Assessing Volitional Impairment in Sexually Violent Predator Evaluations

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Abstract

Sexually Violent Predator (SVP) statutes require a mental abnormality, which is a legal construct that is partially defined by volitional impairment (VI). From a legal standpoint, a mental abnormality is understood to be a mental disorder with impaired behavioral self-control. In this article, VI is examined through the psychological constructs of impulsivity and impaired decision making. Informed by the ideas inherent in structured professional judgment and grounded in an idiographic approach, an approach to assessing VI is presented that can assist in a legal finding/determination of mental abnormality.

Key words: SVP, sexual violent predator, civil commitment, volitional impairment, risk assessment, sexual offenders

Twenty-one jurisdictions have "sexually violent predator" (SVP) civil commitment statutes in the United States. Generally speaking, the presence of three elements, or prongs, must be shown to exist in order to civilly commit someone as a SVP. The first element is a conviction for a sexual offense. The second element is the presence of a mental abnormality (or personality disorder). And, the third element is the presence of a high risk (*likelihood*) to re-offend with another sexual offense. Risk need not be addressed, e.g., the Adam Walsh Act, which is the United States federal SVP statute, does not address risk - civil commitment under this statute requires the demonstration of a serious difficulty controlling behavior: the statute is absent language concerning likelihood to re-offend. This article focuses on mental abnormality and the particular component of mental abnormality known as *serious difficulty in controlling behavior*.

Nearly all jurisdictions define mental abnormality in terms of predisposition (or equivalent wording), i.e., the mental abnormality is a congenital or acquired condition that affects a person's emotional, cognitive, or volitional capacity *predisposing* the person to commit sexually violent offenses (Miller, Amenta, & Conroy, 2005). All jurisdictions are informed by the United States Supreme Court decision in *Kansas v. Crane* (2002)¹ that the relevant constitutional minimum for civil commitment under SVP statutes is *serious difficulty in controlling behavior*.

Current evaluative practice frequently leapfrogs the volitional prong; forensic evaluators frequently ignore the issue altogether. This practice leaves the fact-finder with little to consider in regard to the need to determine whether there is volitional impairment present in cases where serious liberty issues are at stake. It is the view taken in this article that the collection, analysis, and integration of scientifically based data in regard to volitional impairment creates an improved data set for the SVP evaluation, which provides a needed component of an expert opinion for the fact-finder to consider. In short, good data, properly collected, in regard to VI, are necessary. As such, a model to improve the current state of the art by providing probative data for fact-finders to consider in sexually violent predator evaluations can assist in both reducing false positive civil commitments and aid as well as

in identifying and properly committing those in need of treatment.

Adoption of a model for assessing VI is critical, because, as Hart and Kropp (2008) pointed out, specialized tests and procedures do *not* presently exist and mental health examiners have been, to date, relying entirely on their imprecise and unreliable clinical judgment.

Volition

Volition refers to the ability to exercise appropriate decision making leading to reasonably healthy and legal behavioral choices. Hart and Kropp (2008) stated, "[Volition] is the capacity to make choices - to form goals and then to develop, implement, evaluate, and revise plans to achieve these goals" (p. 562). The issue in SVP proceedings regarding choice incapacity is *serious difficulty in controlling behavior*. The conceptualization of behavioral dyscontrol examined in this paper (VI), and an approach to measuring it, allows for clinicians to assist the fact-finder in an area of the law that involves civil commitment, whereas before the advent of *SVP* civil commitment, the degree of VI that could lead to a civil commitment had been usually contingent upon the presence of overt psychosis. The approach proposed is not necessarily considered the *ne plus ultra* approach to assessing VI, but something along the following lines is a needed improvement to the data set for an SVP evaluation.

In order to meet this need, behavioral control is conceptualized in a model for these proceedings, where the ability to control behavior, or lack thereof, is determined on a case by case basis by means of an idiographic approach. While nomothetic components are part and parcel of the model, it is stressed that the elements of behavioral control, and the measures involved in its assessment, are part of a larger idiographic or *whole person* framework. In short, the model is an individualized understanding of each examinee, where the way in which the examinee acts is conceptualized by certain mental constructs.

Volitional Impairment

A readily defensible approach taken in this article, one certainly endorsed in the Diagnostic and Statistical Manual of Mental Disorders, 4th edition, Revised (DSM-IV-TR; American Psychiatric Association, 2000), is the approach that a decision to engage in any particular behavior, including any criminal behavior, does not automatically equate to or reflect behavior that is out-of-control for that individual. This line of thinking presupposes that behavior, including violent behavior, falls into one of three primary categories: (1) healthy behavior resulting from choices made by the individual that are coherent, intentional, and in line with self-interest, (2) maladaptive decisions misperceived to be in line with self-interest, and (3) impulsive behavior resulting from impairment affecting the ability to choose to engage in behavior - or to inhibit such behavior - that is not consistent with the self-interest of the individual (Slavin & Kriegman, 1992; Malamuth & Malamuth, 1999). It is the third category that is constitutive with regard to VI in the context of SVP civil commitment (Zander, 2005); defining this category in terms of behavior that is patently inconsistent with the self-interest of the individual derives from the neuroscience of impulsive decisions and the tendency to devalue rewards (or punishments) that are remote in time (impaired delayed gratification or delayed discounting) (cf. Madden & Bickel, 2010). Hence, behavioral impulsivity and impaired decision-making are viewed as lying at the core of VI.

Impulsivity

A psychological construct that would seem to provide a face valid explanatory fit with volitional impairment is behavioral impulsivity (e.g., Evenden, 1999; Grinage, 2003; Kafka, 2007; Mercado, Schopp & Bornstein, 2005; Ogloff, 1997). Impulsivity may be defined as an impaired ability to defer deliberation, leading to action without adequate cognitive and emotional mediation (Stanford, Mathias, Dougherty, Lane, Anderson, & Patton, 2009). Impulsivity may be argued to be applicable to the assessment of VI in three respects: (1) there is a large empirical literature documenting the importance of impulsivity in a wide range of criminal behaviors, including general delinquency and antisociality (e.g., Farrington, Loeber, & Van Kammen, 1990; Gorenstein & Newman, 1980; Moffitt, 1993; White, Moffitt, Caspi, Bartusch, Needles, & Stouthamer-Loeber, 1994), psychopathy (Cleckley, 1976; Shapiro, 1965), sexual assault and spousal assault (cf., Webster and Jackson, 1997), and sexual impulsivity disorders (Kafka, 2007), (2) impulsivity is embedded in the assessment of risk of violence (cf. Webster and Jackson, 1997; Webster, Douglas, Eaves, & Hart, 1997), including sexual violence (Boer, Wilson, Gauthier, & Hart, 1997), and (3) The DSM-IV-TR (American Psychiatric Association, 2000) recognizes impulsivity in two important ways - as an element in diagnosis of various disorders, including substance abuse, borderline Personality Disorder, and antisocial personality disorder, and as a class of disorders referred to as "impulse control disorders," including pathological gambling, kleptomania, pyromania, trichotillomania, and intermittent explosive disorder (APA, 2000; Hucker, 1997; Melton, Petrila, Poythress, & Slobogin, 2007).

Impulsivity, however, is not an adequate *stand-alone* explanatory construct for VI. As noted above, it can be a defining feature of a wide array of different expressions of psychopathology, including, most importantly, antisociality. As Ogloff (1997) observed, "In regard to impulsive acts per se, it is clear that the law has never applied a blanket exoneration to acts that occurred impulsively. Rather, the law has concerned itself with the *cause* of the impulsivity," (p. 67). Moreover, impulsivity is not just about behavior. As Rogers (1987) pointed out twenty-five years ago, impulses involved in actions always include cognition. Indeed, as Beauregard and Leclerc (2007) found in their study of 69 serial sex offenders, using rational choice theory, most sex offenders characterized as impulsive or "irrational" "are capable, up to a certain point, of an analysis of the *costs/benefits* related to their actions [emphasis added]" (p. 115).

The impulsive individual, a descriptor that fits many criminals and many diagnosed with antisocial personality disorder, is not *necessarily* lacking in behavioral control. In short, impulsivity is not enough (Vognsen & Phenix, 2004). Instead, the ability, or inability, to make choices is viewed as an additional consideration.

Decision-Making

Broadly speaking, decision-making is related to human agency (Paternoster and Pogarsky, 2009), referring to the general ability to weigh options, consider consequences, and act in a way that is consistent with, and to the advantage of, one's long term interests (Bechara, Damasio, Damasio, & Anderson, 1994; Martin & Potts, 2009). The relative inability to arrive at decisions that are consistent with the aforementioned criteria reflects some degree of impairment in decision-making (Kim, Sohn, & Jeong, 2011; Dias-Ferrera et al., 2009).

Many recent studies have reported impaired decision-making in a range of problematic behaviors. Bouchard, Brown, and Nadeau (2012) found impaired decision-making associated with higher motor vehicle offense rates in individuals arrested for driving while intoxicated. Schuermann et al. (2011) found a link between the impulsive, poorly mediated acts of patients with borderline personality

disorder and poor outcomes on the Iowa Gambling Task, a measure of decision-making. Luman et al. (2009) reported an association between altered autonomic control and impaired decision-making in antisociality, and Beauregard and LeClerc (2007) demonstrated the utility of decision-making with sex offenders. These findings, in the context of the larger literature on decision-making, leads to the inclusion of decision-making as a key factor in the assessment of VI.

Integrating Impulsivity and Decision-Making

The key constructs involved in the model proposed for assessing behavioral control include impulsivity and impaired decision-making. The common denominator of impulsivity and impaired decision-making is the inability to inhibit behavior that is not in the long term interest of the individual. Psychological tests have been validated and utilized for the measurement of impulsivity and impaired decision-making. It is the opinion taken herein that impulsivity and decision-making are related to VI and can be linked to the legal construct of serious difficulty in controlling behavior.

Specifically, in integrating the measurement of impulsivity and impaired decision-making and examining VI, it is important to examine those aspects of mentation related to the control and regulation of behavior (Rasmussen, Almik, & Levander, 2001; Golden, Jackson, Peterson-Rhone, & Gontkovsky, 1996; Brower and Price, 2001; Joyal, Black, & Dassylva, 2007).

The recent literature related to the control and regulation of behavior is considerable (e.g., Baumeister et al., 2007; Bernat, Nelson, Steele, Gehring, & Patrick, 2011; Brower and Price, 2001; Elwood, 2009; Endres, Rickert, Bogg, Lucas, & Finn, 2011; Golden, Jackson, Peterson-Rhone, & Gontkovsky, 1996; Joyal, Black, & Dassylva, 2007; Kahneman, 2011; Nordgren & Chou, 2011; Pirtosek, Georgiev, & Gregoric-Kramberger, 2009; Rasmussen, Almik, & Levander, 2001; Sheppes, Scheibe, Suri, & Gross, 2011).

From a neuropsychological perspective, impaired self-control is, in large part, attributed to deficits in the regulatory functions of the frontal cortex (e.g., Bowman, 1997). Executive functioning mediates, modulates, and regulates the behavioral functions of the individual (Bechara, 2005). The inability to successfully mediate between impulse and action is a problem with "self-regulation" (Ross, 2008). As such, behavior that lacks proper mediation could be considered to be the result of control impairment. Such behavior may also be described as impulsive (Rogers, 2003).

Impulsive behavior is regulated by the executive system. In discussing neurological deficits in this regard, Bornovalova, Daughters, Hernandez, Richards, & Lejuez (2005) stated, "Specifically, these deficits were found in the frontal lobe area, which is generally found to mediate inhibitory processes that are involved in risk taking and impulsivity" (p. 315). Research indicates that impulsive behavior is largely controlled by dorsolateral and ventromedial prefrontal cortex functioning (Shackman, McMenamin, Maxwell, Greischar, & Davidson, 2009; Syngelaki, Moore, Savage, Fairchild, & Van Goozen, 2009). Therefore, the link to neurological substrates of behavior with VI has been made.

Such neurological deficits have been linked to sex offending (Spinella and White, 2006; Spinella, White, Frank, & Schiraldi, 2006; Yechaim, Kanz, Bechara, Stout, Busemeyer, Altmaier, & Paulsen, 2008). The pre-frontal cortex, in particular, is linked by neuropsychological research to behavioral dyscontrol in aggressive behavior and maladaptive sexual behavior in humans (Miller, Amenta, and Conroy, 2005; Saver and Damasio, 1991; Blanchard, Cantor, & Robichaud, 2006; Anechiarico, 1999), as well as animals (Davis, Loos, Di Sebastiano, Brown, Lehman, and Coolen, 2010). Studies have implicated both orbital frontal and ventromedial frontal regions in violent behavior (Seguin, 2009). Brower and Price (2001) concluded that "Evidence is strongest for an association between focal prefrontal damage and an impulsive subtype of aggressive behaviour." (p. 725). Stone and

Thompson (2001) concluded that sex offenders suffered from executive function deficits. Denney (2005) outlines research supporting the view that violent behavior is either premeditated or impulsive. Denney (2005) states, "Overall, there appears to be enough research implicating a relationship between neurocognitive functioning and aggression, particularly the impulsive type, to indicate that neuropsychology has a place in the evaluation of violent criminal defendants" (p. 444), and "Among the impulsively aggressive, there appears to be substantial evidence of neurocognitive compromise consistent with previous research regarding executive dysfunction among the violent" (p. 443). In short, evidence supports the notion that the prefrontal cortex is involved in the mediation of impulsive behavior (Bechara, 2005; Villemarette-Pittman, Stanford, & Greve, 2003). Moreover, recent literature points to the utility of neuroscience in evaluating volitional impairment in light of Crane (Fabian, 2012). As such, examining frontal lobe functioning, as it relates to impulsivity and decision-making, is warranted.

In connecting impulsivity, decision-making, and volition, Martin and Potts (2009) have argued that decision making and impulsivity are functionally related. In addition, Kalis et al. (2008) proposed neuropsychological underpinnings of weakness of will (akrasia) that has a clear link to the concept of decision-making. Pirtosek et al. (2009) tied together three constructs - volition, free will, and decision making - in their exegesis on neuroanatomical and neuro-physiological correlates. Accordingly, examining impulsivity and decision-making in the context of VI by means of psychological assessment measures lie at the heart of the proposed protocol.

A Protocol for Assessing VI

Two well-known neuropsychological screening measures that assess impaired ability to inhibit behavior are the Wisconsin Card Sorting Test (WCST) and the Iowa Gambling Task (IGT).

The WCST has been a staple for neuropsychological assessment of frontal lobe function for well over sixty years (Berg, 1948). Contemporary administration of the WCST is computerized (PAR, 2003) and takes approximately twenty-five minutes to complete when administered by computer. The WCST assesses "set shifting," which is the ability to move from one behavioral task with certain rules to another behavioral task with different rules. This ability is linked to self-regulation, planning, and goal formulation (Nestor, Daggett, Haycock, & Price, 1999). As such, the WCST assesses the functioning of the prefrontal cortex where such "set shifting" behavior is guided (Monchi, Pedrides, Petre, Worsley, and Dager, 2001). The WCST has been found useful in assessing functioning in the dorsolateral prefrontal cortex (Dolan, Bechara, & Nathan, 2008).

Those without the ability to properly set-shift make what are called "perseverative responses." Such individuals keep making the same error despite a negative consequence and cannot seem to inhibit the response. Difficulty with set-shifting provides evidence of impairment in properly controlling behavior (Nyhus and Barcelo, 2009; Monchi, Pedrides, Petre, Worsley, and Dager, 2001). Perseveration of this sort has been linked to impulsivity (Stanford, Greve, Gerstle, 1997; Leshem and Glicksohn, 2007).

The IGT is similar to the WCST. The IGT was developed by Bechara, Damasio, Damasio, & Anderson (1994). It assesses simulated decision-making ability, presenting the test-taker with four computer generated, virtual decks of cards (Bechara, 2010). The IGT takes approximately 20 minutes to complete when administered by computer. The goal of the IGT is for the test taker to win as much play money as possible. The IGT assesses the functioning of the prefrontal cortex, where the ability to inhibit impulsive acts leads to poor outcomes. The IGT has been found useful in assessing functioning in the ventromedial prefrontal cortex (Dolan, Bechara, & Nathan, 2008). Impairment in the ventromedial prefrontal cortex can result in "myopia for the future" (Bechara,

Tranel, & Damasio, 2000).

In the IGT, perseveration is manifested in returning to "bad" card selection choices (card selection choices that have high gain but larger relative losses). Orbitofrontal cortical dysfunction is associated with perseveration on the IGT (Bechara, Damasio, & Damasio, 2000). The IGT is utilized to detect those with difficulty controlling impulses (Vassileva, Gonzalez, Bechara, & Martin, 2007; Dolan, Bechara, & Nathan, 2008; Meier, Slutske, Arndt, & Cadoret, 2008). Such usage has included sex offenders (Joyal, Black, & Dasslyva, 2007; Yechaim, Kanz, Bechara, Stout, Busemeyer, Altmaier, & Paulsen, 2008; Veneziano, Veneziano, LeGrand, & Richards, 2004). One study found greater predictive ability for violent recidivism from IGT scores than from PCL-R scores (Beszterczey, 2006).

In the proposed protocol, one or both of these two neuropsychological measures are coupled with a self-report measure of impulsivity. The most widely used paper and pencil measure of impulsiveness is the Barratt Impulsiveness Scale (Stanford, Mathias, Dougherty, Lake, Anderson, & Patton, 2009), which has been in use for more than 50 years (Barratt, 1959) and is currently in its 11th edition (BIS-11) (Patton, Stanford, & Barratt, 1995). The BIS-11 is a 30-question self-report measure utilizing a Likert scale. It examines the degree to which the individual possesses behaviors associated with impulsiveness. The BIS-11 yields a score that is examined in relation to normative data from a demographically matched and census based sample. Higher than normal scores on the BIS-11 have been positively correlated with violent offending (Stanford, Mathias, Dougherty, Lake, Anderson, & Patton, 2009; Barratt, 1985).

Normative data on these tests are derived from samples that are not specific to sexual offenders. Assessment measures, when used as part of an idiographic evaluation, are not viewed as linked to a type of offender (e.g., there are no norms on the MMPI for burglars). Therefore, the idiographic approach is central to the thinking expressed in this protocol.

As a starting point, however, if an individual's scores fall below (i.e., indicating problems) the cut scores established by the WCST or the IGT, and above (also indicating problems) the cut score established for the BIS-11, these indices may be probative of VI. Such an approach, at the least, allows for the systematic, reliable collection of data with a theoretically and clinically plausible connection to VI that could be examined in relation to a mental disorder. Finally, these three measures are by no means the only potentially useful ones and other substitutes may be indicated on a case-by-case basis.

It is important to note, however, that difficulties on any of the measures suggested in this protocol may be due to cognitive limitations or developmental delay. Therefore, if such a limitation and/or delay is/are suspected, from interviews and/or record reviews, the use of a measure that will gather data concerning cognitive abilities may be indicated. Using either the Wechsler Scales of Intelligence or the Wide Range Achievement Test is suggested. Either test will assist in determining whether the individual's scores, if problematic, are due to intellectual impairment or developmental delay. In addition, if psychosis is suspected, adjustment may be needed. This is consistent with an individualized approach to interpretation that is suggested as part of this protocol.

Using Data from the Protocol

As noted above, the first step must be to rule out cognitive limitations or developmental delay. If such limitation or delay exists, this aspect of the individual's functioning must be considered in examining the components of the protocol that follow. Cognitive limitations may affect the scores on the neuropsychological screens and tests such that difficulty is evidenced, but possibly due to potential underlying developmental delay rather than a specific impairment in behavioral control per

se. In addition, a general understanding of the directions of the screens and tests provided in the administration, due to cognitive limitations, may be affected and should be examined and ruled out if suspected from a record review, collateral contacts, or by interview. Furthermore, the presence of psychosis must be ascertained and the protocol adjusted accordingly. Absent such limitations, this step is skipped.

This VI Protocol utilizes three sources of data: (1) known behavior, both prior to and subsequent to the index offense, (2) two neuropsychological measures, and (3) one self-report measure:

1. Behavior

Known behavior, both prior to the governing offense and subsequent to the offense, both in community and in lock-up, must be a centerpiece of any evaluation. As noted earlier, relevant known behavior must be considered and examined with regard to evidence of impulsivity. In short, in situ behavior is vital.

2. Neuropsychological Screening Measures

One or both of the neuropsychological tests described above should be used to collect normative data that is related to impulsivity and decision-making. The census matched data for each test will assist in establishing the presence of frontal lobe impairment and associated difficulty. These data are found in the manuals for the WCST and the IGT. IGT: T-scores based on the census matched sample that are below 40 are considered in the impaired ranges.

WCST: T-scores based on the census matched sample that are below 40 are considered in the impaired ranges.

3. Self-Report Measure

As noted above, the Barratt Impulsiveness Scale is the most widely used self-report measure of impulsiveness. This scale assesses the extent to which the individual self-reports behaviors associated with impulsiveness. The scale yields a score that may be examined in relation to normative data.

BIS-11: Scores greater than 71 are linked via research to difficulties with impulsivity.

An overview of the screens and test used in this protocol is provided in Table 1.

Table 1

Test	Acronym	Admin Time	Admin Mode	Availability	Citation
Wisconsin Card Sorting Test	WCST	25 min	Computer	PAR* / MHS**	Heaton et al., 1993
Iowa Gambling Task	IGT	20 min	Computer	PAR*	Bechara et al., 1994
Barratt Impulsiveness Scale	BIS-II	10 min	P/P: 30 items	Open Source	Stanford et al., 2009

^{*} PAR, Inc., Lutz, FL 33549-8119 (<u>www.parinc.com</u>)

^{**} MHS, North Tonawanda, NY 14120-0950 (www.mhs.com)

Although cut-offs derived from respective manuals or research are provided, the established norms for these scales have not, of course, been provided for the construct of VI. As underscored earlier, VI is a strictly legal construct, and bears a theoretical relationship to the behavioral constructs of impulsivity and decision-making.

Ultimately, an idiographic approach is regarded as central to conducting a comprehensive evaluation. This approach does not abandon nomothetic components, but, rather, incorporates such data into a larger picture. Structured professional judgment uses this approach in creating an individualized approach to risk when examining risk of recidivism for general violence (e.g., Historical Clinical Risk - 20) or sexual violence (e.g., Sexual Violence Risk - 20) (Douglas and Reeves, 2009). In sum, each case must be understood idiographically, and the nomothetic data that the tests produce must be integrated into such an idiographic understanding of the person. That is, an individualized conceptualization of VI is created in each case.

It is the ability to inhibit action *by will* that is the nub of the behavioral control condundrum. The ability to inhibit *by will*, examined idiographically, and with nomothetic components, is the heart of the scientific, psychological evaluation of behavioral control presented in this article. Following the idiographic approach, and informed by the ideas inherent in SPJ, an *individualized* conceptualization of VI is created in each case (Douglas and Reeves, 2009). To be clear, this translates to the combined consideration of the recommended nomothetic data with a comprehensive analysis of relevant behavior. Decisions related to VI should not be based solely on the results of these three measures discussed here. This presents the best fit for opining about psychological questions in a forensic context where each *individual* must be examined in the light of the law (Janus and Meehl, 1997; Janus and Prentky, 2003; Nestor, 2002).

To re-emphasize, relevant known behavior, both prior to the governing offense and subsequent to the offense, both in community and in lock-up, must be carefully considered in any evaluation.

However, this approach does *not* endorse the tautology purporting that a behavioral control impairment exists through the use of circular logic: an individual lacks *the ability to control* behavior because the individual *didn't control* that behavior (Miller, Amenta & Conroy, 2005). Past behavior can assist in determining present functioning, but past behavior *alone cannot* serve to determine impairment in behavioral control. Recent, *in situ* behavior cannot be ignored; civil commitment is a question concerning *present* functioning. Hence, the totality of behavior, including post-offense behavior, must be considered, along with the recommended testing.

A further point not directly discussed is the passage of time between the assessment by the mental health practitioner and the last known evidence of behavioral dyscontrol. Since an individual may have been incarcerated for many years before being evaluated for civil commitment, "old" evidence may not be reliable. Advanced age alone may have a mitigating effect on behavioral dyscontrol (e.g., Barbaree et al., 2003; Barbaree & Blanchard, 2008; Hanson, 2002; 2006; Prentky & Lee, 2007). This problem is addressed in two ways. First, by emphasizing that behavioral evidence must, whenever possible, include behavior *after* the governing offense (unless the governing offense was recent), including all institutional comportment. A developmental record, or timeline, of behavioral dyscontrol should be one critical piece of evidence. Second, this behavior log is complemented by *current* measures (self-report and neuropsychological).

Caveats

The legal term "mental abnormality" has no clear meaning in psychological parlance. The diagnostic task is complicated by the fact that the "mental abnormality" must, at least by common practice, include a documentable classification within a reliable, valid diagnostic system, i.e., the DSM-IV-TR. Thus, *in practice*, a mental abnormality must be a DSM-IV-TR mental disorder *causing a serious difficulty in controlling behavior*.

Following this line of thinking, it is evident that different possibilities exist. One, VI could be present along with a predisposing DSM-IV-TR mental disorder. Such an individual would be eligible for civil commitment. Alternatively, a statutorily-appropriate DSM-IV-TR mental disorder may be present (e.g., pedophilia), but a predisposition to and the presence of VI is absent. This latter case would fail to meet the standard for civil commitment under most SVP schemes. To comply with the statutory requirements of civil commitment, the individual should be found to have a defensible, relevant DSM-IV diagnosis causing a serious difficulty in controlling behavior.

Finally, it is emphasized that this protocol is intended to assess VI and not risk of re-offense. The question of *likelihood*, typically operationalized in terms of risk, is a separate, third element examination that is not addressed in this article. It is possible that an individual may have difficulty with behavioral control caused by a mental disorder but not be at high risk of re-offense. This may be due to a number of reasons, including the ability of the individual to modulate behavior by understanding and effectively implementing a relapse prevention cycle, a high degree of self-awareness particular to offending, and/or other coping or management techniques that serve to control inappropriate behavior and reduce recidivism (all of which may have been components of treatment). An example might be an individual with a record of downloading and using child pornography. VI may be assessed to be a concern, caused by pedophilia. However, in the absence of any hands-on sexual offense involving a child, or if sufficient protective factors mitigating risk of recidivism are in place, the risk of assaulting a child or committing any other new sexual offense may be quite low. The protocol proposed is intended to address only one facet of the second element (mental abnormality) of an SVP evaluation. It is hoped that this approach represents an advance in the assessment of VI, and the state of the art in SVP evaluations, where, frequently, day-to-life civil commitment hangs in the balance.

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Note

¹ Via the due process clause of the Fourteenth Amendment of the United States Constitution, the States are bound by this understanding of the minimal standard of problems with behavioral self-control.

References

1. American Psychiatric Association (2000). Diagnostic and Statistical Manual of Mental Disorders. Fourth Edition. Text Revision (DSM-IV-TR). Washington, D.C.: Author.

- 2. Anechiarico, B. (1999). A closer look at sex offender character pathology and relapse prevention An integrative approach. In B. K. Schwartz & H. R. Cellini (Eds.), The Sex Offender, volume III. New Jersey: Civic Research Institute.
- 3. Barbaree, H. E. & Blanchard, R. (2008). Sexual deviance over the lifespan: Reductions in deviant sexual behavior in the aging sex offender. In D. R. Laws & W. O'Donohue (Eds.), Sexual deviance: Theory, assessment, and treatment, 2nd Edition (pp. 37-60). New York: Guilford.
- 4. Barbaree, H. E., Blanchard, R. & Langton, C. M. (2003). The development of sexual aggression through the lifespan: The effect of age on sexual arousal and recidivism among sex offenders. In R. Prentky, E. Janus & M. Seto (Eds.), Sexually coercive behavior. Understanding and management (Vol. 989, pp. 59-71). New York: Annals of the New York Academy of Sciences.
- 5. Barratt, E. S. (1959). Anxiety and impulsiveness related to psychomotor efficiency. Perceptual and Motor Skills, 9, 191-198.
- Barratt, E. S. (1985). Impulsiveness subtraits: Arousal and information processing. In J. T. Spence & C. E. Izard (Eds.), Motivation, Emotion and Personality (pp. 137-146). North Holland: Elsevier Science.
- 7. Baumeister, R. F., Vohs, K. D. & Tice, D. M. (2007). The strength model of self-control. Current Directions in Psychological Science, 16(6), 351-355.
- 8. Beauregard, E.& Leclerc, B. (2007). An Application of the Rational Choice Approach to the offending process of sex offenders: A closer look at the decision-making. Sex Abuse, 19, 115-33.
- 9. Bechara, A. (2005). Decision making, impulse control and loss of willpower to resist drugs: a neurocognitive perspective. Nature Neuroscience, 8(11), 1458-1463.
- 10. Bechara, A., Tranel, D. & Damasio, H. (2000). Characterization of the decision-making deficit of patients with ventromedial prefrontal cortex lesions, Brain, 123, 2189-2202.
- 11. Bechara, A., Damasio, H. & Damasio, A. R. (2000). Emotion, decision making and the orbitofrontal cortex. Cerebral Cortex, 10, 295-307.
- 12. Bechara, A., Damasio, A.R., Damasio, H. & Anderson, S.W. (1994). Insensitivity to future consequences following damage to human prefrontal cortex. Cognition, 50, 7-15.
- 13. Bechara, A. (2010). Iowa Gambling Task (IGT). Psychological Assessment Resources; 2003.
- 14. Berg (1948). A simple objective technique for measuring flexibility in thinking. Journal of General Psychology, 39, 15-22.
- 15. Bernat, E. M., Nelson, L. D., Gehring, W. J., Steele, V. R. & Patrick, C. J. (2011). Externalizing psychopathology and gain-loss feedback in a simulated gambling task: Dissociable components of brain response revealed by time-frequency analysis. Journal of Abnormal Psychology, 120(2), 352-364.
- 16. Beszterczey, S. K. (2006). The neuropsychology of risky decision-making: The ecology of relapse and recidivism. Dissertation Abstracts International. (UMI No. 3252517).
- 17. Blanchard, R., Cantor, J. M. & Robichaud, L. K. (2006). Biological factors in the development of sexual deviance and aggression in males. In H. E. Barbaree & W. L. Marshall (Eds.), The Juvenile Sex Offender, 2nd Ed. (pp. 77-104). New York: The Guilford Press.
- 18. Boer, D. P., Wilson, R. J., Gauthier, C. M. & & Hart, S. D. (1997). Assessing risk of sexual violence: Guidelines for clinical practice. In C. D. Webster & M. A. Jackson (Eds.), Impulsivity. Theory, assessment, and Treatment (pp. 326-342). New York: The Guilford Press
- 19. Bornovalova, M. A., Daughters, S. B., Hernandez, G. D., Richards, J. B. & Lejuez, C. W. (2005). Differences in impulsivity and risk taking propensity between primary users of crack cocaine and primary users of heroin in a residential substance-use program. Experimental and Clinical Psychopharmacology, 13(4), 311-318.

- 20. Bouchard, S.M, Brown, T.G. & Nadeau, L. (2012). Decision-making capacities and affective reward anticipation in DWI recidivists compared to non-offenders: A preliminary study. Accident Analysis and Prevention, 45, 580-87.
- 21. Bowman, M. L. (1997). Brain impairment in impulsive violence. In C. D. Webster & M. A. Jackson (Eds.), Impulsivity. Theory, assessment, and Treatment (pp. 116-141). New York: The Guilford Press.
- 22. Brower, M. C. & Price, B. H. (2001). Neuropsychiatry of frontal lobe dysfunction in violent and criminal behaviour: A critical review. Journal of Neurology, Neurosurgery, and Psychiatry, 71, 720-726.
- 23. Cleckley, H. C. (1976). The mask of sanity (5th ed.). St Louis, MO: Mosby.
- 24. Davis, J. F., Loos, M., Di Sebastiano, A. R., Brown, J. L., Lehman, M. N. & Coolen, L. M. (2010). Lesions of the medial prefrontal cortex cause maladaptive sexual behavior in male rats. Biological Psychiatry, 67, 1199-1204.
- 25. Denney, R. L. (2005). Criminal responsibility and other criminal forensic issues. In G. J. Larrabee (Ed.), Forensic Neuropsychology: A Scientific Approach (pp. 425-465). New York: Oxford University Press.
- 26. Dias-Ferreira, E., Sousa, J. C., Melo, I., Morgado, P., Mesquita, A. R., Cerqueira, J. J., Costa, R. M. & Sousa, N. (2009). Chronic stress causes frontostriatal reorganization and affects decision-making. Science, 325, 621-625.
- 27. Dolan, S. L., Bechara, A. & Nathan, P. E. (2008). Executive dysfunction as a risk marker for substance abuse: The role of impulsive personality traits. Behavioral Sciences and the Law, 26, 799-822.
- 28. Douglas, K. S. & Reeves, K. (2009). HCR-20 violence risk assessment scheme: Rationale, application and empirical overview. In R. K. Otto & K.S. Douglas (Eds.), Handbook of Violence Risk Assessment. New York: Routledge: Taylor & Francis Group.
- 29. Elwood, R. W. (2009). Mental disorder, predisposition, prediction, and ability to control: Evaluating sex offenders for civil commitment. Sexual Abuse: A Journal of Research and Treatment, 21(4), 395-411.
- 30. Endres, M. J., Rickert, M. E., Bogg, T., Lucas, J. & Finn, P. R. (2011). Externalizing psychopathology and behavioral disinhibition: Working memory mediates signal discriminability and reinforcement moderates response bias in approach-avoidance learning. Journal of Abnormal Psychology, 120(2), 336-351.
- 31. Evenden, J. (1999). Impulsivity: A discussion of clinical and experimental findings. Journal of Psychopharmacology, 13(2), 180-192.
- 32. Fabian, J.M. (2012). Neuropsychology, Neuroscience, Volitional Impairment and Sexually Violent Predators: A Review of the Literature and the Law and Their Application to Civil Commitment Proceedings. Aggression and Violent Behavior, 17, 1-15.
- 33. Farrington, D. P., Loeber, R. & Van Kammen, W. (1990). Long-term criminal outcomes of hyperactivity-impulsivity-attention deficit and conduct problems in childhood. In L. N. Robins & M. Rutter (Eds.), Straight and devious pathways from childhood to adulthood (pp. 62-81). Cambridge, England: Cambridge University Press.
- 34. Golden, C. J., Jackson, M. L., Peterson-Rohne, A. & Gontkovsky, S. T. (1996). Neuropsychological correlates of violence and aggression: A review of the clinical literature. Aggression and Violent Behavior, 1(1), 3-25.
- 35. Gorenstein, E. E. & Newman, J. P. (1980). Disinhibitory psychopathology: A new perspective and a model for research. Psychological Review, 87, 301-315.
- 36. Grinage, B. D. (2003). Volitional impairment and the Sexually Violent Predator. Journal of Forensic Science, 48(4), 861-868.
- 37. Hanson, R. K. (2002). Recidivism and age: Follow-up data on 4,673 sexual offenders. Journal of Interpersonal Violence, 17, 1046-1062.

- 38. Hanson, R. K. (2006). Does Static-99 predict recidivism among older sexual offenders? Sexual Abuse: A Journal of Research and Treatment, 18(4), 343-355.
- 39. Hart, S. D. & Kropp, P. R. (2008). Sexual deviance and the law. In D. R. Laws & W. O'Donohue (Eds.), Sexual deviance: Theory, assessment, and treatment, 2nd Edition (pp. 37-60). New York: Guilford.
- Hucker, S. J. (1997). Impulsivity in DSM-IV Impulse-Control Disorders. In C. D. Webster & M. A. Jackson (Eds.), Impulsivity. Theory, assessment, and Treatment (pp. 195-211). New York: The Guilford Press.
- 41. Janus, E. S. & Meehl, P. E. (1997). Assessing the legal standard for predictions of dangerousness in sex offender commitment proceedings. Psychology, Public Policy, and Law, 3(1), 33-64.
- 42. Janus, E. S. & Prentky, R. A. (2003). Forensic use of actuarial risk assessment with sex offenders: Accuracy, admissibility and accountability. American Criminal Law Review, 40, 1443-1499.
- 43. Joyal, C., Black, D. & Dassylva, B. (2007). The neuropsychology and neurology of sexual deviance: A review and pilot study. Sexual Abuse, 19(2), 155-173.
- 44. Kafka, M. P. (2007). Sexual impulsivity disorders: Psychiatric "orphans." Psychiatric Times, 24(14), 15-17.
- 45. Kahneman, D. (2011). Thinking, Fast and Slow. New York: Farrar, Straus and Giroux.
- 46. Kalis, A., Mojzisch, A., Schweizer, T. S. & Kaiser, S. (2008). Weakness of will, akrasia, and the neuropsychiatry of decision-making: An interdisciplinary perspective. Cognitive, Affective & Behavioral Neuroscience, 8(4), 402-417.
- 47. Kansas v. Crane, 534 U.S. 407 (2002).
- 48. Kim, Y. T., Sohn, H. & Jeong, J. (2011). Delayed transition from ambiguous to risky decision making in alcohol dependence during Iowa Gambling Task. Psychiatry Research, 190, 297-303.
- 49. Leshem, R. & Glicksohn (2007). The construct of impulsivity revisited. Personality and Individual Differences, 43, 681-691.
- 50. Luman, M., Sergeant, J. A., Knol, D. L. & Oosterlaan, J. (2009). Impaired decision making in oppositional defiant disorder related to altered psychophysiological responses to reinforcement. Biological Psychiatry, 68, 337-344.
- 51. Madden, G. J. & Bickel, W. K. (Eds.) (2010). Impulsivity. The behavioral and neurological science of discounting. Washington, D.C.: American Psychological Association.
- 52. Malamuth, N. & Malamuth, E. (1999). Integrating multiple levels of scientific analysis and the confluence model of sexual coercers. Jurimetrics: Journal of Law and Science, 39, 157-179.
- 53. Martin, L. M. & Potts, G. (2009). Impulsivity in decision-making: An event-related potential investigation. Personality and Individual Differences, 46, 303-08.
- 54. Meier, M. H., Slutske, W. S., Arndt, S. & Cadoret, R. J. (2008). Impulsive and callous traits are more strongly associated with delinquent behavior in higher risk neighborhoods among boys and girls. Journal of Abnormal Psychology, 117(2), 377-385.
- 55. Melton, G. B., Petrila, J., Poythress, N. G. & Slobogin, C. (2007). Psychological Evaluations for the Courts, Third Edition. New York: The Guilford Press.
- 56. Mercado, C. C., Schopp, R. F. & Bornstein, B. H. (2005). Evaluating sex offenders under sexually violent predator laws: How might mental health professionals conceptualize the notion of volitional impairment? Aggression and Violent Behavior, 10, 289-309.
- 57. Miller, H. A., Amenta, A. E. & Conroy, M. A. (2005). Sexually violent predator evaluations: Empirical evidence, strategies for professionals, and research directions. Law and Human Behavior, 29(1), 29-54.
- 58. Moffit, T. E. (1993). Life-course-persistent and adolescence-limited antisocial behavior: A developmental taxonomy. Psychological Review, 100, 674-701.

- 59. Monchi, O., Petrides, M., Petre, V., Worsley, K. & Dagher, A. (2001). Wisconsin card sorting revisited: Distinct neural circuits participating in different stages of the task identified by event-related functional magnetic resonance imaging. The Journal of Neuroscience, 21(19), 7733-7741.
- 60. Nestor, P. G. (2002). Mental disorder and violence: Personality dimensions and clinical features. American Journal of Psychiatry, 159, 1973-1978.
- 61. Nestor, P. G., Daggett, D., Haycock, J. & Price, M. (1999). Competence to stand trial: A neuropsychological inquiry. Law and Human Behavior, 23(4), 397-412.
- 62. Nordgren, L. F. & Chou, E. Y. (2011). The push and pull of temptation: The bidirectional influence of temptation on self-control. Psychological Science, 22(11), 1386-1390.
- 63. Nyhus, E. & Barcelo, F. (2009). The Wisconsin card sorting test and the cognitive assessment of prefrontal executive functions: A critical update. Brain and Cognition, 71, 437-451.
- 64. Ogloff, J. R. P. (1997). A legal perspective on the concept of "impulsivity." In C. D. Webster & M. A. Jackson (Eds.), Impulsivity. Theory, Assessment, and Treatment (pp. 63-81). New York: The Guilford Press.
- 65. Paternoster, R. & Pogarsky, G. (2009). Rational choice, agency and thoughtfully reflective decision making: The short and long-term consequences of making good choices. Journal of Quantitative Crimonology, 25, 103-127.
- 66. Patton, J. H., Stanford, M. S. & Barratt, E. S. (1995). Factor structure of the Barratt Impulsiveness Scale. Journal of Clinical Psychology, 6, 768-774.
- 67. Pirtosek, Z., Georgiev, D. & Gregoric-Kramberger, M. (2009). Decision making and the brain: Neurologists' view. Interdisciplinary Description of Complex Systems, 7, 38-53.
- 68. Prentky, R. A. & Lee, A. F. S. (2007). Effect of age-at-release on long-term sexual re-offense rates in civilly committed sexual offenders, Sexual Abuse: A Journal of Research and Treatment, 19(1), 43-59.
- 69. Rasmussen, K., Almvik, R. & Levander, S. (2001). Performance and strategy indices of neuropsychological tests: Relations with personality, criminality, and violence. Journal of Forensic Neuropsychology, 2(2), 29-43.
- 70. Rogers, R. (1987). The APA position on the insanity defense: Empiricism vs. emotionalism. American Psychologist, 42, 840-848.
- 71. Rogers, R. D. (2003). Neuropsychological investigations of the impulsive personality disorders. Psychological Medicine, 33, 1335-1340.
- 72. Ross, T. (2008). Current issues in self-regulation research and their significance for therapeutic intervention in offender groups. International Journal of Behavioral Consultation and Therapy, 4(1), 68-81.
- 73. Saver, J. L. & Damasio, A. R. (1991). Preserved access and processing of social knowledge in a patient with acquired sociopathy due to ventromedial frontal damage. Neuropsychologia, 29, 1241-1249.
- 74. Schuermann, B., Kathmann, N., Stiglmayr, C., Renneberg, B. & Endrass, T. (2011). Impaired decision making and feedback evaluation in borderline personality disorder. Psychological Medicine, 41, 1917-1927.
- 75. Seguin, J. R. (2009). The frontal lobe and aggression. European Journal of Developmental Psychology, 6(1), 100-119.
- 76. Shackman, A. J., McMenamin, B. W., Maxwell, J. S., Greischar, L. L. & Davidson, R. J. (2009). Right dorsolateral prefrontal cortical activity and behavioral inhibition. Psychological Science, 20(12), 1500-1506.
- 77. Shapiro, D. (1965). Neurotic styles. New York: Basic Books.
- 78. Sheppes, G., Scheibe, S., Suri, G. & Gross, J. J. (2011). Emotion-regulation choice. Psychological Science, 22(11), 1391-1396.

- 79. Slavin, M. O. & Kriegman, D. (1992). The adaptive design of the human psyche: Psychoanalysis, evolutionary biology, and the therapeutic process. New York: Guilford Publications.
- 80. Spinella, M. & White, J. (2006). Neuroanatomical substrates for sex offenders. International Journal of Forensic Psychology, 1(3), 84-94.
- 81. Spinella, M., White, J., Frank, M. L. & Schiraldi, J. (2006). Evidence of orbitofrontal dysfunction in sex offenders. International Journal of Forensic Psychology, 1(3), 62-68.
- 82. Stanford, M. S., Greve, K. W. & Gerstle, J. E. (1997). Neuropsychological correlates of self-reported impulsive aggression in a college sample. Personality and Individual Differences, 23, 961-966.
- 83. Stanford, M. S., Mathias, C. W., Dougherty, D. M., Lake, S. I., Anderson, N. E. & Patton, J. H. (2009). Fifty years of the Barratt Impulsiveness Scale: An update and review. Personality and Individual Differences, 47, 385-395.
- 84. Stone, M. H. & Thompson, E. H. (2001). Executive function impairment in sexual offenders. Journal of Individual Psychology, 57(1), 51-59.
- 85. Syngelaki, E. M., Moore, S. C., Savage, J. C., Fairchild, G. & Van Goozen, S. H. M. (2009). Executive functioning and risky decision making in young male offenders. Criminal Justice and Behavior, 36(11), 1213-1227.
- 86. Vassileva, J., Gonzalez, R., Bechara, A. & Martin, E. M. (2007). Are all drug addicts impulsive? Effects of antisociality and extent of multidrug use on cognitive and motor impulsivity. Addictive Behaviors, 32(12), 3071-3076.
- 87. Veneziano, C., Veneziano, L., LeGrand, S. & Richards, L. (2004). Perceptual & Motor Skills, 98(2), 661-674.
- 88. Villemarette-Pittman, N. R., Stanford, M. S. & Greve, K. W. (2003). Language and executive function in self-reported impulsive aggression. Personality and Individual Differences, 34(8), 1533-1545.
- 89. Vognsen, J. & Phenix, A. (2004). Antisocial Personality Disorder is not enough: A reply to Sreenivasan, Weinberger, and Garrick. The Journal of the American Academy of Psychiatry and the Law, 32, 440-442.
- 90. Webster, C. D., Douglas, K. S., Eaves, D. & Hart, S. D. (1997). HCR-20: Assessing Risk for Violence, Version 2. British Columbia, Canada: Mental Health, Law, & Policy Institute.
- 91. Webster, C. D. & Jackson, M. A. (Eds.). (1997). Impulsivity. Theory, assessment, and treatment. New York: The Guilford Press.
- 92. White, J. L., Moffitt, T. E., Caspi, A., Bartusch, D. J., Needles, D. J. & Stouthamer-Loeber, M. (1994). Measuring impulsivity and examining its relationship to delinquency. Journal of Abnormal Psychology, 103(2), 192-205.
- 93. Yechaim, E., Kanz, J. E., Bechara, A., Stout, J. C., Busemeyer, J. R., Altmaier, E. M. & Paulsen, J. S. (2008). Neurocognitive deficits related to poor decision making in people behind bars. Psychonomic Bulletin & Review, 15(1), 44-51.
- 94. Zander, T. K. (2005). Civil commitment without psychosis: The law's reliance on the weakest links in psychodiagnosis. Journal of Sexual Offender Civil Commitment: Science and the Law, 1, 17-82.

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