The Social Psychology of Isolation:

Why Solitary Confinement is Psychologically Harmful

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As everywhere else in society, social context matters a great deal in prison. However, even the best correctional environments are inherently problematic places; they are extremely difficult for staff to operate humanely and for prisoners to survive unscathed. They are also highly improbable places—ones where large numbers of people must be involuntarily confined under conditions of severe restriction, deprivation, and dependency. In this brief article, I review the some of psychological effects of living in a particular kind of prison environment where the inherent problems and improbabilities are made much worse—solitary confinement.[1]

The Empirical Status of Solitary Confinement Effects

The *social* extremes of confinement—intense overcrowding and, at the other end of the spectrum, enforced isolation or solitary confinement—intensify the challenges that are faced by both prisoners and guards during their prison terms. Thus, the ecology of an overcrowded prison creates heightened levels of psychological stress by multiplying the sheer number of potentially problematic interactions that occur. Overcrowding also insures that too many prisoners will be vying for too few already scarce resources. As an overcrowded prison 'runs out' of space, programming, mental health services and the like, the number and magnitude of unmet prisoner needs begin to multiply. Prison staff members are often pressed to manage the inevitable chaos and conflicts in increasingly repressive ways.

Solitary confinement presents a different set of psychological challenges. It subjects prisoners to a deeply monotonous existence, and to unparalleled levels of social and material deprivation. There is also typically a pejorative or stigmatizing component to the experience; prisoners are usually sent to solitary confinement because they are thought to be 'bad,' even in comparison to other prisoners (in some jurisdictions they are literally referred to as 'the worst of the worst'). Correctional officers who must implement the extra-punitive measures that are used to maintain these especially harsh regimes risk having their behavior descend into outright cruelty.[2]

Prison officials and administrators are not oblivious to these commonsense psychological notions about the extremes of confinement. Thus, they try to ameliorate overcrowding when they can and they put prisoners in isolation when they want to punish them. However, overcrowding is regarded as an unwanted anomaly—something that prison systems never seek out but, nonetheless are forced to reluctantly accommodate to. Solitary confinement, on the other hand, is a practice that prison systems can choose to employ (or not).

Indeed, despite its problematic history in corrections, there is some evidence that certain prison systems are once again resorting to the use of long-term solitary confinement. The trend is a regrettable one. We have known for well over a century that placing people in conditions of severe isolation for long periods of time places them at dire risk of grave psychological harm. For example, in 1890 the United States Supreme Court acknowledged that 'it is within the memory of many persons interested in prison discipline that some 30 or 40 years ago the whole subject attracted the general public attention, and its main feature of solitary confinement was found to be too severe.'[3] The Court also noted that '[i]n Great Britain, as in other countries, public sentiment revolted against this severity and... the additional punishment of solitary confinement was repealed.'[4] No new insights about human nature have surfaced in the intervening years to raise doubts about the wisdom of these early precedents.

In fact, solitary confinement came to be seen as so painful and destabilizing an experience that it emerged as a common feature in torture and so-called 'brainwashing' protocols.[5] In addition, domestic and international human rights organizations have concluded that solitary confinement poses such a serious risk of psychological harm that they roundly condemned its use and called for the

1. In the United States, at least, "solitary confinement" is a term that encompasses a relatively wide range of prison housing arrangements to which various labels are applied. I will use it here to mean segregation from the mainstream prisoner population in attached housing units or free-standing facilities where prisoners are involuntarily confined in their cells for upwards of 23 hours a day or more, given only extremely limited or no opportunities for direct and normal social contact with other persons (i.e., contact that is not mediated by bars, restraints, security glass or screens, and the like), and afforded extremely limited if any access to meaningful programming of any kind.
2. For a discussion of these dynamics, see: Haney, C. (2008). 'A culture of harm: Taming the dynamics of cruelty in supermax prisons', *Criminal Justice and Behavior 35:* 956-984.
3. In re Medley, 134 U.S. 160 (1890), at p. 168.
4. *Medley*, at p. 170.
5. For example, see: Hinkle, L. & Wolff, H. (1956). 'Communist interrogation and indoctrination of 'enemies of the states'', *Archives of Neurology and Psychiatry 76:* 115-174; Louw, J. & O'Brien, C. (2007). 'The psychological effects of solitary confinement: An early instance of psychology in South African courts', *South African Journal of Psychology 37:* 96-106; Ristow, W. & Shallice, T. (1976, August 5). 'Taking the hood off British torture', *New Scientist:* 272-274; Suker, P., Winstead, D., Galina, Z., & Allain, A. (1991). 'Cognitive deficits and psychopathology among former prisoners of war and combat veterans of the Korean conflict', *American Journal of Psychiatry 148:* 67-72; Whittaker, S. (1988). 'Counseling torture victims', *Counseling Psychologist 16:* 272-278.

severe restriction or outright abolition of the practice.[6] Moreover, proof of the adverse psychiatric consequences of long-term solitary confinement led a number of courts in the United States to formally prohibit the placement of mentally-ill prisoners inside so-called 'supermax'-type housing units.[7]

Nonetheless, the myth continues to be perpetuated in some quarters that the psychological effects of enforced isolation have not been carefully enough studied and, as a result, too little is known about its harmful consequences to require its strict regulation or the outright elimination of its most extreme forms.

I believe this view is misguided. In the admitted absence of a single perfect study of the phenomenon,[8] there is a substantial body of published literature that clearly documents the distinctive **patterns** of negative psychological effects that can and do occur when persons are placed in long-term solitary confinement. This work has been reviewed in detail elsewhere and I will not belabor it here,[9] except to say that these broad patterns have been consistently identified in personal accounts, descriptive studies, and systematic research on solitary and punitive segregation. The studies have now spanned a period of over four decades, and were conducted in locations across several continents by researchers with different professional expertise, ranging from psychiatrists to sociologists and architects.

Of course, just as solitary confinement regimes vary in severity, and people differ in their capacity to tolerate noxious stimuli, the nature and magnitude of the adverse effects of prolonged isolation are not entirely uniform.[10] Yet, even researchers who seem to be at pains to minimize the negative consequences of solitary confinement are hard pressed to ignore them (especially if they have interviewed a significant number of prisoners who have undergone the experience). For example, Canadian researcher Peter Suedfeld has sometimes been cited for the proposition that solitary confinement is not particularly problematic or harmful. Indeed, he has acknowledged beginning his research on solitary confinement already 'convinced' that reduced environmental stimulation and social isolation were 'extremely beneficial' for many of the people exposed to it,[11] and publicly recommended its use in curing a remarkably wide range of maladies, including addictive behaviors,[12] snake phobias,[13] and the negative after effects of electroshock therapy.[14]

6. For example, see: Gibbons, J., and Katzenbach, N. (2006). *Confronting Confinement: A Report of the Commission on Safety and Abuse in America's Prisons*. New York: Vera Institute of Justice; Hreski, T. (2006). 'In the cellars of the hollow men: Use of solitary confinement in U.S. prisons and its implications under international laws against torture', *Pace International Law Review 18:* 1-27; Human Rights Watch. *Out of Sight: Super Maximum Security Confinement in the United States*. New York: Human Rights Watch (2000). Available online at: http://www.hrw.org/reports/2000/supermax/index.htm#TopOfPage; International Psychological Trauma Symposium, *Istanbul Statement on the Use and Effects of Solitary Confinement*. Istanbul, Turkey (December 9, 2007).
7. Jones 'El v. Berge, 164 F. Supp. 1096 (W.D. Wis. 2001); Madrid v. Gomez, 889 F.Supp. 1146 (N.D. Cal., 1995); and Ruiz v. Johnson, 37 F.Supp. 2d 855 (S.D. Texas, 1999), *rev'd by* 178 F.3d 385 (5th Cir. 1999).
8. No more than basic knowledge of research methodology is required to design the "perfect" study of the effects of solitary confinement: dividing a representative sample of prisoners (who had never been in solitary confinement) into two groups by randomly assigning half to either a treatment condition (say, two or more years in solitary confinement) or a control condition (the same length of time residing in a typical prison housing unit), and conducting longitudinal assessments of both groups (i.e., before, during, and after their experiences), by impartial researchers skilled at gaining the trust of prisoners (including ones perceived by the prisoner-participants as having absolutely no connection to the prison administration). Unfortunately, no more than basic knowledge of the realities of prison life and the practicalities of conducting research in prisons is required to understand why such a study would be impossible to ever conduct. Moreover, any prison system that allowed truly independent, experienced researchers to perform even a reasonable approximation of such a study would be, almost by definition, so atypical as to call the generalizability of the results into question. Keep in mind also that the assessment process itself—depending on who carried it out, how often it was done, and in what manner—might well provide the solitary confinement participants with more meaningful social contact than they are currently afforded in a number of such units with which I am familiar, thereby significantly changing (and improving) the conditions of their confinement.
9. For example, see: Arrigo, B., & Bullock, J. (2008). 'The psychological effects of solitary confinement on prisoners in supermax units: Reviewing what we know and what should change', *International Journal of Offender Therapy and Comparative Criminology 52*: 622-640; Haney, C. (2003). 'Mental health issues in long-term solitary and 'supermax' confinement', *Crime & Delinquency 49*: 124-156; Haney, C., & Lynch, M. (1997). 'Regulating prisons of the future: The psychological consequences of solitary and supermax confinement', *New York University Review of Law and Social Change 23*: 477-570; Smith, P. (2006). 'The effects of solitary confinement on prison inmates: A brief history and review of the literature', in M. Tonry (Ed.), *Crime and Justice* (pp. 441-528). Volume 34. Chicago: University of Chicago Press.
10. It is useful to think about real-world conditions of solitary and solitary-like confinement along a continuum of harshness, comprising different dimensions of confinement that are imposed in differing amounts in any given unit. It is these dimensions—primarily the severity of isolation, amount of deprivation, number of restrictions, and degree of degradation—that facilities impose in varying degrees—amplified by the length of confinement and the amount of control prisoners perceive themselves to have over whether and how they can end it—that primarily account for the negative effects and amount of psychological harm. Thus, the characterization of the literature on solitary confinement as somehow "inconsistent" because some studies show few if any negative effects, without any attention being given to the particular conditions of confinement, the duration of the isolation, or other variables (such as whether the prisoners were involuntarily confined to the units in question or chose to be there for protection or other reasons) seems inapt. In fact, solitary confinement is only ever embodied in actual places, ones that exist in any given instance as an amalgam of different conditions that vary along dimensions of harshness and harm, rather than as some sort of Weberian "ideal type." For precisely this reason, its effects would not be expected to be independent of the particular form it took. Rather than "inconsistency," the differential results merely confirm the basic point with which I began this article: context—here, specific conditions of confinement—matter.
11. 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. p. 312.
12. Suedfeld, P. (1983). 'The restricted environmental stimulation technique in the modification of addictive behaviors: Through the centuries to frontiers for the Eighties', *Bulletin of the Society of Psychologists in Addictive Behaviors 2*: 231-237.
13. Suedfeld, P. & Hare, R. (1977). 'Sensory deprivation in the treatment of snake phobia: Behavioral, self-Report, and physiological effects', *Behavior Therapy 8*: 240-250.
14. Suedfeld, P., Ramirez, C., Remick, R., & Jonathan Fleming, J. (1989). 'Reduction of post-ECT memory complaints through brief, partial restricted environmental stimulation (REST)', *Progress in Neuro-Psychopharmacology & Biological Psychiatry 13*: 693-700.

episodes (derived from prison files), or brain damage (again, as indicated in prison medical charts).[23]

Yet even if we assume that most or all of the psychosocial impairment Lovell et al. uncovered was pre-existing (an assumption that I think is highly unlikely, especially with respect to the subset of prisoners identified through the psychiatric rating scale), it does not entirely account for the very high levels of psychological distress and other symptoms documented in at least some of these units. For example, my own direct assessments of prisoners in harsh solitary confinement facilities located in several jurisdictions in the United States indicated that two-thirds or more of them were suffering from a variety of symptoms of psychological and emotional trauma, as well as some of the psychopathological effects of isolation.[24] In some cases these symptoms of trauma and distress appeared to have been related to more chronic forms of mental illness that the prisoners brought into the solitary confinement unit (which, in many instances, also appeared to have been exacerbated by the harsh conditions of their solitary confinement). However, in others that was clearly not the case, and the negative psychological effects and impairments appeared to have originated in solitary confinement.

Danish researchers reached similar conclusions in their study of a group of prisoners in solitary confinement. In the first study they reported that the probability of being admitted to the prison hospital for a psychiatric reason was about 20 times as high for prisoners who remained in solitary confinement for longer than 4 weeks than it was for those housed in the mainline prison population.[25] The researchers attributed causal responsibility to the conditions of confinement themselves, concluding that prisoners placed in solitary confinement 'are forced into an environment that increases their risk of hospitalization to the prison hospital for psychiatric reasons.'[26] In a follow-up, longitudinal study they were able to identify some 28 per cent of solitary confinement prisoners who suffered psychiatric disorders during their imprisonment and, further, to determine that in more than 2 out of 3 cases the disorder was *not* present prior to their incarceration. They concluded that solitary confinement was 'a significant risk factor for the development of... psychiatric morbidity in comparison with [mainline] imprisonment' and that placement in solitary confinement was medically 'questionable.'[27]

Some commentators have suggested that although solitary confinement is so clearly harmful to mentally-ill prisoners that most or all of them should be removed from such conditions—a proposition that seems indisputable—these same painfully harsh environments are unlikely to have any negative psychological effects that put those who are not mentally ill at risk. It is a position that seems to me difficult to defend. The adverse effects of severe stress and painful, destabilizing trauma on mental health are not restricted to only those who already suffer from serious mental disorders. Moreover, there are a number of incipient or 'pre-morbid' emotional conditions that seem likely to be aggravated by the psychological demands of solitary confinement. And then there are those mildly—perhaps undetectably—mentally-ill prisoners who can effectively manage their psychiatric symptoms in mainstream prison settings but who decompensate under the rigours of prolonged isolation. But whether and how often long-term solitary confinement makes healthy people 'crazy,' or drives those predisposed to mental illness across some diagnostic line, it certainly appears to cause significant distress and even anguish in many people, and puts them at risk of serious psychological harm.

Theoretical Bases for the Harmfulness of Isolation

The scientific analysis of the effects of a real-world environment such as solitary confinement is necessarily based in part on research conducted under less than ideal conditions. Some empirical questions simply cannot be examined in a controlled laboratory setting. Under these circumstances, as I noted in the preceding section, researchers and analysts look to patterns in the data that have been collected to discern whether consistent and apparently corroborating findings exist. In the case of the harmful effects of solitary confinement, as I have also noted, they clearly do. It is also important in this context to draw on knowledge gained from scientific research that has been conducted on analogous circumstances or phenomena. In the case of solitary confinement, this parallel literature includes research on the effects of isolation in a range of other contexts and settings that, although certainly not always directly applicable, are highly suggestive.[28] Finally, it is essential to examine whether there is a theoretical logic or valid conceptual apparatus that helps to account for the patterns of results—that is, to determine, essentially, if the findings 'make sense.'

In fact, situating solitary confinement in broader body of knowledge provides some very clear insights into how and why it is likely to produce certain negative effects. Thus, in addition to the empirical literature that documents the harmful psychological effects of solitary confinement, and a parallel literature on analogous settings and circumstances that reaches a number of highly compatible conclusions, there is a conceptual framework that helps to explain how

23. Lovell, *supra* note 22; Cloyes, K., Lovell, D., Allen, D., & Rhodes, L. (2006). 'Assessment of psychosocial impairment in a supermaximum security unit sample', *Criminal Justice and Behavior 33*: 760-781.
24. Some of these results are reported in Haney, *supra* note 9.
25. Sestoft, D., Andersen, H., Lilleback, T., & Gabrielsen, G. (1998). 'Impact of solitary confinement on hospitalization among Danish prisoners in custody', *International Journal of Law and Psychiatry 21*: 99-108.
26. Id. at p. 105.
27. Andersen, H., Sestoft, D., Lillebaek, T., Gabrielsen, G., Hemmingsen, R., & Kramp, P. (2000). 'A longitudinal study of prisoners on remand: Psychiatric prevalence, incidence and psychopathology in solitary vs. non-solitary confinement', *Acta Psychiatrica Scandinavica 102*: 19-25, at p. 23.
28. Some of this research is discussed in Haney & Lynch, *supra* note 9, at p. 496-510.

But a close reading of Suedfeld's best-known empirical piece on solitary confinement in prison complicates things considerably.[15] It is true that Suedfeld concluded that the experience of isolation was not 'overwhelmingly' damaging and did not result in 'deterioration of personality or intellect' in the prisoners that he and his colleagues assessed. Given the fact that only 15 of the 65 of his participants had *ever* served more than 90 days in solitary, the negative conclusions he reached about these drastic outcomes—the absence of 'overwhelming' damage or 'deterioration' of prisoners' 'personality or intellect'—were certainly not surprising.[16]

However, a careful look at the actual results of Suedfeld's study—not just his vaguely worded conclusions—reveals that, despite the limitations in duration and other caveats about the circumstances of the prisoners' confinement,[17] he and his colleagues found and reported that prisoners who had spent more time in solitary confinement were 'inhibited, anxious, cautious, dissatisfied, dull, submissive to authority, and lacking in self insight.'[18] In addition, they reported that 'inmates who had spent longer periods of time in segregation scored higher on depression... and hostility,' and there was a 'significant correlation between length of the current sentence and hostility.'[19] At the one institution among the several he studied that appeared to be most similar to an actual long-term segregation unit, Suedfeld et al. reported that 'longer time in SC was associated with suspicion, distrust, and forceful and self-seeking behavior' and also that there was 'a significant relationship' between 'longer time in SC [and] higher levels of hostility.'[20] Despite the relatively modest amounts of solitary confinement the participants in Suedfeld's study had experienced, the negative effects he found were similar in a number of respects to those reported by others.

What of the possibility that a disproportionate number of the prisoners who are placed in solitary confinement suffer from psychiatric disorders that account for the high levels of psychological symptoms and distress that are manifested there? There are several factors that mitigate against this as a likely explanation for many if not most of the negative effects that have been identified in the literature. The first is that the prisoners themselves attribute their acute suffering to the painful conditions of solitary confinement. Many of them report experiencing their psychiatric symptoms and psychological distress only after coming into solitary confinement. In addition, most prison systems have screening procedures that are supposed to prevent at least the *most* seriously mentally prisoners from going into solitary confinement. No matter how imperfect these procedures and how imperfectly they are implemented—and in some systems they are extremely so—it is reasonable to assume that the most obviously or flagrantly mentally ill prisoners have been culled from the population of persons in solitary confinement and spared this experience.

At the same time, it is certainly true that—despite these screening procedures—we know there *are* elevated percentages of mentally ill prisoners found in solitary confinement. Several studies have estimated that about a third of prisoners in solitary confinement are mentally ill.[21] In my own experience, in some poorly run systems or special units, the number may even be higher. In addition, as David Lovell points out, 'mental health issues, variously conceived' are much broader than the category of those diagnosed or diagnosable with 'serious mental illness.'[22] Thus, he and his colleagues found that some 45 per cent of supermax prisoners suffered from overall 'psychosocial impairments'—the cumulative percentage of prisoners suffering serious mental illness (based on prison documentation), marked or severe psychiatric symptoms (based on the administration of a brief psychiatric rating scale), psychotic or self-injurious

15. Suedfeld, Ramirez, Deaton, & Baker-Brown, at p. 312.
16. Id. at 335, 336. By the norms that prevail in many jurisdictions in the United States nowadays, unfortunately, 90 days in solitary confinement hardly qualifies as "long-" or, frankly, even "medium-term." See, also, Zinger, I., Wichmann, C., & Andrews, D. (1999). 'The psychological effect of 60 days in administrative segregation', *Canadian Journal of Criminology 43*: 47-83, who reported few if any significant negative effects of solitary confinement in an extremely small sample of prisoners (N=10) who were involuntarily housed there for only 60 days (under conditions where they could anticipate being released even more expeditiously).
17. For example, an unspecified number of Suedfeld et al.'s participants were not actually in solitary confinement (SC) at the time they were assessed, and the participants in general were described as having "experienced SC at this or another institution." At p. 324. Moreover, 12 of the participants were in solitary confinement either voluntarily or for their own protection. At p. 325. Finally, as Suedfeld et al. acknowledged, "[i]ndividuals who were completely unable to adapt to SC and became psychotic or committed suicide were obviously not included." At p. 335. Another potential group—those who may have been so negatively affected by the experience that they were either unable or unwilling to come out of their cells and voluntarily participate in the research project—also were not included.
18. Id. at p. 328.
19. Id. at p. 328.
20. Id. at 329. In fairness to Suedfeld and his colleagues, they also concluded their study with this statement: "We would strongly recommend that attempts be made to assess prisoners' ability to adapt to SC, and that close and objective monitoring and release procedures be set up to identify and transfer individuals for whom the experience may be damaging." Id. at 337. Suedfeld also has been quoted as saying, in testimony that he gave in a case concerning the effects of solitary confinement in Canadian prisons, that: "I would expect that for many people after some prolonged period of time, especially if there is no hope of being released from that environment, things would tend to become inadequate and an individual would then take on another form of reaction to the environment. That may take place in the form of apathy, fantasizing, general withdrawal from the external environment, some kind of inner life, and in some cases, I expect it would lead to psychosis." Quoted in Jackson, M. (1983). *Prisoners of isolation: Solitary confinement in Canada*. Toronto: University of Toronto Press, at p. 79.
21. Specifically, two separate studies have found that 29% of the prisoners in solitary or supermax confinement suffer from a "serious mental disorder." Hodgins, S., and Cote, G. (1991). 'The mental health of penitentiary inmates in isolation', *Canadian Journal of Criminology 33*: 177-182; Lovell, D., Cloyes, K., Allen, D., & Rhodes, L., (2000). 'Who lives in super-maximum custody? A Washington State study', *Federal Probation 64*: 33-38.
22. Lovell, D. (2008). 'Patterns of disturbed behavior in a supermax population', Criminal Justice and Behavior 35: 985-1004, at p. 990.

and *why* this kind of prison environment is psychologically painful and places those exposed to it at grave psychological risk. This series of theoretical propositions underpins the many concerns that informed scholars and practitioners have voiced about the potential of long-term isolation to produce adverse psychological consequences. It also provides a way of understanding the nature of the negative effects that do occur. Below I briefly discuss some of the theoretical and conceptual explanations for these adverse psychological effects.

For one, the deprivation of social contact can undermine social identity and destabilize one's sense of self. Like the rest of us, of course, prisoners are social beings. Although they vary in their levels of sociability, they are nonetheless dependent on social context and interaction with others to remain psychologically grounded in their thoughts, feelings, and actions. There is a long line of research in social psychology that confirms the centrality of social interaction in establishing and maintaining self-knowledge and anchoring personal attitudes and beliefs through social comparison processes.[29]

Precisely 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 routine and recurring opportunities to ground thoughts and feelings in recognizable human contexts is not only painful and but also personally destabilizing. This is precisely why long-term isolated 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. Indeed, a number of prisoners whom I have interviewed in long-term isolation admit to having 'acted out' while confined there literally as a way of getting a reaction from their environment, to prove to themselves that they were still alive and capable of eliciting a human response—however hostile—from other human beings. If they can still at least *provoke* others into responding to them, then they must still exist.

As Joane Martel has poignantly phrased another aspect of this phenomenon, 'to be, one has to be somewhere.' She observed that as prisoners in solitary confinement lose their temporal and spatial grounding—by being placed in environments where the 'space-time continuum of the prison's 'ordinary' life flies into pieces' [30]—their very identity is placed in jeopardy. Segregated prisoners 'vanish in time and space' which is 'akin to losing connection to one's prior experiences and subsequent ones in a biographical narrative, thus to one's memory of [oneself] *in* the social world.'[31]

The fact that they lack any tangible connection to their previous biographical narrative—who they were before their solitary confinement—does not obviate the need for prisoners to fashion some kind of identity that can sustain them. A number of prisoners facing this dilemma come to define themselves in terms of who they have recently become—that is, the way they are defined in the punitive isolation unit that surrounds them. Some isolated prisoners turn this process on its head, and instead reconstitute their identities primarily in *opposition* to the prison administration. They gradually develop a conception of self that is anchored by the overarching goal of thwarting and resisting the control mechanisms that are increasingly directed at them. But, even here, it is still the prison that sets the terms of their self-definition. Moreover, as I have noted elsewhere, '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 [solitary confinement unit] itself and all of the nuances with which it can be infused.'[32]

Depriving people of contact with others for long periods of time is psychologically hurtful and potentially destabilizing for another set of related reasons. The importance of 'affiliation'—the opportunity to have contact with others—in reducing anxiety in the face of uncertain or fear-arousing stimuli is long-established in social psychological literature.[33] People who are denied the opportunity to express these affiliative needs and tendencies—especially when confronted with uncertainty, stress, and danger—may become increasingly frightened, anxious, even panicked. Similarly, the significance of social cues and a larger social context in providing specific content and meaning to our emotional states is well understood.[34] Thus, one of the ways that people determine the appropriateness of their feelings—indeed, how we establish the very nature and tenor of our emotions—is through contact with others. Harry Stack Sullivan once summarized the clinical importance of social contact by observing that '[w]e can't be alone in things and be very clear on what happened to us, and we... can't be alone and be very clear even on what is happening in us very long—excepting that it gets simpler and simpler, and more primitive and more primitive, and less and less socially acceptable.'[35]

29. For example, see: Festinger, L. (1954). 'A theory of social comparison processes', *Human Relations 7*: 327-346; Symposium (1986). *Personality and Social Psychology Bulletin 12*: 261-299.
30. Martel, J. (2006). 'To be, one has to be somewhere', *British Journal of Criminology 46*: 587-611, at p. 587.
31. *Id.* at p. 609.
32. Haney, *supra* note 9, at p. 141.
33. For example, see: Schachter, S. (1959). *The psychology of affiliation: Experimental studies of the sources of gregariousness*. Stanford, CA: Stanford University Press; Sarnoff, I & Philip Zimbardo, P. (1961). 'Anxiety, fear, and social affiliation', *Journal of Abnormal Social Psychology 62*: 356-363; Zimbardo, P. & Robert Formica, R. (1963). 'Emotional comparison and self-esteem as determinants of affiliation', *Journal of Personality 31*: 141-162.
34. For example, see: Fischer, A., Manstead, A., & Zaalberg, R. (2003). 'Social influences on the emotion process', *European Review of Social Psychology 14*: 171-2001; Saarni, C. (1999). *The development of emotional competence*. New York: Guilford Press; Schachter, S. & Singer, J. (1962). 'Cognitive, social, and physiological determinants of emotional state', Psychological Review 69: 379-399; Tiedens, L. & Leach, C. (Eds.) (2004). *The social life of emotions*. New York: Cambridge University Press; Truax, S. (1984). 'Determinants of emotion attributions: A unifying view', *Motivation and Emotion 8*: 33-54;
35. Sullivan, H. (1971). 'The illusion of personal individuality', *Psychiatry 12*: 317-332, at p. 326.

Precisely because people's emotional reactions are so coloured by the social environment in which they live, subjecting them to severe and prolonged social isolation makes them especially vulnerable to a range of emotional disturbances.[36] For many prisoners, solitary confinement is an especially unfamiliar, threatening, and hostile environment. Not surprisingly, then, the empirical literature on solitary confinement documents a number of negative emotional effects, including heightened levels of anxiety, the increased risk of panic attacks, and a sense of impending emotional breakdown among prisoners who are denied normal social contact with others on a long-term basis.[37]

Whatever else it does, of course, solitary confinement drastically restricts or completely eliminates opportunities for normal social interaction. The claim is sometimes made that prisoners who are housed in certain punitive or administrative segregation units are not 'really' in solitary confinement. After all, the prisoners are almost always afforded between 5-10 hours a week out of their cells and, in addition, most of them have managed to devise limited forms of communication with each other—no matter how strained and denatured. Moreover, they all have routine cell-front 'interactions' with correctional officers who—given the fact that the prisoners are confined to their cells nearly around-the-clock—must administer to their basic needs. This argument seems to me to be somewhat disingenuous. Total and absolute solitary confinement—literally complete isolation from any form of human contact—does not exist in prison and *never* has. Although I am aware of at least one prisoner who lived under an official 'no human contact' order for over two decades, even he had *some* contact with others or he could not have been maintained in prison.

In any event, I would take issue the contention that prisoners are being afforded remotely normal, adequate 'social communication' when they are reduced to yelling to one another within or between cellblocks, or from one concrete enclosed or caged exercise pen to another, or can only talk to one another through toilets or plumbing chases. The assertion that prisoners are engaged in remotely normal, adequate forms of 'social interaction' when the only face-to-face contact they have with each other is mediated by iron cell doors or bars or the wire mesh or metal fencing of the individual cages in which they are increasingly enclosed (nowadays, both indoors and out) similarly misses the point. So, too, does the contention that the often brusque or hostile but at best perfunctory exchanges that they have with correctional officers is a genuine and psychologically adequate form of meaningful social intercourse.

In this sense, then, solitary confinement is a socially pathological environment that forces long-term inhabitants to develop their own socially pathological adaptations—ones premised on the absence of meaningful contact with people—in order to function and survive. As a result, prisoners gradually change their patterns of thinking, acting and feeling to cope with their largely asocial world and the impossibility of relying on social support or the routine feedback that comes from normal contact with others. These adaptations represent 'social pathologies' brought about by the socially pathological environment of solitary confinement. Although they are functional and even necessary under the circumstances, they can become painful and disabling if taken to extremes or internalized so deeply that they persist long after the time in solitary confinement has ended.

For example, some prisoners cope with the asociality of their daily existence by paradoxically creating even more. That is, they socially withdraw further from the world around them, receding even more deeply into themselves than the sheer physical isolation of solitary confinement and its attendant procedures require. Others move from initially 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.[38] In extreme cases, another pattern

36. Isolation correlates with psychiatric and other symptomatology in society at large. For example, see: Cacioppo, J., Hawkley, L., & Bernston, G. (2003). 'The anatomy of loneliness', *Current Directions in Psychological Science 12*: 71-74; Chappell, N., & Badger, M. (1989). 'Social isolation and well-being', *Journal of Gerontology 44*: 169-176. Conversely, there is a diverse literature on the beneficial effects of social contact and support. For example, see; Cohen, S., & Wills, T. (1985). Stress, social support, and the buffering hypothesis', *Psychological Bulletin 98*: 310-357; Heller, K. (1979). 'The effects of social support: Prevention and treatment implications', In A. Goldstein & F. Kanfer (Eds.), *Maximizing treatment gains: Transfer enhancement in psychotherapy.* New York: Academic Press; House, J., Landis, K., & Umberson, D. (1988). 'Social relationships and health', *Science 241*: 540-545; Reblin, M., & Uchino, B. (2006). Social and emotional support and its implication for health', *Current Opinion in Psychiatry 21*: 201-205; Uchino, B., Cacioppo, J., & Kiecolt-Glaser, J. (1996). The relationship between social support and physiological processes: A review with emphasis on underlying mechanisms and implications for health', *Psychological Bulletin 119*: 488-531.

37. For example, see: Andersen, et al., *supra* note 27; Brodsky, S., & Scogin, F. (1988). 'Inmates in protective custody: First data on emotional effects', *Forensic Reports 1*: 267-280; Grassian, S. (1983). 'Psychopathological effects of solitary confinement', *American Journal of Psychiatry 140*: 1450-1454; Haney, *supra* note 9; Hilliard, T. (1976). 'The Black psychologist in action: A psychological evaluation of the Adjustment Center environment at San Quentin Prison', *Journal of Black Psychology 2*: 75-82; Koch, I. (1986). 'Mental and social sequelae of isolation: The evidence of deprivation experiments and of pretrial detention in Denmark', in B. Rolston & M. Tomlinson (Eds.), *The expansion of European prison systems, Working Papers in European Criminology No. 7* (pp. 119-129). Belfast: Print Workshop; Korn, R. (1988). 'The effects of confinement in the High Security Unit at Lexington', *Social Justice 15*: 8-19; Korn, R. (1988). 'Follow-up report on the effects of confinement in the High Security Unit at Lexington', *Social Justice 15*: 20-29; Toch, H. (1975). *Men in crisis: Human breakdowns in prisons.* Aldine Publishing Co.: Chicago; Volkart,R., Dittrich, A., Rothenfluh, T., & Werner, P. (1983). 'Eine kontrollierte untersuchung uber psychopathologische effekte der einzelhaft (A controlled investigation on psychopathological effects of solitary confinement)', *Psychologie - Schweizerische Zeitschrift fur Psychologie und ihre Anwendungen 42*: 25-46; Walters, R., Callagan, J., & Newman, A. (1963). 'Effect of solitary confinement on prisoners', *American Journal of Psychiatry 119*: 771-773.

38. For evidence that solitary confinement may lead to a withdrawal from social contact or an increased tendency to find the presence of people increasingly aversive or anxiety-arousing, see: Cormier, B., & Williams, P. (1966). 'Excessive deprivation of liberty', *Canadian Psychiatric Association Journal 11*: 470-484; Haney, *supra* note 9; Miller, H., & Young, G. (1997). 'Prison segregation: Administrative detention remedy or mental health problem?', *Criminal Behaviour and Mental Health 7*: 85-94; Scott, G., & Gendreau, P. (1969). 'Psychiatric implications of sensory deprivation in a maximum security prison', *Canadian Psychiatric Association Journal 12*: 337-341; Toch, *supra* note 38; and Waligora, B. (1974). 'Funkcjonowanie Czlowieka W Warunkach Izolacji Wieziennej ('How men function in conditions of penitentiary isolation'), *Seria Psychologia I Pedagogika* NR 34, Poland.

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.[39] Indeed, at least for some prisoners, solitary confinement appears to be associated with paranoia and the presence of both visual and auditory hallucinations.[40]

Not surprisingly, some prisoners in long-term isolation also report that these adaptations to asociality are painful, and that they feel their lives have been drained of meaning and happiness. John Bowlby characterized intimate attachments with others as the 'the hub around which a person's life revolves,' and elaborated that '[f]rom these intimate attachments a person draws his strength and enjoyment of life and, through what he contributes, he gives strength and enjoyment of others.'[41] Prisoners who cannot manage without such a 'hub' may find themselves becoming increasingly joyless, depressed, and even suicidal.[42]

Virtually every solitary confinement unit with which I am familiar subjects prisoners to more than simply social deprivation. Life in these units also typically includes a high level of repressive control, enforced idleness, reduced environmental stimulation, and physical deprivations that are much greater than in other prison settings. Indeed, most of the things that we know are beneficial to prisoners—such as increased participation in institutional programming, visits with persons from outside the prison, and so on[43]—are either functionally denied them or greatly restricted. The model of profound deprivation on which most solitary confinement units are built and run constricts virtually all aspects of the isolated prisoner's day-to-day existence. Thus, it is not surprising that, in addition to the social pathologies that are generated, the imposition of these other stressors produces a number of other negative psychological effects.

For example, we know that psychological health, adjustment, and well being depend in part on people being able to attain and maintain a sense of autonomy and purpose, a modicum of what Albert Bandura broadly termed 'self-efficacy.'[44] When people are placed in environments or situations where little that they do seems to make a difference, or their plight seems insurmountable and beyond their control, they are likely to become despondent, lethargic, even depressed. Years ago Martin Seligman coined the term 'learned helplessness' to describe the consequence of being kept in environments where negative outcomes appeared unavoidable[45] or environmental stressors could not be controlled or reduced.[46] In analogous ways, the numerous, seemingly insurmountable restrictions of long-term solitary confinement increase the likelihood that a potentially disabling sense of helplessness will become chronic, global, and internalized—the form that Seligman and colleagues regarded as most likely to produce debilitating depression.[47]

Indeed, one of the hallmarks of solitary confinement is that it constricts and constrains the already limited opportunities that prisoners have to initiate behavior. Since they can *do* very little—even less than in mainlstream prison settings—they cannot exercise autonomy or efficacy over much at all.[48] They are forced to become highly dependent upon the institution to authorize, organize, and oversee even the most minute and mundane aspects of their daily life. In a related way, some prisoners in solitary confinement find themselves struggling to **initiate** behavior on their own, in part because they have been stripped of the opportunity to organize their lives around meaningful activity and purpose. They report being unable to begin even mundane tasks or to follow through once they have begun them. Or they find it difficult to focus their attention, to concentrate, or to

39. For example, compare the description in: Cooke, M., & Goldstein, J. (1989). 'Social isolation and violent behavior', *Forensic Reports 2*: 287-294, at p. 288: A socially isolated individual who has few, and/or superficial contacts with family, peers, and community cannot benefit from social comparison. Thus, these individuals have no mechanism to evaluate their own beliefs and actions in terms of reasonableness or acceptability within the broader community. They are apt to confuse reality with their idiosyncratic beliefs and fantasies and likely to act upon such fantasies, including violent ones.
40. For example, see: Brodsky & Scogin, *supra* note 38; Cormier & Williams, supra note 40; Grassian, *supra* note 38; Haney, *supra* note 9; Koch, *supra* note 38; Korn, *supra* note 38; Suedfeld, P. & Roy, C. (1975). 'Using social isolation to change the behavior of disruptive inmates', *International Journal of Offender Therapy and Comparative Criminology 19*: 90-99; and Volkart, et al., *supra* note 38.
41. Bowlby, B. (1980). *Attachment and loss: Loss, sadness, and depression*. New York: Basic Books, at p. 442.
42. Andersen, et al., *supra* note 27; Benjamin, T., & Lux, K. (1975). 'Constitutional and psychological implications of the use of solitary confinement: Experience at the Maine prison'. *Clearinghouse Review 9*: 83-90; Brodsky & Scogin, *supra* note 38; Cormier & Williams, *supra* note 40; Grassian, *supra* note 38; Haney, *supra* note 9; Hilliard, *supra* note 38; Korn, *supra* note 38; and Patterson, R., & Hughes, K. (2008). 'Review of completed suicides in the California Department of Corrections and Rehabilitation, 1999-2004', *Psychiatric Services 59*: 676-682.
43. Wooldredge, J. (1999). 'Inmate experiences and psychological well-being', *Criminal Justice and Behavior 26*: 235-250.
44. For example, see: Bandura, A. (1997). *Self-efficacy: The exercise of control*. New York: Freeman; Karademas, E. & Kalantzi-Asisi, A. (2004). 'The stress process, self-efficacy expectations, and psychological health', *Personality and Individual Differences 37*: 1033-1043; Maddux, J. (1991). 'Self-efficacy', in Snyder, C. & Forsyth, D. (Eds.), *Handbook of social and clinical psychology: The health perspective* (pp. 57-78). New York: Pergamon. See, also: Goodstein, L., MacKenzie, D., & Shotland, L. (1984). 'Personal control and inmate adjustment to prison', *Criminology: An Interdisciplinary Journal 22*: 343-369.
45. Seligman, M. (1975). *Helplessness: On depression, development, and death*. San Francisco: Freeman. See, also: Collins, A., & Kuehn, M. (2007). 'The construct of hope in the rehabilitation', in Power, P. (Eds.), *The psychological and social impact of illness and disability* (pp. 427-440). 5th Edition. New York: Springer.
46. Evans, G., & Stecker, R. (2004). 'Motivational consequences of environmental stress', *Journal of Environmental Psychology 24*: 143-165.
47. For example, see: Abramson, L., Seligman, M., & Teasdale, J. (1978). 'Learned helplessness in humans: Critique and reformulation', *Journal of Abnormal Psychology 87*: 49-74.
48. In addition, in many solitary confinement settings prisoners report feeling that they have little or no control over whether and when they will be released from this painful form of imprisonment. They may literally not know what if anything they can do that will lead to their release, or find the stated requirements arbitrary or unreachable (for example, to be judged as having displayed a "positive attitude" by staff members whom they view as harboring considerable animosity toward them), or be officially that they have simply been placed on "indefinite" solitary confinement status.

organize sustained activity. In extreme cases prisoners may literally stop behaving.[49]

In fact, in most of these units in the United States prisoners cannot even come out of their cells without first being cinched up in elaborate security devices and hardware—handcuffs, leg irons, restraint chains and the like. Along with the other degrading ways in which they are often treated, these procedures undermine their sense of dignity, value, and worth. But because almost every aspect of the prisoner's day-to-day existence is so carefully and completely circumscribed in these units, some of them also 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 confidence in their own ability to behave in the absence of constantly enforced restrictions, the tight external structure that surrounds them, and the ubiquitous physical restraints into which they are repeatedly placed.

As might be expected, then, research confirms that persons who have been kept in solitary confinement under these conditions report having more negative attitudes and affect as well as developing a sense of hopelessness, feeling chronically lethargic, and becoming depressed.[50] In more extreme cases, solitary confinement has been associated with self-mutilation, and suicidal ideation and behaviour.[51] The comparatively high number of suicides and suicide attempts that occur in segregation and solitary-type confinement is due in some part to the increased opportunity that being housed apart from others provides prisoners who are intent on taking such a drastic, tragic step. But it is also in part the result of the heightened levels of 'environmental stress' that are generated by 'isolation, punitive sanctions, [and] severely restricted living conditions.'[52]

In addition to the profound social deprivation and nearly complete undermining of self-efficacy that such extraordinary levels of segregation, restriction and control bring about, prisoners in long-term solitary confinement must endure prolonged and extreme monotony and idleness. They are subjected to certain forms of sensory deprivation, and to a lack of cognitive or mental stimulation that exceeds that of the mainstream prison population. Of course, we know that people require a certain level of mental and physical activity in order to remain healthy.

In this context, some defenders of solitary confinement have belittled the research that shows its negative effects by distinguishing the conditions that prevail in the typical prison isolation unit from those created in the total sensory deprivation studies that were done decades ago. Of course, the differences between the two environments are obvious, and I know of no knowledgeable commentator on solitary confinement who would equate or confuse one with the other. That said, one of the basic lessons of that early sensory deprivation research and the related research that followed—that people are 'dependent on adequate and changing amounts of sensory and social stimulation in order to maintain [their] psychic and physiological functioning'—does seem useful in understanding at least some of the negative consequences of solitary confinement.[53] Of course, this implies that low levels of cognitive stimulation and severe restrictions on activity *are* problematic for a variety of reasons.

Not surprisingly, prisoners subjected to the emptiness of isolated confinement for long periods of time report becoming concerned (even obsessed) about their own potential physical and mental deterioration. In addition, they can suffer from lethargy, a loss of direction and purposefulness, hypersensitivity or a tendency to overreact to certain stimuli, ruminations, and certain forms of cognitive dysfunction (such as an inability to concentrate, focus, and remember).[54]

Finally, numerous studies provide support for the commonsense proposition that frustration makes people angry. When persons believe that their desired goals have been blocked for what they perceive to be unjustified or illegitimate reasons, such frustration tends to produce even greater levels of 'angry aggression,'[55] even very serious forms of aggression in society at large.[56] Yet, many solitary confinement units are structured to deprive prisoners of most of the things that all but the most callous commentators

49. For examples of this range of symptoms, see: Brodsky & Scogin, *supra* note 38; Grassian, *supra* note 38; Haney, *supra* note 9; Hilliard, *supra* note 38; Koch, *supra* note 38; Korn, *supra* note 38; Miller & Young, *supra* note 40; Scott & Gendreau, *supra* note 49; Suedfeld & Roy, *supra* note 42; and Volkart, Dittrich, Rothenfluh & Werner, *supra* note 38.
50. For example, for studies that document some or all of these symptoms as manifested by people who are or have been in solitary confinement, see: Andersen, et al., *supra* note 27; Bauer, M., Priebe, S., Haring, B., & Adamczak, K. (1993). 'Long-term mental sequelae of political imprisonment in East Germany', *Journal of Nervous & Mental Disease 181*: 257-262; Brodsky & Scogins, *supra* note 38; Cormier & Williams, *supra* note 40; Grassian, *supra* note 38; Haney, *supra* note 9; Hilliard, *supra* note 38; Koch, *supra* note 38; Korn, a & b, *supra* note 38; Miller & Young, *supra* note 40; Suedfeld, et al., *supra* note 11; Suedfeld & Roy, *supra* note 42; and Scott & Gendreau, *supra* note 40.
51. For example, see; Benjamin & Lux, *supra* note 44; Cormier & Williams, *supra* note 40; Grassian, *supra* note 38; Haney, *supra* note 9; Patterson & Hughes, *supra* note 44; and Toch, *supra* note 38.
52. Patterson & Hughes, *supra* note 44, at p. 678. The authors reported that "the conditions of deprivation in locked units and higher-security housing were a common stressor shared by many of the prisoners who committed suicide." *Ibid.* See, also: Leibling, A. (1995). 'Vulnerability and prison suicide', *British Journal of Criminology 36*: 173-187; and Liebling, A. (1999). 'Prison suicide and prisoner coping', *Crime and Justice 26*: 283-359.
53. Leiderman, H. (1962). 'Man alone: Sensory deprivation and behavioral change', *Corrective Psychiatry and Journal of Social Therapy 8*: 64-74 (1962), p. 73.
54. For examples of this range of symptoms, see: Brodsky & Scogin, *supra* note 38; Grassian, *supra* note 38; Haney, *supra* note 9; Koch, *supra* note 38; Korn, a, b, *supra* note 38; Miller & Young, *supra* note 40; Suedfeld & Roy, *supra* note 42; and Volkart, et al., *supra* note 38.
55. For example, see Berkowitz, L. (1989). 'Frustration-aggression hypothesis: Examination and reinterpretation', *Psychological Bulletin 106*: 59-73.
56. For example, see: Huff-Corzine, L., Corzine, J., & Moore, D. (1991). 'Deadly connections: Culture, poverty, and the direction of lethal violence', *Social Forces 69*: 715-732; and Williams, K. (1984). 'Economic sources of homicide: Reestimating the effects of poverty and inequality', *American Sociological Review 49*: 283-289.

would concede are basic necessities of life—minimal freedom of movement, the opportunity to touch another human being in friendship or with affection, the ability to engage in meaningful or productive physical or mental activity, and so on. These deprivations, restrictions, and the totality of control fills many prisoners with intolerable levels of frustration that, for some, turns to anger, and then even to uncontrollable and sudden outbursts of rage.[57]

Others channel their anger by ruminating over 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 staff and officials whom they perceive as intent on provoking, thwarting, and oppressing them. There are solitary confinement prisoners who become consumed by the fantasy of revenge, and others who sometimes lash out against those who have treated them in ways they regard as inhumane. As two commentators wisely observed: 'Modern experts certainly imagined that they could shape and monitor the identities of those whom they segregated, but empirical studies based on institutional records and memories expose the limits on those ambitions. Exclusion produces submission but it also provokes non-compliance at the very least, and organized rebellion at the extreme.'[58] Ironically, but sometimes uncontrollably, some prisoners are driven by these deprived and oppressive conditions to pursue courses of action that further ensure their continued deprivation and oppression.

Conclusion

A very high percentage of the persons placed in long-term solitary confinement are truly suffering, and many are deeply disturbed—emotionally and in other ways. In some cases a prisoner's pre-existing psychiatric disorder has contributed to the disturbing behavior that has resulted in his placement in solitary confinement, making him more susceptible to the painful stresses of the harsh and deprived environment in which he is housed. In other cases, however, the painful effects and negative consequences stem more fully and directly from the harsh conditions—the stresses and traumas—of isolated confinement. Moreover, as I have tried to show in this article, there is a theoretical framework within which the harmful effects of solitary confinement can be understood. The resulting social pathologies and other adverse reactions are precisely the ones that would be expected, given what is known about the importance of social context and contact, and the effects of severe deprivation and repressive control. Thus, there is a logic to the way isolation hurts and can damage those subjected to it.

These are extraordinary—I believe often needless and indefensible—risks to take with the human psyche and spirit.

I do not see any other way to interpret the renewed use of this long-discredited punishment except as a concession to the punitive age in which we now live, one in which it has become acceptable—even routine—within certain prison systems to resort to extraordinarily harsh practices that are motivated by little more than administrative convenience (absent any penological justification or psychological rationale), no matter how much they may 'hurt' prisoners (sometimes precisely because they do hurt them), and no matter the risk that the painfulness of the experience will do real harm. Modern and humane policy makers would do well to reflect on the range of perverse outcomes that may occur when they are designing regimes that are intended to control problematic behaviour in prison.

57. For examples of some or all of these symptoms among present or former solitary confinement prisoners, see: Bauer, et al., *supra* note 52; Brodsky & Scogin, *supra* note 38; Cormier & Williams, *supra* note 40; Grassian, *supra* note 38; Haney, *supra* note 9; Hilliard, *supra* note 38; Koch, *supra* note 38; Miller & Young, *supra* note 40; Suedfeld, et al., *supra* note 11; Suedfeld & Roy, *supra* note 42; and Toch, *supra* note 38.
58. Bashford, A., & Strange, C. (2003). 'Isolation and exclusion in the modern world: An introductory essay', in C. Strange & A. Bashford (Eds.), Isolation: Places and practices of exclusion (pp. 1-19). London: Routledge, at p. 13