

**Bad Bad Juju:**  
Sensory Deprivation and Solitary Confinement

Gary I. Wilson

31 March 2009

## **Abstract**

The psycho-physiological impact of sensory deprivation on incarcerated suspects, criminals, and terrorists has garnered considerable attention. Research shows that extreme sensory deprivation and extended periods of solitary confinement lead to mental aberrations and manifestations such as hallucinations, perceptual issues, and dysfunctional cognitive missteps. One of the serious consequences of extreme sensory deprivation and solitary confinement is the diminishing of suspects' mental capacities, which compromises their competencies to stand trial and limits their abilities to participate in their defense.

## Bad Bad Juju: Sensory Deprivation

Solitary confinement is the confinement of “a prisoner alone in a cell for all, or nearly all, of a day with minimal stimulation and minimal opportunity for social interaction.” It has “long been known that severe restriction of environmental and social stimulation has a profound deleterious effect on mental functioning” (Grassian, 2006, p. 327). Sensory deprivation manifested in prolonged solitary confinement is indeed devastating and aptly described as *bad bad juju*. “It’s an awful thing, solitary,” John McCain wrote of his five and a half years as a prisoner of war in Vietnam where he spent more than two years of it in isolation and solitary confinement (Gawande, 2009, p. 1):

“It crushes your spirit and weakens your resistance more effectively than any other form of mistreatment.” And this comes from a man who was beaten regularly; denied adequate medical treatment for two broken arms, a broken leg, and chronic dysentery; and tortured to the point of having an arm broken again. A U.S. military study of almost a hundred and fifty naval aviators returned from imprisonment in Vietnam, many of whom were treated even worse than McCain, reported that they found social isolation to be as torturous and agonizing as any physical abuse they suffered (p 1).

The social isolation of sensory deprivation essentially stems from “the loss of physical awareness caused by detachment from external sensory stimuli (e.g. solitary confinement). Sensory deprivation associated with isolation and solitary confinement often results in psychological disorders. These psychological disorders may express themselves as panic, mental confusion, depression, and hallucinations” (Elsevier, 2009; Dr. S. Grassian, personal communication, February 15, 2009). In 1958, Donald O. Hebb of McGill University conducted

some of the most significant and relevant studies of sensory deprivation. Hebb's early work provided a window into the effects of solitary confinement for scientific communities and the United States Government (USG).

Solitary confinement in the U.S legal system dates back approximately 180 years. "Quaker philosophy inspired the practice with disastrous results" (Sullivan, 2006, ¶ 1-2). In 1890, the U.S. Supreme court acknowledged the psychiatric trauma caused by solitary confinement. Over the last 20 years, however, sensory deprivation (e.g. solitary confinement, administrative segregation, and isolation) has flourished in the U.S. prison system. "The 1990s witnessed a boom in the construction of full-blown segregation facilities (e.g. Supermax isolation units) just for solitary confinement" (Sullivan, 2006, ¶ 1-2):

Isolation today means 23 hours a day in a concrete cell no bigger than a bathroom. One hour a day is spent alone in a concrete exercise pen, about the length and width of two cars. Most inmates held in solitary have no contact with the outside world other than the U.S. mail. Depending on the state, inmates have limited access to visitors. Most can't watch television, call anyone on the phone or even touch another person while in the units.

Sensory deprivation precipitates disturbing effects. Its psycho-physiological impact on incarcerated suspects, criminals, and terrorists has captured the news and the attention of the academic, medical, human rights, and legal communities (Grassian, 2006; Grassian, 1983). The media is replete with stories about enemy combatant detainees being held in prolonged solitary confinement. So too the news is dotted with examples of isolation tactics, techniques, and procedures (TTPs) to control gang members in the U.S. prison populations. It has been suggested that legal sensory deprivations techniques (e.g. isolation cells) are similar to or are

torture techniques in their impact on one's physical and emotional well-being as well as competence to stand trial or participate in legal proceedings.

Warren Richey writes how CIA and Defense Department research in the 1950s and '60s investigated isolation and sensory deprivation TTPs: "The findings were included in a 1963 CIA handbook with the warning and 'profound moral objection' of applying duress past the point of irreversible psychological damage" (Richey, 2007, p. 2). The perils and liabilities of prolonged sensory deprivation are evident and well documented in studies by Dr. Stuart Grassian in the 1980s (Greene, Heilbronn, Fortune, & Nietzel, 2007; Richey, 2007; Grassian, 2006; Grassian, 1983). In fact, the Army's "new Field Manual prohibits the use of isolation to achieve psychological disorientation through sensory deprivation" (Richey, p. 2):

Sensory deprivation is defined as an arranged situation causing significant psychological distress due to a prolonged absence, or significant reduction, of the usual external stimuli and perceptual opportunities," the manual states. "Sensory deprivation may result in extreme anxiety, hallucinations, bizarre thoughts, depression, and anti-social behavior. Detainees will not be subject to sensory deprivation."

## **Legal Issue of Sensory Deprivation**

While the new Army manual bars and restricts the use of sensory deprivation, the Supreme Court over time has expressed little concern about it when it comes to prison conditions (Haney & Zimbardo, 1998, p. 709-727; Smith, 2008, p. 61). The Supreme Court focuses "less on prison conditions themselves and more on the justifications of the prison officials" when it comes to solitary confinement and sensory deprivation (Greene, Heilbrun, Fortune, & Nietzel, 2007, p. 445):

As a result, prison officials' explanations for any number of extreme measures are usually accepted by the judges. In *Bass v. Perrin* (1999), for example, the federal court accepted a Florida prison administrator's explanation for keeping two prisoners in solitary confinement for two years. The official claimed both men were serious security risks: One had killed a guard, and the other has attempted to escape five times. It is only at the extreme – where the use of force or conditions of confinement “shock the conscience” – that a judge will interfere with the administration of a prison.

Within the U.S. criminal justice system, solitary confinement and isolation are now accepted and legal forms of sensory deprivation (Bartol & Bartol, 2005):

Prison inmates may be physically isolated or segregated from the general prison population for a variety of reasons and under a wide range of circumstances...we can identify the following main categories: (1) isolation or segregation as a form of punishment; (2) isolation or segregation for an inmate's own protection; and (3) administrative segregation done for management purposes ... administrative segregation has taken on new meaning, with the placement of large groups of inmates in high-security-ultramax-facilities (p. 541).

## **Relationship of Sensory Deprivation, Legal Proceedings, and Mental Health**

Research shows that prolonged solitary confinement is devastating (Reinert, n.d., p. 82; Rebman, 1999). Rebman describes in her work the various studies on solitary confinement by Dr. Stuart Grassian and others in the early 1980s. These studies address the varied deleterious consequences of solitary confinement on inmates' physical, emotional, social, and mental health (Greene et al., 2007, p. 446; Rebman, p. 567-619; Reinert). “Grassian found that inmates held in

solitary confinement“ suffered consistent symptoms of sensory disturbances, primitive aggressive fantasies, and disturbances of memory and attention (Greene et al., 2007, p. 446).”

Additionally, the recent work of Peter Smith coincides with and supports Grassian’s research and others (Smith, 2008):

Solitary confinement – regardless of the specific conditions and regardless of time and place causes serious health problems for a significant number of inmates. The central harmful feature that it reduces meaningful social contact an absolute minimum; a level of social and psychological stimulus that many individuals will experience as insufficient to remain reasonably healthy and relatively well functioning ... expert commentators have argued that some courts have been too reluctant to acknowledge the psychological effects of imprisonment, including specifically the effects of solitary confinement (p. 61-62).

## **The Padilla Case**

The effects of solitary confinement on the mental faculties of detainee José Padilla offers an excellent case study into sensory deprivation, psychology, and the law. According to J.S Martinez, a law professor at Stanford University, José Padilla was arrested 8 May 2002 in Chicago, incarcerated, declared an enemy combatant, turned over to the military for trial and held in solitary confinement (Martinez, 2007).

Padilla was convicted in a federal court (not a military court) in 2007. Martinez at the time of Padilla’s conviction wrote of his sensory deprivation, underscoring how Padilla was denied “for nearly two years all access to his lawyers, his family and the court system” (Martinez, 2007, p. A23):

The administration claimed that he could be held without trial until the end of its "war on terror." Allowing Padilla to talk to a lawyer or know that a court was considering his case, the government argued, would threaten national security. Meanwhile, the government was working to create a relationship of complete "dependency" between Padilla and his interrogators, who were busy trying to torture a confession out of him. As court filings indicate, Padilla was allegedly subjected to sleep deprivation, stress positions and extreme temperatures. Worse, he was held without human contact, without a clock or even natural light with no way to know how quickly or slowly time was passing. When he was removed from his cell to visit a dentist, goggles and earmuffs were placed on him. Psychologists have long reported that extreme sensory deprivation is one of the quickest ways to drive people mad and make them willing to confess to anything (p. A23).

The evidence is clear and convincing that sensory deprivation is deleterious to one's health mentally and physically. Yet, the courts have side-stepped the matter of sensory deprivation, its impact on the defendant's mental health, and on competency to stand trial and the ability to participate in one's defense. While the courts avoid the issue of extreme sensory deprivation, the courts do condone medicating someone to achieve a mental status to where they can stand trial. However, the courts have a history of looking the other way when one is driven "mad" while incarcerated in order to coerce a confession or obtain information. Nevertheless, Padilla and his Yale legal team have enjoined a civil tort proceeding seeking relief and damages associated with prolonged sensory deprivation and torture (Cassel, 2008):

The suit also draws a connection between Padilla's treatment as an "enemy combatant" and his criminal conviction in Miami, arguing that the tactics used in his detention made

him unable to effectively contribute to his own defense. The suit sets forth specific allegations of torture, including the use of mind-altering drugs, the stress position, and sleep and sensory deprivation (§ 3).

The question still remains for forensic psychologists and psychiatrists: What are the effects (e.g. psychological and physical) on Padilla from his being subjected to prolonged sensory deprivation? The judge during Padilla's criminal trial did take judicial note of his "mentally disability". However, the judge ruled he was competent enough to stand trial, thus, setting aside any and all legal questions regarding the use of prolonged sensory deprivation and/or torture associated with sensory deprivation (Richey, 2007, p. 2-3). As a sidebar related to incarcerated defendants' "mental states", it is interesting to note that even after a verdict is rendered, sentencing is complete, and the convicted is relegated to death row, an inmate's mental condition can dramatically influence an outcome ordered by the court. In the case of *Ford v. Wainwright* the court ruled that prisoners who mentally decompose became "insane" while incarcerated cannot be executed (Schmallger, 2006, p. 98).

Mental decomposition concordant with solitary confinement is dramatically uncovered by Drs. Stuart Grassian and Angela Hegarty in the federal case of *US v. Padilla*. The focus in this case from a forensic standpoint is Padilla's cognitive capacity juxtaposed with the law and the effects of prolonged isolation, enhanced interrogation, and extreme sensory deprivation. The court affidavit by Dr. Hegarty lays bare Padilla's psychological deterioration and desolate mental state precipitated by isolation and solitary confinement. Dr. Hegarty reveals the use of prolonged isolation creates the conditions that induce intense fear, feelings of helplessness and loss of control characteristic of the traumatic experience: (Cryptome, 2006):

Sleep deprivation, physiological stress, and repeated questioning only exacerbate the traumatic nature of the experience. Mr. Padilla believed he was going to die on a number of occasions during his detention. He believed his family would be harmed if he did not comply. He learned that no matter whether he was cooperative, or whether he pleaded with his captors, he was utterly helpless and absolutely dependent on them for everything. He believed and still believes they have the ultimate power to decide what happens in his life, his case, and whether he is released or ultimately is returned to the brig. These traumatic events were exacerbated by their duration. Additionally, Mr. Padilla's current environment wherein he is an unhealthy degree of isolation remains psychologically unsafe for him and only serves to compound the psychological damage that has already been done...With a reasonable degree of medical and psychiatric certainty, it is my opinion that as a result of his experiences during his detention and interrogation, Mr. Padilla does not appreciate the nature and consequences of the proceedings against him, is unable to render assistance to counsel, has impairment in reasoning as the result of mental illness and as such lacks the capacity to assist in his own defense (p. 2-5).

As revealed in the preceding excerpt the forensic professional did not stray into the legal definition of *torture* as related to sensory deprivation. Instead she addressed and clinically observed the effects of sensory deprivation upon Padilla concordant with the associated environmental conditions Padilla was maintained in. Further the role of a forensic professional is reflected in the concentration on Padilla's mental status, not the policies, legal wrangling, and politics of a war on terrorism. In her role as a forensic expert, Dr. Hegarty is candid and in her professional judgment concludes that Padilla "was not the same man he was in 2002 and

whatever happened to him during his solitary confinement has radically changed him” (Richey, 2007, p. 2)

Drs. Grassian and Hegarty integrate clinical observations, research data, Padilla’s personal history, and hours of extensive psychological examinations into a compelling evaluation. Their written declarations presented to the court are in keeping with Supreme Court criteria regarding scientific knowledge (Cryptome, 2006; *Daubert v. Merrill Dow Pharmaceuticals Inc 1993*) related to: (1) falsifiability (or refutability), (2) peer review, (3) reliability and error rates, and (4) acceptance by the appropriate scientific community (Greene et al., 2007, p.19). The forensic evaluations and professional judgments in the Padilla case find merit in academic, medical, and peer review of psychiatric data pertaining to sensory deprivation and solitary confinement. According to Atul Gawande in the *The New Yorker*, “It is unclear how many prisoners in solitary confinement become psychotic (Gawande, 2009, p. 1)”:

Stuart Grassian, a Boston psychiatrist, has interviewed more than two hundred prisoners in solitary confinement. In one in-depth study, prepared for a legal challenge of prisoner-isolation practices, he concluded that about a third developed acute psychosis with hallucinations. The markers of vulnerability that he observed in his interviews were signs of cognitive dysfunction – a history of seizures, serious mental illness, mental retardation, illiteracy, or, as in Felton’s case, a diagnosis such as attention-deficit hyperactivity disorder, signaling difficulty with impulse control. In the prisoners Grassian saw, about a third had these vulnerabilities, and these were the prisoners whom solitary confinement had made psychotic. They were simply not cognitively equipped to endure it without mental breakdowns (p. 1).

We would do well to heed this cognitive research and data and conclude that solitary confinement and extreme sensory deprivation are literally bad bad juju.

## References

- Bartol, C., & Bartol, A. (2005). *Criminal behavior a psychological approach* (7th ed.). Upper Saddle River, NJ: Pearson Prentice Hall.
- Cassel, E. (2008). *Jose Padilla's suit against John Yoo: an interesting idea, but will it get far?* Retrieved February 15, 2009, from <http://writ.corporate.findlaw.com/cassel/20080114.html>
- Cryptome (2006). *Affidavit of Angela Hegarty, MD*. Retrieved January 17, 2009, from <http://cryptome.org/padilla/padilla-695-3.pdf>
- Elsevier (2009). *Mosby's medical dictionary*. Retrieved January 29, 2009, from <http://medical-dictionary.thefreedictionary.com/Sensory+deprivation>
- Gawande, A. (2009, March 30). Hellhole. *New Yorker*. Retrieved from [http://www.newyorker.com/reporting/2009/03/30/090330fa\\_fact\\_gawande?currentPage=all](http://www.newyorker.com/reporting/2009/03/30/090330fa_fact_gawande?currentPage=all)
- Grassian, S. (1983). Psychopathological effects of solitary confinement. *American Journal of Psychiatry*, *140*, 1450-1454.
- Grassian, S. (2006). Psychiatric effects of solitary confinement. *Journal of Law and Policy*, *22*, 325-383.
- Greene, E., Heilbrun, K., Fortune, W., & Nietzel, M. (2007). *Wrightman's psychology and the legal system* (International Student ed.). United Kingdom: Wadsworth.
- Haney, C., & Zimbardo, P. (1998). The past and future of U.S. prison policy: Twenty-five years after the Sanford Prison Experiment. *American Psychologist*,
- Martinez, J. S. (2007, August 17, 2007). The real verdict on Jose Padilla. *The Washington Post*, p. A23.

- Rebman, C. (1999, January 29, 2009). The Eight Amendment and solitary confinement: The gap in protection from psychological consequences. *DePaul Law Review*, 49
- Reinert, A. A. (n.d.). *Eight Amendment gaps: Can conditions of confinement litigation benefit from theory of proportionality*. Retrieved January 29, 2009, from <http://law.fordham.edu/publications/articles/400fls016760.pdf>
- Richey, W. (2007, August 13, 2007). U.S. terror interrogation went too far, experts say. *The Christian Science Monitor*, pp. 6.
- Richey, W. (2007, August 14, 2007). US Gov't broke Padilla through intense isolation, say experts. *The Christian Science Monitor*. Retrieved from <http://www.csmonitor.com/2007/0814/p11s01-usju.html?page=2>
- Schmallger, F. (2006). *Criminal justice a brief introduction* (6th ed.). Upper Saddle River, NJ: Pearson Prentice Hall.
- Smith, P. (2008). *Solitary confinement: An introduction to the Istanbul statement on the use and effects of solitary confinement*. Retrieved February 13, 2009, from [http://www.humanrights.dk/files/pdf/Engelsk/International/Solitary\\_confinement.pdf](http://www.humanrights.dk/files/pdf/Engelsk/International/Solitary_confinement.pdf)
- Sullivan, L. (2006). *In U.S. prisons, thousands spend years in isolation*. Retrieved January 29, 2009, from <http://www.npr.org/templates/story/story.php?storyId=5582144>