their supermaxes, any efficiencies are likely to be reduced.

Finally, in some states, supermax prisons are viewed as an effective form of *punishment*, one that restricts inmate movement and privileges, precludes

association with others, and increases time served by reducing parole eligibility and credits for good behavior. Clearly, the structure and operations of these prisons seems to guarantee that greater punishment occurs. For this goal, then, the logic of supermax prisons seems unassailable. Yet, some inmates actually may prefer the conditions in supermax housing, and others may view placement in them as a way to enhance their reputations as being among the system's toughest inmates. Such examples run counter to some accounts in the literature, so it is unclear how pervasive this view is among inmates. But the fact that counter-examples exist suggests that the "punishment effect" should not be assumed.

Barriers to Achieving the Goals of Supermax Prisons

As we have argued, for supermax prisons to be effective, they must be used in their intended manner, and the causal mechanisms through which they are thought to work must be largely unimpeded. Here, we extend this argument but focus on several likely barriers that may affect the ability of supermaxes to achieve one or more of their goals.

One notable barrier touched on above is that classification systems may fail to identify the prisoners appropriate for a supermax (Haney, 2003). Placement of the mentally ill, for example, may aggravate existing mental illness and in turn may increase their misconduct, and among the general inmate population it may reduce the perceived legitimacy of prison authorities, thereby risking an increase in prison disorder (Sparks et al., 1996). This practice may reduce the beds available for those inmates who would be most appropriate for supermax confinement (DeMaio, 2001; Hanes, 2004). Several interview respondents emphasized the issue, stressing that classifying the "right" prisoners to a supermax—that is, those whose confinement can help achieve a specific goal—is essential for ensuring that staff and prisoners clearly understand the purposes of supermax confinement and for creating a deterrent effect.

Concern about classification appears warranted because it remains a nascent science (Austin, 2003; Austin & McGinnis, 2004). That said, critics' concerns that the "wrong" types of inmates are placed in supermax housing (e.g., those who are not disruptive or have a mental illness) are difficult to verify. Most states do not compile statistics on the characteristics of inmates in their supermax facilities, nor do they typically document that their procedures for identifying, classifying, and placing inmates in supermaxes are appropriate, well implemented, or valid (Kurki & Morris, 2001). One prison official's comments illustrate the relevance of the issue:

[Supermax wardens must] frequently remind other [wardens] that they will not take problem inmates who have not demonstrated violent behavior or dangerous activities. Inmates who are "irritants," such as multiple grievance or lawsuit filers, are considered inappropriate transfers and subject to veto by the warden.

The implications can be dire: One official explained that “true” supermax inmates accounted for only one-third of all prisoners in his supermax due to overflow from other facilities.

Respondents pointed to another significant barrier—litigation. Several stressed that lawsuits in their states substantially hindered the correctional system’s ability to fill all supermax beds, either by limiting the types of inmates who could be classified to supermax prisons or by establishing cumbersome administrative procedures. One official said that his system was prevented from sending inmates who instigated others to commit disruptive acts to a supermax; he could confine only those inmates who themselves have engaged in such acts. From the perspective of this respondent, such a policy undermines the effectiveness of supermaxes because, in his experience, a considerable amount of prison violence and disorder arises from inmates who instigate or incite others. Indeed, it may be necessary to transfer a critical mass of such inmates to achieve significant reductions in systemwide violence and disorder.

The political dimensions surrounding supermax prisons may also constrain their effectiveness. Most notably, some respondents expressed concern that politicians’ punitive attitudes toward prisoners inhibited the correctional system’s ability to provide programs to supermax inmates. Illustrative of the attitude is Governor Scott McCallum of Wisconsin, who, when asked about his decision concerning a settlement in a class action suit, stated: “I will not turn [the] supermax into a *vacation home* for criminals. This is still a prison for the most corrosive prisoners, the worst of the worst” (Corrections Digest, 2002, p. 4; emphasis added). According to several corrections executives, the repercussions of such views are substantial. One, for example, said that such attitudes recently led to the elimination of a planned mental health treatment program for supermax inmates. Several others emphasized that they faced considerable challenges in obtaining support for rehabilitative programs, for supermax inmates.

The Political, Moral, and Fiscal Dimensions of Supermax Prisons

Juxtaposed against the range of issues discussed to this point are the political, moral, and fiscal dimensions of supermax prisons. We cannot examine these issues in detail, but our purpose here is to emphasize that they likely should be included in any discussion about whether supermax prisons constitute a worthwhile public investment.

Politically, supermax prisons seem to have been embraced more from a “get tough” response to prison disorder than from evidence that they are effective. There is nothing essentially political about wanting to improve prison systems. But the fact that an untested and costly strategy has been and continues to be adopted as one of the primary means for addressing prison order, safety, and other management goals suggests that politics feature prominently. As the legislator cited earlier explained, supermaxes can be “sold to the public” relatively

easily and for considerable “political gain.” Similarly, Riveland (1999b) has emphasized that supermax prisons “have become political symbols of how ‘tough’ a jurisdiction has become” (p. 5).

Several policymakers stated that they faced an uphill battle in fighting against supermaxes—some communities and “get tough” legislators, including both liberals and conservatives, simply had too much political leverage. In one focus group, several corrections officials asserted that their prison system actually did not need a supermax, but policymakers were unwilling to support the purchase of a “regular” prison, and so the department of corrections requested a supermax. Cost, we were told, was not an issue. Another corrections administrator explained that a “‘get tough’ political agenda” resulted in a larger supermax facility than he had originally requested. The result: More than two-thirds of all supermax beds in his state reportedly are occupied by prisoners who have overflowed from standard segregation units and do not fit the expected supermax inmate profile.

Policymakers emphasized that once a supermax prison was built, the political pressures from constituents precluded closing them, even if studies showed that supermax prisons did not work and that their costs far exceeded their benefits. Indeed, one legislator said that such studies would be largely irrelevant because “when it comes to philosophical punishments, studies aren’t going to change anyone’s mind.” Another stated, “If you believe in the supermax, then there is no real need for [a cost-benefit] study.” In at least one state, however, corrections officials believe that a supermax built 15 years ago should be closed because of its substantial operational costs and perceptions that it is not an effective prison management tool (Nitkin, 2003).

Considerable debate exists about the moral dimensions of supermax prisons, especially about whether they are constitutional or humane (Haney & Lynch, 1997; Toch, 2003). Historically, the penitentiary system evolved from the extended solitary confinement used in America’s early years precisely because it was felt that excessive isolation contributed to mental illness (Rothman, 1995). The pendulum has swung back, however, and so the issue again confronts the corrections field. Yet, from our review and interviews, there is little evidence that policymakers have given it serious consideration. For policies with smaller stakes, the relative lack of scrutiny would be understandable. But the United States has been criticized for supporting cruel and inhumane confinement policies that in some instances may violate US-sanctioned international standards of human rights (Abramsky, 2002; Anderson, 1998; British Broadcasting Corporation, 2000; Clarke, 2001; Miller, 1995). Given such concerns and those raised by researchers, the absence of a record of policymaker discussions about the morality of supermax prisons appears surprising. Indeed, without such discussions, the question remains as to whether these prisons are appropriate, from a moral standpoint.

The fiscal costs of supermax prisons are of course relevant to any discussion about the merits of these prisons. Against a backdrop in which empirical research on the effectiveness of supermax prisons is limited to only a few recent

studies with less than favorable findings, states have embarked on a large-scale commitment to supermax prisons. Most accounts indicate that these facilities are considerably more costly to build and operate than conventional facilities, sometimes on an order of magnitude of two to three times more costly. Many of these costs continue for the life course of the prison, and cannot be easily reduced. However, we should emphasize that we know of no systematic account of the actual costs of specific supermax prisons, including conventional cost categories (e.g., construction, staffing, and health care), and indirect costs, such as litigation, potential increases in prison violence, staff and inmate assaults, recidivism, and decreases in employment and housing prospects when inmates are released.

Juxtaposed against the costliness of supermaxes is the question of whether alternative, cheaper investments might yield comparable or larger effects. If, for example, the issue is whether supermax prisons can reduce systemwide disorder, the cost-effectiveness question is whether alternative investments—drug treatment, educational and vocational programs, mental health counseling, creation of segregation cells dispersed across prison systems, among some of the ideas proffered by individuals we interviewed (see also Briggs et al., 2003; Gendreau & Keyes, 2001)—could achieve comparable outcomes with fewer dollars.

Conclusion

Summary

Just over 20 years ago, no states had supermax prisons, and now roughly two-thirds have them. The policy question is whether this investment is sensible. To date, answers have run in diametrically opposed directions and now roughly four out of every five states have them. Proponents point to what they see as obvious benefits, while opponents emphasize what they view as equally obvious financial and humanitarian costs. In the mean time, a broad-based, systematic foundation on which to provide a fair and balanced answer to the question has been lacking. To address this situation, we examined five critical dimensions, largely neglected in the literature, and argued that they should be included in discussions about whether supermax prisons constitute an appropriate and effective allocation of resources. To this end, we drew on a comprehensive review of research, site visits, and interviews with corrections policymakers, officials, and practitioners across 11 states and the federal justice system.

Our analyses point to five broad-based sets of findings, paralleling each of the dimensions we examined. First, there has been strikingly little research on the goals and impacts of supermax prisons, to the point where it is reasonable to assert that no solid empirical foundation exists to say with confidence that they are either effective or ineffective. Equally striking is the fact that the literature and our respondents have identified a wide range of goals and impacts. Our

analyses suggest, for example, that increasing prison safety and order, controlling and improving prisoners' behavior, reducing the influence of gangs, increasing public safety, and increasing efficiencies throughout correctional systems are some of the goals associated with supermax prisons. This situation makes cross-state evaluations of supermax prisons a challenge, and how goals should be measured remains unclear. Before we evaluate something, we must first know what it is trying to achieve. In this instance, researchers essentially must go to each state and ask policymakers and officials exactly what their supermaxes were built to achieve. Even then, they are likely to hear, as we did, a range of responses, so any evaluation likely should include measures common to all states and ones specific to the goals articulated by particular states.

Second, our analyses point to a wide range of potential unintended impacts, some positive and some negative, that supermax prisons may have and that would be critically relevant to any general assessment. Some unintended positive impacts may include increasing the quality of life among general population prison staff and inmates, and improving the economy in the communities in which supermax prisons are located. Some negative impacts may include the opposite of many of the identified goals of supermax prisons—for example, instead of increasing systemwide order, supermax prisons may decrease it. Other negative impacts include decreasing the quality of staff-inmate relations, increasing mental illness among supermax-confined inmates, and increasing supermax and non-supermax inmate recidivism rates. These and other unintended impacts may be rare, isolated events. Or they may be common. Without empirical research, there simply is no way to tell. But it is clear that these types of impacts could dramatically change our views about whether supermax prisons merit support. Perhaps, for example, supermaxes do not appreciably increase mental illness among inmates. Such information would presumably go a long way toward vitiating the arguments of opponents of supermax prisons. Conversely, evidence that supermax prisons substantially increase recidivism rates might raise doubts among even the most ardent advocates of supermaxes.

Third, we found little compelling logic about how supermax prisons are supposed to achieve specific goals. In some cases, the logic may seem straightforward. For example, incarcerating an escape-prone inmate in a highly secure setting for 23 hours per day presumably would reduce the chances that the inmate can escape. But closer reflection raises many important questions. For example, do prisons effectively identify risk-prone inmates? Even if they do, does that have any bearing on the likelihood that other inmates will escape? Perhaps more salient is the question of prison order. For supermax prisons to achieve this goal, many conditions must be met—the most disruptive inmates must be identified, they must be less likely to misbehave upon return to the general prison system, other inmates must refrain from disruptive behavior, a sufficient number of disruptive inmates must be placed in supermax confinement, and so on (see Mears & Reisig 2006). Examination of these and other conditions raises questions about the likely effectiveness of supermaxes in promoting order or achieving other goals.

Fourth, our analyses highlighted a large number of barriers to supermaxes being effective. Assume that we have a clear goal (e.g., reducing prison disorder) and logic model (incapacitation and specific deterrence of inmates in supermax confinement). For a supermax to be effective, it must incarcerate those inmates who are most likely to be disruptive and who are most likely to be deterred. Our review points to a number of critical barriers to these conditions being met. For example, well-validated instruments for identifying disruptive inmates do not exist. And evidence suggests that overcrowding and other pressures lead to the placement of inmates, such as the mentally ill or non-violent offenders, in supermaxes. In some cases, our respondents, including corrections practitioners, indicated that the barriers come close to constituting fatal flaws. Perhaps the best example is the fact that many states currently are facing lawsuits that hamper their ability to place the most disruptive inmates in supermax prisons. If inmates must themselves have committed a specific violent act to be placed in a supermax, states effectively are precluded from isolating inmates who themselves refrain from such behavior but who surreptitiously incite others to engage in it.

Finally, we identified several political, moral, and fiscal dimensions that bear on the question of whether supermax prisons represent a wise policy choice. We suggested that political considerations appear to factor prominently in the decision to build and maintain supermax prisons, while moral considerations do not appear to factor much at all. And we argued that the level of debate and empirical inquiry about supermax prisons does not appear to be commensurate with the level of investment in, and the substantial costs of, these prisons.

Implications for Policy and Practice

We believe the five dimensions discussed above pose considerable implications for policy and practice. From a policy perspective, it might prove instructive to consider an area in which research is entirely silent—the cost-effectiveness of supermax prisons. Specifically, what is the effectiveness of a supermax prison in achieving particular corrections goals as compared with alternative investments aimed at achieving similar goals? Imagine a typical scenario: A state can invest \$50 million to build a new supermax facility and \$25 million annually to operate it over, say, 35 years, a low-end estimate of the typical life course of a prison. Or it can use these same funds over the same time period—close to \$1 billion if we factor in the costs of lawsuits—to invest in a variety of less costly programs. Even if the effects of any one of the latter were substantially less than what might occur with a supermax, the markedly lower costs might well result in larger aggregate returns. When contemplating such a scenario, consider that few states build supermaxes to expand their bed space capacity. Rather, states usually build supermax prisons to achieve specific correctional goals, such as improving systemwide order and safety. So, the comparison is not to what

would be achieved with building other prisons; rather, it is to any of a range of strategies designed to achieve similar goals.

During the past 20 years, states have expanded their prison populations and, perhaps as a consequence, experienced higher levels of disorder and violence. They naturally have sought strategies to address this problem. Unfortunately, there has been little theoretical, conceptual, or empirical research to guide them. Instead, ideologically driven arguments for and against supermaxes have dominated public and academic debates. Based on our study, we believe a foundation exists to re-examine whether supermax prisons constitute a wise investment. Specifically, systematic analysis of the goals and impacts of supermaxes, their unintended effects, the causal logic underlying them, the barriers to their appropriate implementation, and the political, moral, and fiscal dimensions of these prisons would place debates about them on more solid footing. Among other things, it would help raise questions about areas where assumptions have long prevailed. More importantly, it would encourage more appropriate assessments about the effectiveness and merits of supermaxes, as well as explicit justifications, across the dimensions reviewed here, for building them.

On the whole, our examination of these dimensions leads us to be tentatively skeptical about supermax prisons. There is scant evidence that they are effective (though future studies could prove otherwise), and some research, including ours, suggests that they may cause many negative effects, preclude investment in other potentially effective strategies, and raise substantial constitutional and humanitarian questions. Consider the matter from another perspective. If one wants to make a compelling case for supermaxes, the following conditions would need to be met: We would want research that these prisons are effective in achieving specified goals; that their causal logic makes sense with respect to a range of goals and can be supported directly or indirectly by research; that few negative unintended effects exist or are thought to be likely or important; that the costs, including litigation, are less than those of the next-best alternative; and that few constitutional or ethical concerns exist. Yet, apart from a general, though far from uniform, consensus among practitioners that supermaxes appear to be effective, none of the conditions holds true.

That said, empirical research is needed along each of the five dimensions to arrive at a fair and balanced assessment of supermaxes. Prison officials and practitioners face many challenges in their work, and the views that many of these people hold should not be dismissed lightly. If, for example, supermax prisons substantially reduce the likelihood of prison riots and enable the rest of the entire correctional system to run more smoothly, it would be foolhardy to dismiss them as a costly fad. Similarly, if, at the same time, they do not increase rates of mental disorder, then arguments against them substantially diminish.

For researchers, we see a host of theoretical and empirical gaps that should be addressed. In contrast to the early years of American criminological research, recent decades have witnessed few prominent debates or analyses of correctional systems and the issue of prison order. Supermax facilities provide a unique opportunity to revisit this issue. For example, they provide an opportunity to

revisit arguments about whether prison order arises primarily from individual-level factors (e.g., the characteristics of inmate population) or ecological-level factors (e.g., the characteristics and operations of prison systems).

Just as important are the opportunities for evaluation research. For example, which supermax goals should be given the most weight? Some goals, such as reducing escapes, may be viewed as less important in some states than in others, or less important than other goals. Similarly, public safety, a general goal of any correctional system, may be viewed as largely irrelevant relative to such other concerns as staff and inmate safety. That said, given a set of goals, have they been achieved? For example, are supermax inmates less likely than their counterparts in states without supermax prisons to commit crime, find jobs and housing, and successfully reenter society? Are some goals, like riots or other such crises, more likely to be achieved than longer-term goals, such as improving systemwide order?⁸ Also, many opportunities exist to explore how inmates experience different types of incarceration (e.g., medium, maximum, supermax) and whether these experiences bear on their behavior, those of other inmates, or on prison system operations generally. Not least, and at a much different level of analysis, is the need for research to examine why so few studies have been conducted on supermax prisons. Are there entrenched political or institutional interests that have inhibited such research? Is it that researchers have been reluctant to conduct studies because of the challenges of gaining access to inmates or simply because funding has not been available (see, e.g., Ward & Werlich, 2003)?⁹

Descriptive research that would bear on evaluations of supermax prisons is also greatly needed. How, for example, do the actual criteria used to place inmates in, and release them from, supermax confinement vary from stated criteria? What exactly are the characteristics of inmates in supermaxes? Are these characteristics consistent with the goals of supermaxes? How long are inmates actually held in supermax confinement, and how many supermax inmates are released straight into society? For those who are first transitioned into other facilities, what are their behaviors prior to and after release into society?

Clearly, attempts to answer these and other questions pose considerable challenges to researchers, especially given that administrative records often may not be complete or provide valid measures of key constructs, and when conducting interviews with, or observations of, prisoners and staff can be difficult and costly (Ward & Werlich, 2003). Nonetheless, many opportunities exist to advance our understanding of supermax prisons. For example, interrupted time-series analytic approaches could be pursued to examine the impact of supermaxes. Some states do not have supermax prisons but are planning to build them, while some states are seeking to add more, and at least one state

8. This intriguing possibility was suggested by one reviewer, who noted that a marked increase in the use of supermax-like facilities in Texas contributed to a substantial decline in a rapidly escalating prison homicide rate (see Ralph & Marquart, 1991).

9. The authors thank one of the reviewers for identifying the need for this line of research.

(Maryland) is seeking to take down its one supermax. All of these scenarios create opportunities to revisit the work begun by Briggs et al. (2003). In some cases, data could be created prospectively, and thus include a range of measures that tap into diverse goals. And, for retrospective studies, records could be mined for similar measures, including systemwide levels of programming, infractions, assaults, accidental injuries, staff turnover, and the like (Burt, 1981; Logan, 1993).

Surveys of legislators, corrections executives, wardens, corrections officers, and inmates could provide a more systematic foundation for assessing a diverse range of goals and unintended impacts.¹⁰ For example, one might find that legislators' expectations for supermax prisons differ markedly from those of corrections executives, or that there is in fact variation in the official justifications for these prisons. In assessing specific impacts, one might find that wardens who sent inmates to supermaxes report that their own facilities are easier to manage. This approach would entail relying on perceptual data, which may not fully accord with reality. However, particularly in the case of wardens, who operate as managers of organizations, the respondents are uniquely situated to render such assessments, and the approach would allow a direct test of the idea that removing certain inmates can affect the management of institutions.

Apart from helping to identify and assess particular goals, surveys could be used to quantify more systematically the extent to which specific unintended impacts may occur. They also could serve to quantify how much specific factors impede or facilitate the effectiveness of supermax prisons. Such an approach might also allow for assessing whether states systematically differ with respect to the particular barriers they face in effectively operating supermaxes. And, not least, it could be used to measure the intervening variables thought to result in particular impacts. For example, the general deterrence hypothesis could be examined by asking inmates whether they fear placement in supermax prisons.

Before-and-after surveys of inmates who enter supermaxes, coupled with similar information from a matched group of individuals who enter maximum security prisons, could be used to help determine whether supermax confinement affects in-prison inmate behaviors. This type of study also would be critical to addressing debates about whether supermaxes cause or aggravate mental illness more than other types of incarceration. And it would be critical for assessing whether, upon release to society, supermax inmates fare better or worse along a range of re-entry outcomes (e.g., recidivism, drug abuse, employment, housing).

In-depth case studies of select states could provide invaluable insight into the reasons why supermax prisons came into existence, how they are operated, and whether stated guidelines depart from actual practice. Such studies might draw

10. It is by no means simple to gain access to these different populations. Nonetheless, examples of successful attempts exist (see, e.g., Burt, 1981).

on a review of legislative and agency documents, interviews with policymakers, corrections staff, and inmates, and observations of staff and inmates in supermax facilities, and could include quantitative and qualitative analyses.

Finally, and not least, financial audits could quantify the precise construction and operational costs of supermax prisons and determine whether costs vary across states, creating information especially useful for cost-benefit analyses. For example, a "break even" analysis could be conducted to identify the level of impacts, and thus benefits, that must accrue to equal the costs of supermax prisons. In addition, cost-benefit analyses could help guide decisions about whether alternative approaches to achieving similar goals might yield greater returns at less cost.

Not all criminal justice investments warrant such attention. But supermaxes stand out because of their rapid emergence, substantial costs, and the controversy they have prompted, all juxtaposed against a period in which correctional systems have faced enormous growth and challenges. Since these high-security prisons appear here to stay, it is not too soon to begin giving them a closer look.

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References

- Abramsky, S. (2002, February 11). "Return to the madhouse." *The American Prospect*, 13, 26-29.
- Abramsky, S. (1999, June). When they get out. *The Atlantic Monthly*, 283, 30-36.
- Adams, K. (1992). Adjusting to prison life. In M. H. Tonry (Ed.), *Crime and justice: A review of research* (pp. 275-359). Chicago: University of Chicago Press.
- Akers, R. L., & Sellers, C. (2004). *Criminological theories: Introduction, evaluation, and application* (4th ed). Los Angeles, CA: Roxbury.
- Anderson, L. (1998, August 2). Is "supermax" too much? Strict isolation of inmates called cruel, ineffective. *Chicago Tribune*, p. C1.
- Associated Press. (2002, March 28). Ohio ordered to revise inmate-transfer rules. *The Cincinnati Enquirer*, p. C6.
- Atherton, E. (2001). Incapacitation with a purpose. *Corrections Today*, 63, 100-103.

- Austin, J. (2003). *Findings in prison classification and risk assessment*. Washington, DC: National Institute of Corrections.
- Austin, J., & Irwin, J. (2001). *It's about time: America's imprisonment binge* (3rd ed.). Belmont, CA: Wadsworth.
- Austin, J., & McGinnis, K. (2004). *Classification of high-risk and special management prisoners: A national assessment of current practices*. Washington, DC: National Institute of Corrections.
- Austin, J., Repko, S., Harris, R., McGinnis, K., & Plant, S. (1998). *Evaluation of the Texas Department of Criminal Justice administrative segregation population*. Washington, DC: National Council on Crime and Delinquency.
- Babbie, E. (1995). *The practice of social research* (7th ed.). Belmont, CA: Wadsworth.
- Boin, A. (2001). Securing safety in the Dutch prison system: Pros and cons of a supermax. *The Howard Journal*, 40, 335-346.
- Bottoms, A. (1999). Interpersonal violence and social order in prisons. In M. H. Tonry & J. Petersilia (Eds.), *Crime and justice: A review of research* (pp. 205-282). Chicago: University of Chicago Press.
- Briggs, C. S., Sundt, J. L., & Castellano, T. C. (2003). The effect of supermaximum security prisons on aggregate levels of institutional violence. *Criminology*, 41, 1341-1376.
- British Broadcasting Corporation News (BBC). (2000, May 15). US rebuked over torture. London, UK: BBC News. Retrieved January 28, 2005, from <http://news.bbc.co.uk/1/hi/world/americas/749606.stm>
- Bruton, J. H. (2004). *The big house: Life inside a supermax security prison*. Stillwater, MN: Voyageur Press.
- Burt, M. (1981). *Measuring prison results: Ways to monitor and evaluate corrections performance*. Washington, DC: National Institute of Justice.
- Campbell, R. (2003). *Dollars and sentences: Legislators' views on prisons, punishment, and the budget crisis*. New York: Vera Institute of Justice.
- Caplow, T., and Simon, J. (1999). Understanding prison policy and population trends. In M. H. Tonry & J. Petersilia (Eds.), *Prisons* (pp. 63-120). Chicago: University of Chicago Press.
- Caudle, S. L. (2004). Using qualitative approaches. In J. S. Wholey, H. P. Hatry, & K. E. Newcomer (Eds.), *Handbook of practical program evaluation* (pp. 417-438). San Francisco: Jossey-Bass.
- Clarke, M. T. (2001, October). Ohio ACLU challenges supermax. *Prison Legal News*, 12, 28.
- CNN.com. (2000, February 15). New prison brings money, jobs, and criticism. *CNN.com*. Retrieved January 28, 2005, from www.cnn.com/2000/US/02/15/wis.prison.economy
- Collins, W. C. (2004). *Supermax prisons and the Constitution: Liability concerns in the extended control unit*. Washington, DC: National Institute of Corrections.
- Conover, T. (2000). *Newjack: Guarding Sing Sing*. New York: Random House.
- Corrections Digest. (2002). Supermax puts seals at doors for security. *Corrections Digest*, 33, 4.
- Cunningham, M. D., & Vigen, M. P. (2002). Death row inmate characteristics, adjustment, and confinement: A critical review of the literature. *Behavioral Sciences and the Law*, 20, 191-210.
- Davis, P. (1999, December 8). *Inspection report: Ohio State Penitentiary*. Columbus, OH: Correctional Institution Inspection Committee of the 123rd General Assembly.
- DeMaio, J. R. (2001). If you build it, they will come: The threat of overclassification in Wisconsin's supermax prison. *Wisconsin Law Review*, 207-248.
- Dilulio, J. J. (1987). *Governing prisons: A comparative study of correctional management*. New York: Free Press.
- Ekland-Olson, S. (1986). Crowding, social control, and prison violence: Evidence from the post-Ruiz years in Texas. *Law and Society Review*, 20, 389-421.

- Elsner, A. (2004). *Gates of injustice: The crisis in America's prisons*. New York: Pearson.
- Feagin, J. R., Orum, A. M., & Sjoberg, G., eds. (1991). *A case for the case study*. Chapel Hill, NC: University of North Carolina Press.
- Fellner, J. (2000, February). *Out of sight: Super-maximum security confinement in the United States*. New York: Human Rights Watch.
- Florida Corrections Commission. (2000). *2000 annual report*. Tallahassee, FL: Florida Corrections Commission.
- Franklin, R. H. (1998). Assessing supermax operations. *Corrections Today*, 60, 126-127.
- Gaes, G., Flanagan, T. J., Motiuk, L. L., & Stewart, L. (1999). Adult correctional treatment. In M. H. Tonry & J. Petersilia (Eds.), *Prisons* (pp. 361-426). Chicago: University of Chicago Press.
- Gendreau, P., & Keyes, D. (2001). Making prisons safer and more humane environments. *Canadian Journal of Criminology*, 43, 123-130.
- Goldenkoff, R. (2004). Using focus groups. In J. S. Wholey, H. P. Hatry, & K. E. Newcomer (Eds.), *Handbook of practical program evaluation* (pp. 340-362). San Francisco: Jossey-Bass.
- Gonnerman, J. (1999, May 19). The supermax solution. *The Village Voice*, pp. 36-45.
- Good, R. (2003, March 3). The supermax solution. *The Nation*, p. 7.
- Grann, D. (2004, February 16). The Brand: How the Aryan Brotherhood became the most murderous prison gang in America. *The New Yorker*, LXXX, 157-171.
- Grassian, S. (1983). Psychopathological effects of solitary confinement. *American Journal of Psychiatry*, 140, 1450-1454.
- Grassian, S., & Friedman, N. (1986). Effects of sensory deprivation in psychiatric seclusion and solitary confinement. *International Journal of Law and Psychiatry*, 8, 49-65.
- Hammack, L. (2004, April 11). Minimum-security prisons bulging. *The Roanoke Times*, p. B1.
- Hanes, S. (2004, September 6). State lacks Federal prison. *The Baltimore Sun*, p. 1B. Retrieved September 13, 2004, from www.baltimoresun.com/news/local/bal-md.detention06sep06,1,5717927.story?coll=bal-local-headlines
- Haney, C. (2003). Mental health issues in long-term solitary and "supermax" confinement. *Crime and Delinquency*, 49, 124-156.
- Haney, C., & Lynch, M. (1997). Regulating prisons of the future: A psychological analysis of supermax and solitary confinement. *New York University Review of Law and Social Change*, 23, 477-570.
- Henningsen, R. J., Johnson, W. W., & Wells, T. (1999). Supermax Prisons: Panacea or Desperation? *Corrections Management Quarterly*, 3, 53-59.
- Hershberger, G. L. (1998). To the max: Supermax facilities provide prison administrators with more security options. *Corrections Today*, 60, 54-57.
- Irwin, J. (2005). *The warehouse prison: Disposal of the new dangerous class*. Los Angeles: Roxbury.
- Jackson, J., & Burke, Jr., W. F. (1999). *Dead run: The untold story of Dennis Stockton and America's only mass escape from death row*. New York: Random House.
- Jackson, M. (2002). *Justice behind the walls: Human rights in Canadian prisons*. Vancouver: Douglas & McIntyre.
- James, M. (2002, November 1). Malvo could go to school at supermax. *The Baltimore Sun*, p. A8.
- Johnson, K. (2002, December 12). From extreme isolation, waves of felons are freed. *USA Today*, pp. A1, A5.
- Jones, R. P. (2001, October 20). Supermax comes under scrutiny. *JOnline Milwaukee Journal Sentinel*. Retrieved January 28, 2005, from www.jsonline.com/news/state/oct01/super21102001.asp
- Kalman, G. (2001). Avoiding prison policy by sound bite. *Corrections Today*, 63, 106-107.

- King, R. (1999). The rise and rise of supermax: An American solution in search of a problem? *Punishment and Society*, 1, 163-186.
- Knight, K. N. (2000). The evolution of decisionmaking among prison executives, 1975-2000. In J. Horney (Ed.), *Policies, processes, and decisions of the criminal justice system* (pp. 177-224). Washington, DC: National Institute of Justice.
- Kurki, L., & Morris, N. (2001). Supermax prisons. In M. H. Tonry (Ed.), *Crime and justice: A review of research* (pp. 385-424). Chicago, IL: University of Chicago Press.
- Logan, C. H. (1993). Criminal justice performance measures for prisons. In *Performance measures for the criminal justice system* (pp. 15-59). Washington, DC: Bureau of Justice Statistics.
- Lovell, D., Cloyes, K., Allen, D., & Rhodes, L. (2000). Who lives in super-maximum custody? A Washington State study. *Federal Probation*, 64, 33-38.
- Mears, D. P. (2005). A Critical Look at Supermax Prisons. *Corrections Compendium*, 30, pp. 6-7, 45-49.
- Mears, D. P., Moore, G. E., Travis, J., & Winterfield, L. (2003). *Improving the link between research and drug treatment in correctional settings*. Washington, DC: The Urban Institute.
- Mears, D. P., & Reisig, M. D. (2006). The theory and practice of supermax prisons. *Punishment and Society* 8, 33-57.
- Miller, H. A., & Young, G. R. (1997). Prison segregation: Administrative detention remedy or mental health problem? *Criminal Behavior and Mental Health*, 7, 85-94.
- Miller, N. D. (1995). International protection of the rights of prisoners: Is solitary confinement in the United States a violation of international standards? *California Western International Law Journal*, 26, 139-172.
- Mohr, L. B. (1995). *Impact analysis for program evaluation* (2nd ed.). Thousand Oaks, CA: Sage.
- National Institute of Corrections. (1997). *Supermax housing: A survey of current practice*. Washington, DC: National Institute of Corrections.
- Newcomer, K. E., & Triplett, T. (2004). Using surveys. In J. S. Wholey, H. P. Hatry, & K. E. Newcomer (Eds.), *Handbook of practical program evaluation* (pp. 257-291). San Francisco: Jossey-Bass.
- Nitkin, D. (2003, October 16). Maryland wants to demolish supermax as obsolete at 14: State shifts from lockup to rehabilitation in prison. *The Baltimore Sun*, p. A1.
- Ohio Department of Rehabilitation and Correction. (1998, April 9). Director officially opens Ohio State Penitentiary. *News Release*. Columbus, OH: Ohio Department of Rehabilitation and Correction Public Information Service.
- Pfeiffer, M. B. (2004, October 31). A death in the box. *The New York Times Magazine*, pp. 48-53.
- Pizarro, J., & Stenius, V. M. K. (2004). Supermax prisons: Their rise, current practices, and effect on inmates. *The Prison Journal*, 84, 248-264.
- Preer, R. (2004, April 4). The solitary men. *The Boston Globe*, pp. 30-37.
- Ralph, P. H., & Marquart, J. W. (1991). Gang violence in Texas prisons. *The Prison Journal*, 71, 38-49.
- Rebman, C. (1999). The Eighth Amendment and solitary confinement: The gap in protection from psychological consequences. *DePaul Law Review*, 49, 567-619.
- Rhodes, L. A. (2004). *Total confinement: Madness and reason in the maximum security prison*. Los Angeles: University of California Press.
- Riveland, C. (1999a). Prison management trends, 1975-2025. In M. H. Tonry & J. Petersilia (Eds.), *Prisons* (pp. 163-203). Chicago: University of Chicago Press.
- Riveland, C. (1999b). *Supermax prisons: Overview and general considerations*. Washington, DC: National Institute of Corrections.

- Rocheleau, A. M., Forcier, M., & Jackson, J. (1998). *Evaluation of the Massachusetts Department of Correction Department disciplinary unit*. Cambridge, MA: BOTECE.
- Rossi, P. H., Freeman, H. E., & Lipsey, M. W. (1999). *Evaluation: A systematic approach* (6th ed.). Thousand Oaks, CA: Sage.
- Rothman, D. J. (1995). Perfecting the prison: United States, 1789-1865. In N. Morris & D. J. Rothman (Eds.), *The Oxford history of the prison* (pp. 111-129). New York: Oxford University Press.
- Scheirer, M. A. (1994). Designing and using process evaluation. In J. S. Wholey, H. P. Hatry, & K. E. Newcomer (Eds.), *Handbook of practical program evaluation* (pp. 40-68). San Francisco: Jossey-Bass.
- Shelden, R. G., Tracy, S. K., & Brown, W. B. (1997). *Youth gangs in American society*. New York: Wadsworth.
- Sheppard, R. A., Geiger, J. R., & Welborn, G. (1996). Closed maximum security: The Illinois supermax. *Corrections Today*, 58, 84-106.
- Simon, J. (2000). The "society of captives" in the era of hyper-incarceration. *Theoretical Criminology*, 4, 285-308.
- Singer, P. (2003, March 3). Inmates volunteer to stay at "supermax" prison. *Associated Press*. Retrieved 4 April 2006, www.wkyc.com/akron/akron_fullstory.asp?id=3330
- Sparks, R., Bottoms, A. E., & Hay, W. (1996). *Prisons and the problem of order*. Oxford: Oxford University Press.
- Steinke, P. (1991). Using situational factors to predict types of prison violence. *Journal of Offender Rehabilitation*, 17, 119-132.
- Stickrath, T. J., & Bucholtz, G. A. (2003). Supermax prisons: Why? In, D. Neal (Ed.), *Supermax prisons: Beyond the rock* (pp. 1-14). Lanham, MD: American Correctional Association.
- Suedfeld, P., Ramirez, C., Deaton, J., & Baker-Brown, G. (1982). Reactions and attributes of prisoners in solitary confinement. *Criminal Justice and Behavior*, 9, 303-340.
- Texas Department of Criminal Justice. (2002). *Administrative segregation plan*. Austin, TX: Texas Department of Criminal Justice, Institutional Division.
- Timberg, C. (2001, July 31). Documents show use of force at Wallens Ridge. *The Washington Post*, p. B1.
- Toch, H. (2001). The future of supermax confinement. *The Prison Journal*, 81, 376-388.
- Toch, H. (2003). The contemporary relevance of early experiments with supermax reform. *The Prison Journal*, 83, 221-228.
- Walters, S. (2002, January 3). Settlement calls for changes to supermax. *JSOnline Milwaukee Journal Sentinel*. Retrieved January 28, 2005, from www.jsonline.com/news/state/jan02/9928.asp
- Ward, D. A. (1995). A corrections dilemma: How to evaluate super-max regimes. *Corrections Today*, 57, 104-108.
- Ward, D. A., & Werlich, T. G. (2003). Alcatraz and Marion: Evaluating super-maximum custody. *Punishment and Society*, 5, 53-75.
- Webb, L. R. (2001). *Addressing severe behavior problems in a "super-max" prison setting*. Salem, OR: Oregon State Penitentiary.
- Wells, T. L., Johnson, W. W., & Henningsen, R. J. (2002). Attitudes of prison wardens toward administrative segregation and supermax prisons. In L. F. Alarid & P. F. Cromwell (Eds.), *Correctional perspectives* (pp. 171-180). Los Angeles, CA: Roxbury.
- Zahn, M. (2003, May 10). Supermax death spurs probe of inmate care. *JSOnline Milwaukee Journal Sentinel*. Retrieved January 28, 2005, from www.jsonline.com/news/metro/may03/140055.asp