Mental Health Issues in Long-Term Solitary and "Supermax" Confinement

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This article discusses the recent increase in the use of solitary-like confinement, especially the rise of so-called supermax prisons and the special mental health issues and challenges they pose. After briefly discussing the nature of these specialized and increasingly widespread units and the forces that have given rise to them, the article reviews some of the unique mental-health-related issues they present, including the large literature that exists on the negative psychological effects of isolation and the unusually high percentage of mentally ill prisoners who are confined there. It ends with a brief discussion of recent caselaw that addresses some of these mental health issues and suggests that the courts, though in some ways appropriately solicitous of the plight of mentally ill supermax prisoners, have overlooked some of the broader psychological problems these units create.

Keywords: *supermax; solitary confinement; effects of imprisonment*

The field of corrections is arguably impervious to much truly significant change. Of all of the institutions in our society, prisons retain the greatest similarity to their early 19th century form. Indeed, until relatively recently, more than a few prisoners were housed in facilities that had been constructed a half century or more ago. Although there have been advances in the methods by which correctional regimes approach the task of changing or rehabilitating prisoners, and a number of improvements made in overall conditions of confinement compared to the 19th century (often brought about by litigation compelling prison systems to modernize and improve), many of the basic facts of prison life have remained relatively constant. Notwithstanding increased sophistication in the technology of incarcerative social control, and the waxing and waning in popularity of one or another kind of prison treatment program, the argument that there has been nothing fundamentally new on the correctional landscape for many years would be difficult to refute.

However, in this article, I suggest that the last decade of the 20th century did see the rise of a new penal form—the so-called supermax prison. Increasing numbers of prisoners now are being housed in a new form of

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solitary or isolated confinement that, although it resembles the kind of punitive segregation that has been in use since the inception of the prison, has a number of unique features.[1] At the start of the 1990s, Human Rights Watch (1991) identified the rise of supermax prisons as "perhaps the most troubling" human rights trend in U.S. corrections and estimated that some 36 states either had completed or were in the process of creating some kind of "super maximum" prison facility. By the end of the decade, the same organization estimated that there were approximately 20,000 prisoners confined to supermax-type units in the United States (Human Rights Watch, 2000) and expressed even more pointed concerns about their human rights implications. Because most experts agree that the use of such units has increased significantly since then, it is likely that the number of persons currently housed in supermax prisons is considerably higher.

There are few if any forms of imprisonment that appear to produce so much psychological trauma and in which so many symptoms of psychopathology are manifested. Thus, the mental health implications of these units are potentially very significant. Despite the slight (and sometimes not so slight) variations in the ways different state prison systems approach this most restrictive form of confinement, supermax prisons have enough in common to permit some generalizations about what they are, why they have come about, what special mental health issues they raise, and how they might be regulated and reformed to minimize some of the special risks they pose. I will try to address each of these issues in turn in the pages that follow.

SUPERMAX CONDITIONS OF CONFINEMENT

Supermax confinement represents a significant variation in the long-standing practice of placing prisoners in what is known as solitary confinement or punitive segregation. For practical as well as humanitarian reasons, prisoners have rarely been confined in literal or complete solitary confinement.[2] But prisoners in solitary or isolation have always been physically segregated from the rest of the prison population and typically excluded from much of the normal programming, routines, opportunities, and collective activities available in the mainline institution. By the late 19th century, most jurisdictions in the United States had, for the most part, restricted solitary confinement to relatively brief periods of punishment that were imposed in response to specified infractions of prison rules.[3]

In contrast to this traditional form of isolation, supermax differs in several important ways—primarily the totality of the isolation, the intended duration of the confinement, the reasons for which it is imposed, and the technological

sophistication with which it is achieved. In particular, supermax prisons house prisoners in virtual isolation and subject them to almost complete idleness for extremely long periods of time. Supermax prisoners rarely leave their cells. In most such units, an hour a day of out-of-cell time is the norm. They eat all of their meals alone in the cells, and typically no group or social activity of any kind is permitted.[4]

When prisoners in these units are escorted outside their cells or beyond their housing units, they typically are first placed in restraints—chained while still inside their cells (through a food port or tray slot on the cell door)—and sometimes tethered to a leash that is held by an escort officer. They are rarely if ever in the presence of another person (including physicians and psychotherapists) without being in multiple forms of physical restraints (e.g., ankle chains, belly or waist chains, handcuffs). Supermax prisoners often incur severe restrictions on the nature and amounts of personal property they may possess and on their access to the prison library, legal materials, and canteen. Their brief periods of outdoor exercise or so-called yard time typically take place in caged-in or cement-walled areas that are so constraining they are often referred to as "dog runs." In some units, prisoners get no more than a glimpse of overhead sky or whatever terrain can be seen through the tight security screens that surround their exercise pens.

Supermax prisoners are often monitored by camera and converse through intercoms rather than through direct contact with correctional officers. In newer facilities, computerized locking and tracking systems allow their movement to be regulated with a minimum of human interaction (or none at all). Some supermax units conduct visits through videoconferencing equipment rather than in person; there is no immediate face-to-face interaction (let alone physical contact), even with loved ones who may have traveled great distances to see them. In addition to "video visits," some facilities employ "tele-medicine" and "tele-psychiatry" procedures in which prisoners' medical and psychological needs are addressed by staff members who "examine" them and "interact" with them over television screens from locations many miles away.

Supermax prisons routinely keep prisoners in this near-total isolation and restraint for periods of time that, until recently, were unprecedented in modern corrections. Unlike more traditional forms of solitary confinement in which prisoners typically are isolated for relatively brief periods of time as punishment for specific disciplinary infractions, supermax prisoners may be kept under these conditions for years on end. Indeed, many correctional systems impose supermax confinement as part of a long-term strategy of correctional management and control rather than as an immediate sanction for discrete rule violations.

In fact, many prisoners are placed in supermax not specifically for what they have done but rather on the basis of who someone in authority has judged them to be (e.g., "dangerous," "a threat," or a member of a "disruptive" group). In many states, the majority of supermax prisoners have been given so-called indeterminate terms, usually on the basis of having been officially labeled by prison officials as gang members. An indeterminate supermax term often means that these prisoners will serve their entire prison term in isolation (unless they debrief by providing incriminating information about other alleged gang members).[5] Prisoners in these units may complete their prison sentence while still confined in supermax and be released directly back into the community. If and when they are returned to prison on a parole violation or subsequent conviction, they are likely to be sent immediately back to supermax because of their previous status as a supermax prisoner.

To summarize: prisoners in these units live almost entirely within the confines of a 60- to 80-square-foot cell, can exist for many years separated from the natural world around them and removed from the natural rhythms of social life, are denied access to vocational or educational training programs or other meaningful activities in which to engage, get out of their cells no more than a few hours a week, are under virtually constant surveillance and monitoring, are rarely if ever in the presence of another person without being heavily chained and restrained, have no opportunities for normal conversation or social interaction, and are denied the opportunity to ever touch another human being with affection or caring or to receive such affection or caring themselves. Because supermax units typically meld sophisticated modern technology with the age-old practice of solitary confinement, prisoners experience levels of isolation and behavioral control that are more total and complete and literally dehumanized than has been possible in the past. The combination of these factors is what makes this extraordinary and extreme form of imprisonment unique in the modern history of corrections. Its emergence in a society that prides itself on abiding "evolving standards of decency" (*Trop v. Dulles*, 1958) to regulate its systems of punishment requires some explanation.

THE ORIGINS OF THE MODERN SUPERMAX

Two important trends in modern American corrections help to account for the creation of this new penal form. The first is the unprecedented growth in the prison population that started in the mid-1970s and continued into the early years of the 21st century. The rate of incarceration in the United States (adjusting for any increases in overall population) remained stable over the

50-year period from 1925 to 1975. Remarkably, it then quintupled over the next 25-year period. Most state prison systems doubled in size and then doubled again during this period, with no commensurate increase in the resources devoted to corrections in general or to programming and mental health services in particular (Haney & Zimbardo, 1998).

This dramatic influx of prisoners—and the overcrowding crisis it produced—occurred at approximately the same time that another important change was underway. In the mid-1970s, the United States formally abandoned its commitment to the rehabilitative ideals that had guided its prison policy for decades. Often at the insistence of the politicians who funded their prison systems, correctional administrators embraced a new philosophy built on the notion that incarceration was intended to inflict punishment and little else. The mandate to provide educational, vocational, and therapeutic programming in the name of rehabilitation ended at an especially inopportune time (Haney, 1997). Prisons throughout the country were filled to capacity and beyond, and the prisoners who were crowded inside had few opportunities to engage in productive activities or to receive help for preexisting psychological or other problems.

Under these conditions of unprecedented overcrowding and unheard of levels of idleness, prison administrators lacked positive incentives to manage the inevitable tensions and conflicts that festered behind the walls. In systems whose raison d'être was punishment, it was not surprising that correctional officials turned to punitive mechanisms in the hope of buttressing increasingly tenuous institutional controls. Of course, disciplinary infractions often were met with increasing levels of punishment in the modern American prison, even before these trends were set in motion. But the magnitude of the problem faced by correctional administrators in the 1980s pushed their response to an unprecedented level. Supermax prisons emerged in this context—seized on as a technologically enhanced tightening screw on the pressure cooker-like atmosphere that had been created inside many prison systems in the United States. As the pressure from overcrowding and idleness increased, the screw was turned ever tighter.

Historically, correctional polices often harden in times of prison crisis. But once the problem causing the increased tension or turmoil has been identified and resolved, the punitive response typically de-escalates, sometimes leading to even more hospitable conditions and treatment. Unfortunately, the prison overcrowding problem did not subside during the 1980s and 1990s, and the continued punitive atmosphere that marked this period meant that corrections officials were in no position look "soft" in the face of the crisis.

The politics of the era deprived prison administrators of alternative approaches and guaranteed a one-way ratcheting up of punishment in the face of these tensions. They became increasingly committed to more forcibly subduing prisoners whose behavior was problematic ("a threat to the safety and security of the institution"), taking fewer chances with others whom they suspected might be a problem, and set about intimidating everyone else who might be thinking about causing disruption. Supermax simultaneously provided politicians with another stark symbol to confirm their commitment to tough-on-crime policies (Riveland, 1999) and gave prison officials a way of making essentially the same statement behind the walls.

I belabor this recent correctional history to debunk several myths that surround the rise of the supermax prison form. This new kind of prison did not originate as a necessary or inevitable response or backlash to some sort of "permissive" correctional atmosphere that allegedly prevailed in the 1960s, as some who defend the recent punitive trends in imprisonment have suggested (cf. O'Brien & Jones, 1999). It was not a badly needed corrective to liberal prison policies or to previous capitulations to the prisoners' rights movement. Quite the opposite. Supermaxes began in response to the overcrowded and punitive 1980s and came into fruition in the even more overcrowded and more punitive 1990s. They are in many ways the logical extension of a system founded on the narrow premise that the only appropriate response to misbehavior is increased punishment.

In addition, there is no evidence that the rise of supermax prisons was driven by the threat of some new breed of criminal or prisoner. The natural human tendency to individualize, dispositionalize, and sometimes even to demonize problematic behavior, and to ignore the contextual forces that help create it, is intensified in prison systems as perhaps nowhere else. Thus, when correctional officials faced unprecedented pressures from dramatically increased levels of overcrowding and idleness, they naturally ignored the contextual origins of the problem (over which they had little or no control) and blamed the prisoners (over which they did).

But, even if supermax prisons now contain only "the worst of the worst"[6]—a phrase that is often used to justify the use of these newly designed units but whose accuracy is hotly disputed by their critics—there is no evidence that these allegedly "worst" prisoners are any worse than those who had been adequately managed by less drastic measures in the past. In assessing the benefits and burdens of supermax confinement, it is important to keep in mind that correctional officials have not been given a mandate to engage in such extraordinarily punitive and unprecedented measures because they now

confront not only an extraordinarily dangerous but new strain of prisoner that has never before existed. There is no such new breed and no such mandate.

THE PSYCHOLOGICAL PAINS OF SUPERMAX CONFINEMENT

In assessing the mental health concerns raised by supermax prisons, it is important to acknowledge an extensive empirical literature that clearly establishes their potential to inflict psychological pain and emotional damage. Empirical research on solitary and supermax-like confinement has consistently and unequivocally documented the harmful consequences of living in these kinds of environments. Despite some methodological limitations that apply to some of the individual studies, the findings are robust. Evidence of these negative psychological effects comes from personal accounts, descriptive studies, and systematic research on solitary and supermax-type confinement, conducted over a period of four decades, by researchers from several different continents who had diverse backgrounds and a wide range of professional expertise. Even if one sets aside the corroborating data that come from studies of psychologically analogous settings—research on the harmful effects of acute sensory deprivation (e.g., Hocking, 1970; Leiderman, 1962), the psychological distress and other problems that are created by the loss of social contact such as studies of the pains of isolated, restricted living in the free world (e.g., Chappell & Badger, 1989; Cooke & Goldstein, 1989; Harrison, Clearwater, & McKay, 1989; Rathbone-McCuan & Hashimi, 1982), or the well-documented psychiatric risks of seclusion for mental patients (e.g., Fisher, 1994; Mason, 1993)—the harmful psychological consequences of solitary and supermax-type confinement are extremely well documented.

Specifically, in case studies and personal accounts provided by mental health and correctional staff who worked in supermax units, a range of similar adverse symptoms have been observed to occur in prisoners, including appetite and sleep disturbances, anxiety, panic, rage, loss of control, paranoia, hallucinations, and self-mutilations (e.g., Jackson, 1983; Porporino, 1986; Rundle, 1973; Scott, 1969; Slater, 1986). Moreover, direct studies of prison isolation have documented an extremely broad range of harmful psychological reactions. These effects include increases in the following potentially damaging symptoms and problematic behaviors: negative attitudes and affect (e.g., Bauer, Priebe, Haring, & Adamczak, 1993; Hilliard, 1976; Koch, 1986; Korn, 1988a, 1988b; Miller & Young, 1997; Suedfeld, Ramirez, Deaton, & Baker-Brown, 1982), insomnia (e.g., Bauer et al., 1993; Brodsky &

Scogin, 1988; Haney, 1993; Koch, 1986; Korn, 1988a, 1988b), anxiety (e.g., Andersen et al., 2000; Brodsky & Scogin, 1988; Grassian, 1983; Haney, 1993; Hilliard, 1976; Koch, 1986; Korn, 1988a, 1988b; Toch, 1975; Volkart, Dittrich, Rothenfluh, & Werner, 1983; Walters, Callagan, & Newman, 1963), panic (e.g., Toch, 1975), withdrawal (e.g., Cormier & Williams, 1966; Haney, 1993; Miller & Young, 1997; Scott & Gendreau, 1969; Toch, 1975; Waligora, 1974), hypersensitivity (e.g., Grassian, 1983; Haney, 1993; Volkart, Dittrich, et al., 1983), ruminations (e.g., Brodsky & Scogin, 1988; Haney, 1993; Korn, 1988a, 1988b; Miller & Young, 1997), cognitive dysfunction (e.g., Brodsky & Scogin, 1988; Grassian, 1983; Haney, 1993; Koch, 1986; Korn, 1988a, 1988b; Miller & Young, 1997; Suedfeld & Roy, 1975; Volkart, Dittrich, et al., 1983), hallucinations (e.g., Brodsky & Scogin, 1988; Grassian, 1983; Haney, 1993; Koch, 1986; Korn, 1988a, 1988b; Suedfeld & Roy, 1975), loss of control (e.g., Grassian, 1983; Haney, 1993; Suedfeld & Roy, 1975; Toch, 1975), irritability, aggression, and rage (e.g., Bauer et al., 1993; Brodsky & Scogin, 1988; Cormier & Williams, 1966; Grassian, 1983; Haney, 1993; Hilliard, 1976; Koch, 1986; Miller & Young, 1997; Suedfeld et al., 1982; Toch, 1975), paranoia (e.g., Cormier & Williams, 1969; Grassian, 1983; Volkart, Dittrich, et al., 1983), hopelessness (e.g., Haney, 1993; Hilliard, 1976), lethargy (e.g., Brodsky & Scogin, 1988; Haney, 1993; Koch, 1986; Scott & Gendreau, 1969; Suedfeld and Roy, 1975), depression (e.g., Andersen et al., 2000; Brodsky & Scogin, 1988; Haney, 1993; Hilliard, 1976; Korn, 1988a, 1988b), a sense of impending emotional breakdown (e.g., Brodsky & Scogin, 1988; Grassian, 1983; Haney, 1993; Koch, 1986; Korn, 1988a, 1988b; Toch, 1975), self-mutilation (e.g., Benjamin & Lux, 1975; Grassian, 1983; Toch, 1975), and suicidal ideation and behavior (e.g., Benjamin & Lux, 1975; Cormier & Williams, 1966; Grassian, 1983; Haney, 1993).

In addition, among the correlational studies of the relationship between housing type and various incident reports, again, self-mutilation and suicide are more prevalent in isolated housing (e.g., Hayes, 1989; Johnson, 1973; A. Jones, 1986; Porporino, 1986), as are deteriorating mental and physical health (beyond self-injury), other-directed violence, such as stabbings, attacks on staff, and property destruction, and collective violence (e.g., Bidna, 1975; Edwards, 1988; Kratcoski, 1988; Porporino, 1986; Sestoft, Andersen, Lilleback, & Gabrielsen, 1998; Steinke, 1991; Volkart, Rothenfluh, Kobelt, Dittrich, & Ernst, 1983). The use of extreme forms of solitary confinement in so-called brainwashing and torture also underscores its painful, damaging potential (e.g., Deaton, Burge, Richlin, & Latrownik, 1977; Foster, 1987; Hinkle & Wolff, 1956; Riekert, 1985; Shallice, 1974; Vrca, Bozikov, Brzovic, Fuchs, & Malinar, 1996; West, 1985). In fact, many

of the negative effects of solitary confinement are analogous to the acute reactions suffered by torture and trauma victims, including post-traumatic stress disorder or PTSD (e.g., Herman, 1992, 1995; Horowitz, 1990; Hougen, 1988; Siegel, 1984) and the kind of psychiatric sequelae that plague victims of what are called "deprivation and constraint" torture techniques (e.g., Somnier & Genefke, 1986).

To summarize, there is not a single published study of solitary or supermax-like confinement in which nonvoluntary confinement lasting for longer than 10 days, where participants were unable to terminate their isolation at will, that failed to result in negative psychological effects. The damaging effects ranged in severity and included such clinically significant symptoms as hypertension, uncontrollable anger, hallucinations, emotional breakdowns, chronic depression, and suicidal thoughts and behavior. Of course, it is important to emphasize that not all supermax prisons are created equal, and not all of them have the same capacity to produce the same number and degree of negative psychological effects. Research on the effects of social contexts and situations in general and institutional settings in particular underscores the way in which specific conditions of confinement do matter. Thus, there is every reason to expect that better-run and relatively more benign supermax prisons will produce comparatively fewer of the preceding negative psychological effects, and the worse run facilities will produce comparatively more.

THE PREVALENCE OF PAIN AND SUFFERING IN SUPERMAX

In addition to the serious nature and wide range of adverse symptoms that have been repeatedly reported in a large number of empirical studies, it is important to estimate their prevalence rates—that is, the extent to which prisoners who are confined in supermax-type conditions suffer its adverse effects. My own research at California's Pelican Bay "security housing unit" (or SHU)—a prototypical supermax prison at the time these data were collected—provides one such estimate. In this section, I describe this research in some detail and situate its findings by comparing them to prevalence rates among several other relevant groups.

In the Pelican Bay study, each prisoner was individually assessed in face-to-face interviews. Because the sample of 100 SHU prisoners was randomly selected, the data are representative of and, within appropriate margins of error, generalizable to the entire group of prisoners at this supermax facility.[7] The following two important areas were explored in each interview. In the

TABLE 1: Symptoms of Psychological and Emotional Trauma

Symptom	*% Presence Among Pelican Bay SHU Prisoners*
Anxiety, nervousness	91
Headaches	88
Lethargy, chronic tiredness	84
Trouble sleeping	84
Impending nervous breakdown	70
Perspiring hands	68
Heart palpitations	68
Loss of appetite	63
Dizziness	56
Nightmares	55
Hands trembling	51
Tingling sensation[a]	19
Fainting	17

NOTE: SHU = security housing unit.
a. Not necessarily a symptom of psychological trauma. It is included as a control question to provide a baseline against which to measure the significance of the trauma-related responses.

first, one series of questions focused on whether the prisoner experienced any of 12 specific indices of psychological trauma or distress. A list of those symptoms regarded as reliable indicators of general psychological distress was employed. They were essentially the same indices of distress that Jones (1976) and others have used to assess mainline prison populations. In the second, a different series of questions was designed to determine whether the prisoner suffered any of 13 specific psychopathological effects of isolation. Based on previous research conducted by Grassian (1983) and others (e.g., Brodsky & Scogin, 1988; Korn, 1988a, 1988b), a list of isolation-related symptoms was developed and used to assess each prisoner in this regard.

The results of this prevalence study are depicted in Tables 1 and 2. As Table 1 indicates, every symptom of psychological distress but one (fainting spells) was suffered by more than half of the representative sample of supermax prisoners. Two thirds or more of the prisoners reported being bothered by many of these symptoms in the SHU, and some were suffered by nearly everyone. For example, virtually all of the isolated prisoners were plagued by nervousness and anxiety, by chronic lethargy, and a very high percentage (70%) felt themselves on the verge of an emotional breakdown. In addition, a very high number suffered from headaches and troubled sleep, and more than half were bothered by nightmares. Well over half of the supermax prisoners reported a constellation of symptoms—headaches, trembling, sweaty palms, and heart palpitations—that is commonly associated with hypertension.

TABLE 2: Psychopathological Effects of Prolonged Isolation

Symptom	*% Presence Among Pelican Bay SHU Prisoners*
Ruminations	88
Irrational anger	88
Oversensitivity to stimuli	86
Confused thought process	84
Social withdrawal	83
Chronic depression	77
Emotional flatness	73
Mood, emotional swings	71
Overall deterioration	67
Talking to self	63
Violent fantasies	61
Perceptual distortions	44
Hallucinations	41
Suicidal thoughts	27

NOTE: SHU = security housing unit.

As Table 2 shows, the psychopathological symptoms of isolation were even more prevalent among these prisoners. Almost all of the supermax prisoners reported suffering from ruminations or intrusive thoughts, an oversensitivity to external stimuli, irrational anger and irritability, confused thought processes, difficulties with attention and often with memory, and a tendency to withdraw socially to become introspective and avoid social contact. An only slightly lower percentage of prisoners reported a constellation of symptoms that appeared to be related to developing mood or emotional disorders—concerns over emotional flatness or losing the ability to feel, swings in emotional responding, and feelings of depression or sadness that did not go away. Finally, sizable minorities of supermax prisoners reported symptoms that are typically only associated with more extreme forms of psychopathology—hallucinations, perceptual distortions, and thoughts of suicide.

To put both sets of figures in perspective, it is possible to compare these prevalence rates with those derived from other populations in which similar assessments have been made. For example, Dupuy, Engel, Devine, Scanlon, and Querec (1970) assessed some similar indices of psychological distress with a representative national probability sample of more than 7,000 persons. More recent data focusing on similar indices of psychopathology were collected in Epidemiologic Catchment Area Study (ECAS), a multisite study in which the diagnostic interview schedule (DIS) was used to assess the prevalence of psychiatric symptoms in the population at large (Robins & Regier,

1991). Finally, even more extensive comparisons are possible with another systematic study of the effects of living under isolated prison conditions—Brodsky and Scogin's (1988) research on prisoners confined in two maximum security protective custody units.

Table 3 contains a summary of the comparisons between the prevalence rates found in the two studies of nonincarcerated normal populations, Brodsky and Scogin's protective custody prisoners, and the supermax sample from Pelican Bay SHU (of course, along only those dimensions measured in each of the respective studies). The contrasts with the nonincarcerated normal samples are striking. As would be expected, in almost every instance, the prevalence rates for indices of psychological distress and psychopathology in the samples from the general population are quite low. The only exceptions were for anxiety and nervousness, which Dupuy et al. (1970) found in 45% of their normal sample, and depression, which Robins and Regier (1991) found in almost a quarter of the persons they assessed. Otherwise, the indices of distress and symptoms of psychopathology occurred in less than 20% of the nonincarcerated samples. On the other hand, in both of the isolated prisoner populations, the prevalence rates were well above 50% on virtually all of the measured dimensions. For certain symptoms, rates for the prisoner samples were five to ten or more times as high.

In fact, in both comparative and absolute terms, the prevalence rates were extremely high for the supermax prisoner sample and exceeded even those reported for the protective custody prisoners. Conditions of confinement for protective custody prisoners are in many ways similar to those in supermax confinement. That is, they are typically segregated from the rest of the prison population, restricted or prohibited from participating in prison programs and activities, and often housed indefinitely under what amount to oppressive and isolated conditions. Unlike supermax prisoners per se, however, many have some control over their status as protective custody (PC) prisoners (e.g., many have "volunteered" for this status) and, although they live under the stigma of being PC prisoners, they are technically housed in these units for protection rather than for punishment.

Accordingly, Brodsky and Scogin (1988) found high rates of psychological trauma among their sample of protective custody prisoners, so much so that they worried about the "strong potential for harmful effects" that such confinement represented (p. 279).[8] They also observed, in terms that apply equally well to supermax prisoners, that "when inmates are subjected to extensive cell confinement and deprivation of activities and stimulation, a majority can be expected to report moderate to serious psychological symptoms" (p. 279). Yet, note that on 16 of 18 possible comparisons, the symptom prevalence rate for Pelican Bay SHU prisoners are greater than those reported

TABLE 3: Comparison of Prevalence Rates Between In Normal, Protective Custody, and Supermax Populations

Description	*% Normal Dupuy, Engel, Devine, Scanlon, and Querec's (1970) National Probability Sample of 7,000 Adults*	*% Normal Robins and Regier's (1991) Multisite Assessment of 20,000 Adults*	*% Protective Housing Brodsky and Scoggin's (1988) Sample of 31 Prisoners in Protective Housing*	*% Supermax Haney's (1993) Random Sample of 100 Prisoners in Security Housing Unit*
Symptoms of psychological trauma				
Anxiety, nervousness	45		84	91
Headaches	13.7		61	88
Lethargy, chronic tiredness	16.8		65	84
Trouble sleeping	16.8		61	84
Impending breakdown	7.7		48	70
Perspiring hands	17		45	68
Heart palpitations	3.7		39	68
Dizziness	7.1		45	56
Nightmares	7.6		42	55
Hands trembling	7		39	51
Fainting			0	17
Psychopathological effects of isolation				
Ruminations			74	88
Irrational anger		2.9	71	88
Confused thought process		10.8	65	84
Chronic depression		23.5	77	77
Overall deterioration			52	67
Talking to self			68	63
Hallucinations		1.7	42	41

in the protective custody study. Note also that many of the percentage differences are comparatively large. In fact, the Pelican Bay prevalence rates are, on average, 14.5% greater than those reported for the prisoners in Brodsky and Scogin's study.

The prevalence data collected in the Pelican Bay study partially address another important supermax-related issue. Several mental health experts have written about a distinct set of reactions or a syndrome-like condition that occurs in prisoners who have been subjected to long-term isolation. Canadian psychiatrist George Scott (1969) described what he termed "isolation sickness" as coming from "prolonged solitary confinement" (p. 3). In more recent research, it has been labled "RES" (reduced environmental stimulation) or "SHU" (security housing unit) syndrome. Perhaps the most detailed clinical description of the disorder came from psychiatrist Stuart Grassian (1983), who observed that it included massive free-floating anxiety, hypersensitivity to external stimulation, perceptual distortions or hallucinations, derealization experiences, difficulties with concentration or memory, acute confusional states, aggressive fantasies, paranoia, and motor excitement (that may include violent or self-destructive outbursts).

Because the Pelican Bay prevalence study was not designed to directly diagnose SHU syndrome, prisoners were not questioned about literally each one of its indices. However, the study found that a very high percentage of Pelican Bay prisoners suffered many symptoms similar to the ones Grassian had identified. Specifically, a high percentage of prisoners in the present study reported suffering from heightened anxiety (91%), hyper-responsivity to external stimuli (86%), difficulty with concentration and memory (84%), confused thought processes (84%), wide mood and emotional swings (71%), aggressive fantasies (61%), perceptual distortions (44%), and hallucinations (41%). Moreover, fully 34% of the sample experienced all eight of these symptoms, and more than half (56%) experienced at least five of them.

THE SOCIAL PATHOLOGIES OF SUPERMAX

The Pelican Bay prevalence study and the other direct studies of the psychological effects of supermax confinement I cited earlier focused on discrete and measurable consequences of this form of imprisonment. The tools used to provide these measurements are extremely useful and scientifically appropriate methods for documenting specific reactions and symptoms. However, they have some inherent limitations that may mask some of the subtle yet important transformations that are brought about by supermax confinement.

For one, indices of measurable harm generally rely on things that persons must be aware of in order to report. Obviously, prisoners must be consciously pained or in distress over a symptom in order to complain about it; the greater their conscious awareness, the higher the frequency and extent of negative effects. However, in the course of adjusting and adapting to the painful and distressing conditions of confinement, many prisoners will strive to essentially "get used to it," adapting and accommodating to make their day-to-day misery seem more manageable. In addition, some supermax prisoners will undergo forms of psychological deterioration of which they are unaware and, therefore, incapable of reporting. As long as the deterioration is not obvious or disabling, it is likely to escape the attention of mental health staff who, in most units, rarely perform careful psychiatric assessments on a routine basis for prisoners who appear to be otherwise minimally functioning.

Indeed, it is not uncommon to encounter a number of supermax prisoners who, although they voice few specific complaints and are not identified by staff as having any noticeable psychological problems or needs, nonetheless have accommodated so profoundly to the supermax environment that they may be unable to live anywhere else. In some instances, these changes are difficult to measure because prisoners are unaware that they are occurring or because they have blunted their perception that such transformations are underway. In other instances, the changes are too broad, complicated, and subtle to be precisely measured. Yet they appear to have lasting mental health implications.

Thus, a number of significant transformations occur in many long-term supermax prisoners that, although they are more difficult to measure, may be equally if not more problematic for their future health and well-being and the health and well-being of those around them. These come about because in order to survive the rigors of supermax, many prisoners gradually change their patterns of thinking, acting, and feeling. Some of these transformations have the potential to rigidify, to become deeply set ways of being, that are, in varying degrees for different people, more or less permanent changes in who these prisoners are and, once they are released from supermax, what they can become. Because they do not represent clinical syndromes per se, and because they constitute patterns of social behavior that are largely "functional" under conditions of isolation—for the most part becoming increasingly dysfunctional only if they persist on return to more normal social settings—I have termed them "social pathologies."

Several of the social pathologies that can and do develop in prisoners who struggle to adapt to the rigors of supermax confinement are discussed below.

First, the unprecedented totality of control in supermax units forces prisoners to become entirely dependent on the institution to organize their exis-

tence. Although this is a potential consequence of institutionalization or "prisonization" in general (e.g., Haney, in press), it occurs to an exaggerated degree in many supermax prisons. Thus, many prisoners gradually lose the ability to initiate or to control their own behavior, or to organize their own lives. The two separate components of this reaction—problems with the self-control and self-initiation of behavior—both stem from the extreme over-control of supermax. That is, all prisoners in these units are forced to adapt to an institutional regime that limits virtually all aspects of their behavior. Indeed, one of the defining characteristics of supermax confinement is the extent to which it accomplishes precisely that. But because almost every aspect of the prisoners' day-to-day existence is so carefully and completely circumscribed in these units, some of them lose the ability to set limits for themselves or to control their own behavior through internal mechanisms. They may become uncomfortable with even small amounts of freedom because they have lost the sense of how to behave in the absence of constantly enforced restrictions, tight external structure, and the ubiquitous physical restraints.

Second, prisoners may also suffer a seemingly opposite reaction that is caused by the same set of circumstances. That is, they may begin to lose the ability to initiate behavior of any kind—to organize their own lives around activity and purpose—because they have been stripped of any opportunity to do so for such prolonged periods of time. Chronic apathy, lethargy, depression, and despair often result. Thus, as their personal initiative erodes, prisoners find themselves unable to begin even mundane tasks or to follow through once they have begun them. Others find it difficult to focus their attention, to concentrate, or to organize activity. In extreme cases, prisoners may literally stop behaving. In either event, it is hard to imagine a set of adaptations more dysfunctional and problematic for persons who will one day be expected to exercise increased self-control and self-initiative in mainline prison settings or in the free world, if and when they are released there.

Third, the absence of regular, normal interpersonal contact and any semblance of a meaningful social context creates a feeling of unreality that pervades one's existence in these places. Because so much of our individual identity is socially constructed and maintained, the virtually complete loss of genuine forms of social contact and the absence of any routine and recurring opportunities to ground one's thoughts and feelings in a recognizable human context leads to an undermining of the sense of self and a disconnection of experience from meaning. Supermax prisoners are literally at risk of losing their grasp on who they are, of how and whether they are connected to a larger social world. Some prisoners act out literally as a way of getting a reaction from their environment, proving to themselves that they are still alive and

capable of eliciting a genuine response—however hostile—from other human beings.

Fourth, the experience of total social isolation can lead, paradoxically, to social withdrawal for some supermax prisoners. That is, they recede even more deeply into themselves than the sheer physical isolation of supermax has imposed on them. Some move from, at first, being starved for social contact to, eventually, being disoriented and even frightened by it. As they become increasingly unfamiliar and uncomfortable with social interaction, they are further alienated from others and made anxious in their presence. In extreme cases, another pattern emerges: This environment is so painful, so bizarre and impossible to make sense of, that they create their own reality—they live in a world of fantasy instead.

Fifth, and finally, the deprivations, restrictions, the totality of control, and the prolonged absence of any real opportunity for happiness or joy fills many prisoners with intolerable levels of frustration that, for some, turns to anger and then even to uncontrollable and sudden outbursts of rage. Others channel their supermax-created anger in more premeditated ways. Many supermax prisoners ruminate in the course of the countless empty hours of uninterrupted time during which they are allowed to do little else. Some occupy this idle time by committing themselves to fighting against the system and the people that surround, provoke, deny, thwart, and oppress them. There are supermax prisoners who become consumed by the fantasy of revenge, and others lash out against those who have treated them in ways they regard as inhumane. Sadly, there are some supermax prisoners who are driven by these deprived and oppressive conditions to pursue courses of action that further ensure their continued deprivation and oppression.

Although I have described these social pathologies as separate and distinct adaptations, they are not mutually exclusive. Thus, prisoners may move through one or another adaptation to their extraordinarily stressful life in supermax, or engage in several at once in an attempt to reduce the pains of their confinement and to achieve a tolerable equilibrium in this otherwise psychologically hostile environment. In fact, in extreme cases and over a long period of time, a combination of seemingly adaptive responses may coalesce into a more or less permanent lifestyle, one lived so exclusively and with such commitment that the prisoner's very being seems to be transformed. For example, some supermax prisoners whose opportunities for self-definition and self-expression have been effectively suppressed for extended periods of time—who have been denied conventional outlets through which to use their intellect or to express their heightened sense of injustice—come increasingly to define themselves in opposition to the prison administration. They begin to gradually fashion an identity that is anchored primarily by the goal of thwart-

ing and resisting the control mechanisms that are increasingly directed at them. The material out of which their social reality is constructed increasingly consists of the only events to which they are exposed and the only experiences they are allowed to have—the minutiae of the supermax itself and all of the nuance with which it can be infused.

Just as the social pathologies of supermax are the creations of a socially pathological environment, taking prisoners out of these places often goes a long way in reducing or eliminating the negative effects. But there is good reason to believe that some prisoners—we do not yet know how many or, in advance, precisely who—cannot and will not overcome these social pathologies; their extreme adaptations to supermax confinement become too ingrained to relinquish. Those who are not blessed with special personal resiliency and significant social and professional support needed to recover from such atypical and traumatic experiences may never return to the free world and resume normal, healthy, productive social lives. These are extraordinary—I believe often needless and indefensible—risks to take with the human psyche and spirit. Such extreme, ultimately dysfunctional, but often psychologically necessary adaptations to supermax confinement underscore the importance of continuing to critically analyze, modify, and reform the extremely harsh conditions that produce them. Understanding how and why they occur also brings some real urgency to the development of effective programs by which prisoners can be assisted in unlearning problematic habits of thinking, feeling, and acting on which their psychological survival in supermax often depends.

But they also highlight another issue. In what is one of the core irrationalities in the logic on which supermax regimes are premised, these units make the ability to withstand the psychological assault of extreme isolation a prerequisite for allowing prisoners to return to the intensely social world of mainline prison or free society. In this way, prisoners who cannot "handle" the profound isolation of supermax confinement are almost always doomed to be retained in it. And those who have adapted all too well to the deprivation, restriction, and pervasive control are prime candidates for release to a social world to which they may be incapable of ever fully readjusting.

ADDITIONAL MENTAL HEALTH ISSUES IN SUPERMAX

In addition to the negative psychological effects of solitary and supermax-like confinement reviewed above, there are several other important mental health issues raised by the nature of these conditions and the policies by

which prisoners are placed in them. One such issue involves the number of mentally ill prisoners who are housed in supermax. Prisoners often describe their experience in supermax environments as a form of psychological torture; most of them are in varying degrees of psychic pain, and many of them struggle to cope with the daily stress of their confinement. Although in my experience, virtually everyone in these units suffers, prisoners with preexisting mental illnesses are at greater risk of having this suffering deepen into something more permanent and disabling. Those at greatest risk include, certainly, persons who are emotionally unstable, who suffer from clinical depression or other mood disorders, who are developmentally disabled, and those whose contact with reality is already tenuous. There is good reason to believe that many of these prisoners in particular will be unable to withstand the psychic assault of dehumanized isolation, the lack of caring human contact, the profound idleness and inactivity, and the otherwise extraordinarily stressful nature of supermax confinement without significant deterioration and decompensation.

How many such persons are there? Research conducted over the past several decades suggests that somewhere between 10% to 20% of mainline prisoners in general in the United States suffer from some form of major mental illness (e.g., Jamelka, Trupin, & Chiles, 1989; Veneziano & Veneziano, 1996). The percentages in supermax appear to be much higher. Although too few studies have been done to settle on precise estimates of mentally ill supermax prisoners, and the numbers undoubtedly vary some from prison system to prison system, the percentages may be as much as twice as high as in the general prisoner population.

For example, a Canadian study estimated that approximately 29% of prisoners in special handling and long-term segregation units suffered from "severe mental disorders" (Hodgins & Cote, 1991). A more recent study conducted by a group of Washington state researchers (Lovell, Cloyes, Allen, & Rhodes, 2000) found exactly the same thing: 29% of intensive management prisoners in the state's correctional system manifested at least one predefined indication of serious mental disorder (such as multiple admissions to an acute care mental care facility, or having been in one of the prison system's residential mental health units).

Why this overrepresentation? Unproblematic adjustment to prison requires conformity to rigidly enforced rules and highly regimented procedures. Many mentally ill prisoners lack the capacity to comply with these demands and they may end up in trouble as a result. If they are not treated for their problems, the pattern is likely to be repeated and eventually can lead to confinement in a supermax unit. As Toch and Adams (2002) have succinctly put it, "an unknown proportion of people who are problems (prove trouble-

some to settings in which they function) also have problems (demonstrate psychological and social deficits when they are subjected to closer scrutiny)" (p. 13). Prison systems that fail to realize this basic fact will end up blaming—and punishing—prisoners for manifesting psychological conditions for which they should have been treated. Especially for prison systems that lack sufficient resources to adequately address the needs of their mentally ill mainline prisoners, disciplinary isolation and supermax confinement seems to offer a neat solution to an otherwise difficult dilemma. In such systems, supermax becomes the default placement for disruptive, troublesome, or inconvenient mentally ill prisoners. Thus the presence of a disproportionately high number of mentally ill prisoners in supermax often reflects a failure of system-wide proportions.

A number of supermax prisons fail to adequately screen out prisoners with preexisting mental illness, and fail to remove those whose mental health problems worsen under the stress of the extreme isolation, deprivation, and forceful control they confront inside. In addition, many of the units fail to appreciate the potential for these kinds of conditions of confinement to produce psychopathology in previously healthy prisoners. These problems are exacerbated by the fact that even if mental health staff members manage to identify those prisoners with serious psychological and psychiatric needs, many supermaxes are uniquely ill-suited to address them. Not only are they likely to be staffed with too few treatment personnel and plagued by high turnover, but the extraordinary and unyielding security procedures that characterize these kinds of prisons often preclude meaningful and appropriate therapeutic contact.

Thus, supermax prisoners who are in acute distress typically have the option of receiving what is euphemistically called "cell front therapy" in which they can discuss intimate, personal problems with mental health staff who cannot easily see or hear them through the cell doors (unless they speak so loudly that other prisoners in the housing unit also can listen in). Or they can choose to undergo strip searches, be placed in multiple restraints (which are typically left on throughout the therapy session), and taken either to a counselor's office (where correctional officer escorts are often stationed close enough to overhear what is being said) or special rooms fitted with security cages in which the prisoner is placed to be counseled by a therapist who speaks to them through wire screening of the cage. Or, in some places they can submit to "tele-psychiatry" sessions in which disembodied images attempt to assess and address their problems from distant locations. Not surprisingly, under these circumstances many prisoners fail to ask for help or reject it when it is offered.

A separate but related problem pertains to the group of prisoners who, although they do not suffer from preexisting mental illness, nonetheless are