CAUSE NO. 380-80047-00
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THE STATE OF TEXAS * IN THE 380TH DISTRICT COURT
$v$.
IVAN ABNER CANTU

OF COLLIN COUNTY, TEXAS

I, LISA M. RENFRO, Official Court Reporter in and for the 380th District Court of Collin County, Texas, do hereby certify that the following exhibits, Pretrial Exhibits 1-2; Court's Exhibit 1; State's Exhibits 1-179 (excluding 25, 26, 84, 85, 172, 175b, 176, and 177), and Defendant's Exhibits 1-42 (excluding 3, 4 and 6) constitute a true and complete duplicate of the original exhibits admitted into evidence during the hearing in the above-entitled and -numbered cause as set out herein before the Honorable Charles F. Sandoval, Judge of the 380th District Court of Collin County, Texas, on the 13th day of July, 2001; the 15th thru 17 th days of August, 2001; and the 21st thru the 26th day of October, 2001.


WITNESS MY OFFICIAL HAND on this the oath day of
november, 2002,

 8003.

Lisa M. Renfro, Official Court Reporter Texas CSR \#4534 380th District Court Collin County Courthouse 210 s. McDonald st. McKinney, Texas 75069 (972) 548-4661

LISA M. RENFRO, OFFICIAL SHORTHAND REPORTER $380 T H$ DISTRICT COURT - (972) 54 $4-4661$




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# Antisocial Personality Disorder and Psychopathy: Diagnostic Dilemmas in Classifying Patterns of Antisocial Behavior in Sentencing Evaluations 

Mark D. Cunningham, Ph.D.,* and Thomas J. Reidy, Ph.D.

## ADMITTED


#### Abstract

Antisocial Personality Disorder (APD) and PCL-R psychopathy are critically examined regarding their application to sentencing determinations. PCL-R psychopathy is emerging in the literature as a more useful forensic diagnostic construct than APD, which appears flawed by multiple weaknesses. These include shifting diagnostic criteria, innumeracy problems, absence of symptom weighting, temporal instability, and the equivalence of some symptoms with substance abuse disorders. Additionally, APD overdiagnosis may result from inattention to issues of social context, trauma history, and symptom pervasiveness. Neither objective nor projective personality testing reliably differentiates APD. Finally, an APD diagnosis does not always indicate criminal, much less incorrigible criminal behavior. By contrast, PCL-R psychopathy results are strongly predictive of criminal behavior and violent recidivism for Caucasian males through mid-life residing in the community. Emerging research with the PCL-R regarding other important populations and contexts is promising but generalization is currently limited. (C) 1998 John Wiley \& Sons, Ltd.


Mental health experts performing forensic assessments for sentencing purposes often describe defendants as displaying Antisocial Personality Disorder (APD) or some variation of the term. This diagnosis may have a profoundly aggravating effect on sentencing considerations, particularly in creating expectations that no rehabilitation is possible and that future criminal violence is inevitable. Additionally, this diagnosis may be viewed by both the testifying expert and the trier of fact as justification that mitigating circumstances are irrelevant. In this regard,

[^0]APD as a diagnostic construct becomes reified (Widiger \& Shea, 1991) and takes on a life of its own well beyond the underlying scientific support. The aggravating impact of APD and the related assumptions were most notoriously demonstrated in Estelle v. Smith (1981) and Barefoot v. Estelle (1983).

Psychopathy, as defined and measured by the revised Psychopathy Checklist (PCL-R) (Hare, 1991), is emerging as a discrete clinical entity which may be more precise and reliable than APD in identifying a subset of criminals who are at greater risk of general, as well as violent criminal recidivism. However, reification issues also apply to psychopathy. Research supports a probabilistic rather than an absolutist application of the concept. Additionally, the implications of psychopathy in some populations and contexts remain under-investigated.

This paper will critically evaluate the diagnostic concepts of APD and PCL psychopathy as they may be used in sentencing evaluations. It is hoped that these considerations will result in forensic clinicians making more informed application of these diagnostic conceptualizations and in more effectively educating the court regarding the implications of the presence or absence of APD or PCL psychopathy.

## ANTISOCIAL PERSONALITY DISORDER

## Diagnostic Weaknesses

Antisocial Personality Disorder as a diagnostic construct has been criticized in the professional literature for multiple weaknesses, raising questions regarding whether the diagnosis has sufficient reliability and validity for forensic applications.

## Shifting Diagnostic Criteria

The diagnosis of APD has been one of marked professional ambivalence and significantly changing criteria (Widiger \& Corbitt, 1995). The evolving and shifting diagnostic criteria for making a diagnosis of APD can be observed by comparing the behavioral indicators listed in the sequential revisions of the Diagnostic and statistical manual of mental disorders (DSM) of the American Psychiatric Association (1968; 1980; 1987; 1994). Rogers and Dion (1991) noted that DSM-II criteria for APD share no common criteria with DSM-III and only one with DSM-III-R. DSM-IV shifts toward more general criteria, while the accompanying DSM-IV text retains specific features echoing DSM-III-R.

Rogers and Dion (1991) also noted that these changing diagnostic standards have not been driven by research, and concluded that APD lacks descriptive consistency and validity. Only three of thirteen studies reviewed by Rogers, Duncan, Lynett, \& Sewell (1994) evidenced good reliability for DSM APD criteria. These authors, utilizing prototypical ratings of possible APD criteria, identified four broad factors which experienced forensic clinicians regard as fundamental to a diagnosis of APD. Most notably, DSM-IV criteria neglect the interpersonal/affective symptoms which emerged from the prototypical analysis and from the PCL-R (Rogers et al., 1994a).

Hare (1996) and Hare and Hart (1996) reported that the APD criteria embraced by DSM-IV were not field tested, but rather were logically (not empirically) derived from the DSM-III-R adult symptoms in criterion C. Furthermore, no field trial was conducted on criterion B, Conduct Disorder before age 15, which is a necessary precursor to making the APD diagnosis.

To the extent that current DSM-IV criteria rely upon behavior but neglect interpersonal intimacy and the other personality features historically associated with the disorder, future criterion revision is expected.

## Innumeracy Problem

Rogers and Dion (1991) described the "innumeracy problem" of the APD diagnosis in DSM-III and DSM-III-R which involves the enormous number of possible symptom variations that might result in an APD diagnosis. As the total number of variations increases, the likelihood that the diagnosis is a discrete clinical entity decreases. While diagnostic criteria for APD were reduced in DSMIV from ten to seven, and sub-criteria were eliminated, the innumeracy problem remains. Rogers et al. (1994a) described this simplification of the DSM-III-R criteria as resulting in a reduction of possible APD diagnostic criterion combination variations from 3.5 million in DSM-III-R to .5 million in DSM-IV. ${ }^{1}$

## Absence of Symptom Weighting

DSM-IV APD criteria receive equal weight and are not arranged in order of significance. The diagnosis rests only on a "pervasive pattern" of misconduct in three or more of the listed criteria. Pervasiveness is not operationally defined and there is no mechanism for considering symptom criterion severity. Widiger, Frances, Spitzer, \& Williams (1988) noted that diagnostic validity of personality disorder diagnosis could be enhanced by a weighting of criteria. Consistent with this proposal, Rogers $\epsilon t$ al. (1994a) found that experienced forensic psychiarrists gave greater weight to a factor comprised of unstable self-image, unstable relationships, and irresponsibility than to a factor of nonviolent delinquency. In the absence of criterion weighting and in light of the innumeracy problem, different symptom combinations are likely and may in fact represent distinct clinical subtypes that vary in important ways (Lykken, 1995). Thus, the relationship of a diagnosis of APD to criminal violence or recidivism may have more to do with the importance, frequency, and severity of the criteria observed, than with the actual diagnostic label.

## Temporal Instability

Personality disorders by definition reflect pervasive and unremitting maladaptive symptoms significantly interfering with functioning or causing marked subjective distress. The expectation for diagnostic validity, therefore, is that an APD diagnosis of a given individual will remain constant over time. However, this expectation is not borne out by research. The interrater reliability of an APD diagnosis

[^1]over repeated psychiatric evaluations is a disappointing 42.9-58.8\% (Helzer, Spitznagel, \& McEvoy, 1987; Perry, Lavori, Cooper, Hoke, \& O’Connell, 1987; Vandiver \& Sher, 1991). APD is apparently not uniformly stable across the lifespan either. Large scale representative community samples have found lower prevalence rates of APD among community residents over age 45 as compared to those younger than age 45 (Myers, Weissman, Tischler, Holzer, Leaf, Ovzashal, Anthony, Boyd, Burke, Kramer, \& Stoltzman, 1984; Regier, Boyd, Burke, Rae, Myers, Kramer, Robins, George, Karno, \& Locke, 1988). Criminal behaviors associated with this disorder may be significantly reduced by aging (American Psychiatric Association, 1994; Harpur \& Hare, 1994; Hirschi \& Gottfredson, 1989) and context (Quay, 1984).

## Differentiating ASPD from Substance Use Disorders

There is controversy regarding the overlap of ASPD and substance abuse disorders (Widiger and Corbitt, 1995). Specifically, DSM-IV criteria for a diagnosis of ASPD include repeated illegal acts, deceitfulness, impulsivity, irritability, aggressiveness, reckless disregard for safety, consistent irresponsibility, and lack of remorse (American Psychiatric Association, 1994, pp. 649-650). Quite obviously, these same behavioral characteristics may be observed in an individual who is drug and/or alcohol dependent. It is not surprising then that DSM-IV Substance Abuse Disorder criteria include some equivalent symptoms of: substance use resulting in failure to fulfill major role obligations (irresponsibility), substance use in hazardous situations such as driving or working under the influence (reckless disregard for safety), substance-use-related legal problems (illegal acts), social or interpersonal problems (deceitfulness, impulsivity, aggressiveness) caused by or exacerbated by the effects of the substance abuse (American Psychiatric Association, 1994, pp. 182-183). DSM-IV calls for a diagnosis of "both a Substance-Related Disorder and Antisocial Personality Disorder in situations where criteria for both are met, even though some antisocial acts may be a consequence of the Substance-Related Disorder" (p. 648).

Gerstley, Alterman, McLellan, \& Woody (1990) concluded that even with the requirement of childhood Conduct Disorder, APD may overlap so significantly with Substance Dependence Disorder that it may not be possible to determine whether APD is causing the substance disorder or whether the substance use is causing the antisocial conduct. Further, Gerstley et al. expressed concern that APD diagnostic emphasis on behavior patterns rather than underlying personality dynamics and failure to identify substance abuse as an exclusion criterion results in an over-diagnosis of APD in what are simply substance dependent individuals. Concern with overlap between APD and Substance Abuse Disorder has been noted by other researchers (Rounsaville, Eyre, Weissman, \& Kleber, 1983; Spitzer, Endicott, \& Robins, 1978).

## Diagnostic Accuracy

If the above difficulties with the reliability and validity of APD as a diagnostic construct are set aside, care must be taken in the criminal justice system to insure
that a defendant's behavior in fact meets the diagnostic criteria for the disorder because the label alone may be quite prejudicial. Two diagnostic issues are particularly important to scrutinize in this regard.

## Context

The DSM-IV text cautions against the application of borh Conduct Disorder (a childhood behavior disorder which is an essential precursor of APD) and APD diagnoses in some contexts, such as "in settings where patterns of undesirable behavior are sometimes viewed as protective (e.g., threatening, impoverished, high crime) ... it may be helpful for the clinician to consider the social and economic context in which the undesirable behaviors occurred" (pp. 88, 647). The historic life context and social milieu of the defendant may lead to recurrent behavior that is socially prohibited or criminal without invoking an APD diagnosis.

This raises a question of whether the prevalence of APD criteria behaviors, particularly illegal behaviors and arrests, in a given subculture or locale are critically important to consider before concluding that individual histories containing these high frequency criminal behaviors represent APD. In other words, if a behavior pattern represents a widespread social phenomenon, i.e. criminality, is it appropriate to diagnose the individual expression of these traits as a personality disorder? For example, Ogletree, Prosser, Smith, and Talley (1995), described that on any given day $42 \%$ and $58 \%$ of the African-American males aged $18-35$ in Washington, DC, and Baltimore, MD, respectively, are involved in the criminal justice system.

Trauma history is another potentially relevant contextual variable. While a review of the impact of childhood trauma on development and adult adjustment is beyond the scope of this paper, there is extensive research evidence that "protective survival strategies" to childhood traumatic experience and exposure can result in a variety of long-term psychological, emotional, physical, and cognitive effects (American Psychological Association, 1996). These trauma effects can be considered to be ways in which the traumatized individual is attempting to adapt to survive physically or psychologically. Of particular relevance to differential diagnosis questions of both Conduct Disorder and APD, these trauma or survival effects may include problems with affect modulation and behavioral control which may rise to delinquency or frankly criminal acts, substance abuse, interpersonal alienation and reduced community identification, deficient moral reasoning, and other cognitive distortions. These and other trauma reactions may affect a range of developmental issues which have their own associated maladaptive behavioral sequelae mimicking APD (American Psychological Association, 1996; Garbarino, Dubrow, Kostelny, \& Pardo, 1992; Pynoos, Steinberg, \& Goenjian, 1996; Terr, 1991).

The DSM diagnostic system is phenomenological, i.e., it is a descriptive classification of symptoms implying a homogeneous etiology. However, consideration of social and trauma history context of an individual raises the issue of whether APD truly is a homogeneous phenomenon with a common course, or a heterogeneous disorder with subtypes that represent quite different expressions, developmental causes, and rehabilitation prognoses. Consistent with such a formulation, Lykken (1995) described APD from an etiologic perspective, identifying four subtypes of antisocial personality with a chronic disposition toward
criminal conduct: common sociopathy, alienated sociopathy, aggressive sociopathy, and dyssocial sociopathy.

Lykken's (1995) etiological subtype conceptualization is consistent with research suggesting a complex matrix of causative factors for APD. Genetic predisposition (DSM-IV, 1994; Lykken, 1995; Lyons, True, Eisen, Goldberg, Meyer, Faraone, Eaves, \& Tsuang, 1995; Raine, 1993; Rutter, 1997), childhood trauma and neglect (Luntz \& Widom, 1994), neurological deficit (Raine, 1993), deficient family-sociocultural developmental context (DSM-IV, 1994; Patterson, DeBaryshe, \& Ramsey, 1989; Staub, 1996) and faulty learning (Dodge, 1993) have all been implicated in the formation of APD.

Thus, APD may include subtypes which are quite dissimilar in characteristics, behavior, and prognosis depending on the specific configuration of the diagnostic features displayed and the etiology of these behaviors. The criminal behavioral potential and recidivism outcome of these varying etiologies remains insufficiently explored by research.

There is a secondary risk that excessive focus on antisocial behavior while neglecting context and etiology may result in diagnostic inaccuracy. For example, a history of traumatic abuse could implicate other primary psychopathology including post-traumatic responses, as well as thought, affective, and neuropsychological disorders. Thus, the antisocial behavior may operate to obscure the clinical presentation so that other diagnostic possibilities are not identified.

## Pervasive Long-Standing Pattern Requirement

The DSM-IV diagnosis of APD in adulthood requires the pre-existence in childhood of a Conduct Disorder defined as a "repetitive and persistent pattern of behavior" which is "often" exhibited. Similarly, APD criteria also involve "pervasive pattern" and "repeated" criteria. Application of these diagnoses requires careful, thorough confirmation that a pervasive pattern has extended from childhood. An APD diagnosis cannot be based on isolated incidents or a particular instant offense.
To illustrate, the presence of an arrest record is much more common in the male population than the incidence of APD. While the incidence of APD is estimated at $3 \%$ in males (American Psychiatric Association), Farrington (1986) cited multiple longitudinal studies measuring the prevalence of nontraffic arrest. In Philadelphia, PA, the prevalence rate for males was $35 \%$ at age 18 , increasing to $47 \%$ by age thirty. In Marion County, OR, $25 \%$ of males had a police contact for a nontraffic offense by age 18. Farrington concluded that, at least for males, police records are not confined to a deviant minority. Robins, Tipp, and Przybeck (1991) analyzed the NIMH Epidemiologic Catchment Area data and found that even with multiple nontraffic arrests only $40 \%$ of the males met DSM-III criteria for APD.

## Standardized Testing <br> Objective Personality Measures

Despite its usefulness in many psychological assessment applications, Minnesota Multiphasic Personality Inventory (MMPI/MMPI-2) (Butcher, Dahlstrom,

Graham, Tellegen, \& Kaemmer, 1989; Hathaway \& McKinley, 1940) testing may have little practical utility in differentiating APD from other forensic subjects. Hare (1985) identified only modest correlation between Scale 4 (Pd—Psychopathic Deviate) as an indicator of APD and either DSM-III APD ( $r=.26$ ) or Psychopathy Checklist ( $r=.29$ ). As Morey and Smith (1988) observed, other MMPI-2 codetypes may be suggestive of APD, but "should in no way be mistaken as a pathognomonic indicator of this diagnosis" (p. 129). Further, MMPI profile patterns may change over time and thus do not represent immutable personality characteristics for criminal forensic evaluations. Similarly important, prison inmate MMPI profile patterns have been observed to change over time so that an inmate's corresponding Megargee classification may well shift (Clements, 1996; Craig, 1996). This pattern of profile instability further limits usefulness of the MMPI/ MMPI-2 in evaluating APD or future violence potential.

If the defendant being tested is awaiting trial, the context of imprisonment, as well as the stress of pending criminal prosecution, may affect testing responses and render the results of reduced long term utility. Finally, because individuals in a forensic context have an increased incentive to distort their responses, self-report personality measures such as the MMPI-2 may be skewed by deception (Rogers, Sewell, \& Salekin, 1994).

More recently two other self-report inventories, the Personality Assessment Inventory (PAI) (Morey, 1991) and Millon Clinical Multiaxial Inventory (MCMIII/III) (Millon \& Davis, 1996), have become available as potential instruments to study forensic populations. Both the PAI and MCMI have scales reflecting deviant response style and antisocial personality dimensions. The PAI in particular incorporates PCL-R factors reflecting both deviant behavior and personality (Morey, 1996). Only a very few studies to date have applied these instruments to forensic issues or populations. Neither the general forensic nor specific diagnostic utility of these measures to reliably identify APD or psychopathy has been sufficiently empirically demonstrated.

## Projective Measures

In general, projective instruments have not proven consistently useful at identifying APD or psychopathy. The Rorschach inkblot technique, employing the Exner comprehensive scoring system, has demonstrated some potential as a source of hypotheses in a forensic criminal context (Meloy \& Gacono, 1995; Weiner, Exner, \& Sciara, 1996). Unfortunately, there is a paucity of Rorschach studies relevant to APD or psychopathy and the handful of available studies were principally reported by a collaborating group of authors (Gacono, 1990; 1992; Gacono \& Meloy, 1991; 1992; 1994; Gacono, Meloy, \& Berg, 1992; Gacono, Meloy, \& Heaven, 1990; Meloy \& Gacono, 1992). Their research utilizing Exner Rorschach scoring in differentiating psychopaths from nonpsychopaths is promising, but additional independent validation studies are required before these findings can be considered to have sufficient diagnostic validity to reliably identify APD or psychopathy in a forensic sentencing context. The Rorschach would appear to have some diagnostic advantage in avoiding positive impression management as the testing response patterns linked to psychopathy are not obvious. However, consistent with the selfreport measures reviewed above, the Rorschach is susceptible to response
distortion, which could limit the usefulness of the resulting scales and indices (Perry \& Kinder, 1990).

## Prevalence

If the diagnostic construct is accepted and the diagnostic criteria are met, the sentencing application of an APD diagnosis requires an informed perspective of its prevalence in a particular population.

## APD Prevalence Among Prison Inmates

Estimates of an APD diagnosis in an incarcerated male population (Table 1) range from 49 to $80 \%$ as cited by Widiger and Corbitt (1995).

Table 1. APD, Diagnosis in an Incarcerated Male Population

| Study | $N$ | Diagnosis | \% APD |
| :--- | :---: | :--- | :---: |
| Guze et al (1969) | 223 | Sociopathy | 79 |
| Hare (1980) | 146 | DSM-III ASPD | 76 |
| Hare (1985) | 274 | DSM-III ASPD | 49 |
| Hare et al (1991) | 1603 | DSM-III-R ASPD (8 data sets) | 80 |
| Cote and Hodgins (1990) | 495 | NIMH DIS | 61 |

Note. References are cited by Widiger and Corbitt (1995).

The diagnosis of APD alone then describes little about prison behavior and recidivism outcome except that the individual is similar to most prison inmates, and thus APD is not in and of itself an indication of a particularly dangerous or incorrigible inmate within the prison environment.

## Criminality Prevalence in the Community

APD is not invariably associated with criminality. NIMH Epidemiologic Catchment Area data revealed that $53 \%$ of community residents who met DSMIII criteria for APD had no significant arrest record (Robins et al., 1991). Noncriminal "normal" variants of this disorder can be seen in "sublimated forms", for example, in some entrepreneurial, action oriented, adventurous selfserving persons who are not afraid to stretch rules and social conventions (Millon \& Davis, 1996).

## PSYCHOPATHY

Psychopathy, as defined and measured by the Psychopathy Checklist (PCL), is a diagnostic construct based on conceptualizations of Cleckley (1941). The three versions of the PCL (PCL: Hare, 1980; PCL-Revised: Hare, 1991; PCL-Screening Version: Hart, Cox, \& Hare, 1995) are highly correlated. The research literature is
considering PCL-defined psychopathy as a more reliable construct of both maladaptive personality features and socially deviant behaviors that may be relevant to determinations of recidivism and violence risk assessment both in and out of an institutional setting (Salekin, Rogers, \& Sewell, 1996).

The PCL-R is a structured protocol consisting of interview, self-report and observation which is cross-checked with collateral information. Twenty specifically defined domains are evaluated. These items are scored 0,1 , or 2 depending on the extent to which the stated criteria are met. Good interrater reliability and testretest reliability are reported (Hare, 1991; Salekin et al., 1996). For research purposes, a score of 30 is required for a diagnosis of psychopathy. In an applied forensic context where significant issues of human liberty are at sake, diagnostic cutoffs of 33 or 37 may be indicated to control for the 3.25 standard error of measurement (Meloy, 1996; Rogers, 1995; Salekin et al., 1996).

Psychopathy characteristics can also be considered as a dimensional phenomenon. The PCL-R provides corresponding norms reflecting the incremental incidence of psychopathy among two norm groups, male prison inmates and male forensic psychiatric patients, thus providing the opportunity to address both higher and lower recidivism risk issues.

For research purposes, the PCL-R items are divided into two stable factors (Salekin et al., 199.6). Factor 1 consists of an interpersonal/affective dimension best described by Meloy $(1988,1992)$ as aggressive narcissism, which is most closely descriptive of the traditional clinical understanding of the psychopathic personality. It is only weakly related to self-report personality scales, quality of family background, criminal behavior, or the diagnosis of ASPD. Factor 2, though, reflects chronic irresponsible and antisocial lifestyle variables that are strongly correlated with these features (Salekin et al., 1996), as well as with MMPI/MMPI-2, MCMIII, and PAI scales related to deviant socialization. Factors 1 and 2 each measure different but important elements of psychopathy. Assessments based only on one or the other factor are thus considered inadequate (Harpur, Hare, \& Hakstian, 1989).

The clear criteria, verifiable scoring, psychometric and predictive research support, and pervasive symptom diagnostic cutting score of the PCL-R have led to growing research and forensic utilization. It is anticipated that PCL-R psychopathy will become a more frequently encountered and accepted construct in forensic mental health testimony.

## Psychopathy and APD

Several studies are illustrative of the association between psychopathy and APD in prison population. Hare and McPherson (1984) obtained PCL scores and DSM III diagnoses from 227 male inmates of a Canadian medium security prison. As PCL scores increased, so did the percentage of inmates who were diagnosed as APD. Only 7.5\% of inmates scoring below 22 on the PCL were diagnosed as APD while $87.7 \%$ of inmates scoring above 30 were diagnosed as APD. These findings were also generally consistent with other estimates that approximately $75 \%$ of male prison inmates would be diagnosed as APD but only $1 / 3$ of these would be diagnosed as psychopaths according to the PCL-R (Meloy, 1988).

## Psychopathy and Prison Behavior

Only a few studies were identified which investigated psychopathy and disruptive behavior in a prison population. Wong (1984) reviewed prison file information and found that psychopaths were more frequently involved in institutional offenses accompanied by a higher incidence of threats and violence. Unfortunately, neither institutional offenses nor threats and violence were defined. Another limitation involved the lack of independence of PCL scores from outcome criteria, i.e. using institutional records to score psychopathy and to measure violent institutional misconduct rates.

Another study investigating psychopathy and prison behavior of male inmates (Hare and McPherson, 1984) suffers from similar methodological flaws of lack of specificity and lack of independent outcome measures. These authors reviewed prison file information regarding "aggressive behavior". While psychopaths were described as exhibiting more aggressive behavior, the definition of aggressive behavior was quite broad and included behaviors which would likely not be considered "future acts of criminal violence" in a forensic sentencing proceeding (attempted suicide, self-mutiation, verbal abuse and threats, easily annoyed, belligerent). Even behaviors which might represent more serious aggression such as "fighting" were not delineated in such a way that severity, provocation, selfdefense, weapon use, injury, etc could be examined. Aggressive homosexuality was most common ( $8 \%$ ) among inmates who scored in the moderate PCL range, followed by the high scorers ( $6.8 \%$ ) and the low scorers ( $2.6 \%$ ). The practical utility of this finding is difficult to apply as over $90 \%$ of the inmates in any of the three categories did not display this behavior in prison.
Additionally, Hare and McPherson assigned a five-point "violence" rating to each inmate from file data. Absent was an operational definition of "violence" in the reporting article, repeating the definition specificity problem noted above in regard to "aggressive behavior" and "fighting". Scrutiny of the ratings reveals that "violence" was observed in all three groups, with psychopaths displaying more problematic behaviors. In summary, these two studies point toward psychopaths being involved in more disruptive activity, but undetermined rates of serious institutional violence.
Forth, Hart, \& Hare (1990) reported correlation of 46 between PCL scores and the number of institutional charges for violent or aggressive behavior. A similar effect was reported by Molto, Carmona, Poy, Avila, and Torrubia (1996) who investigated the validity of the PCL-R for categorizing violent and aggressive behavior in a Spanish prison. Inmates were divided into three groups based on low, medium, and high PCL-R scores. The high scorers showed a greater number of serious prison rule violations (not operationally defined) and violations per year. In contrast, low scorers adapted better in prison and were less prone to serious misconduct. In a similar study, Gonclaves (1996) reported correlating four types of adaptation by Portuguese prisoners with their degree of psychopathy.
Kosson, Steuerwald, Forth, and Kirkhart (1997), though, using a sample of male prison inmates, reported nonsignificant correlations between institutional disciplinary offenses for violent and nonviolent behavior and PCL-R Factor 1 ( $r=-.05$ and .14 , respectively) and Factor $2(r=.07$ and .11 respectively). In a similar vein, Serin (1991) reported no differences in institutional disciplinary
infractions for male inmates among nonviolent psychopaths, violent nonpsychopaths, and violent psychopaths. The institutional behavior of inmates in both studies was not the primary focus of investigation and the descriptions of violent and nonviolent offenses were not clearly enunciated.

In a single study of adult females inmates (Loucks, 1995), PCL-R psychopathy emerged as the only factor significantly associated with institutional misbehavior in the regression analysis. Of all the personality and emotional functioning criterion variables, PCL-R psychopathy had the highest correlations with institutional violence ( $r .38$ ), and behavior problems ( $r=.59$ ) in this sample of 100 female inmates. However, the base rate of violent behavior was quite low with only 16 incidents among ten females inmates.

A single study examined a sample of adolescents confined to a maximum security facility (Forth et al., 1990) and described a significant correlation ( $r=.46$ ) between psychopathy and institutional charges of violence or aggression. Again, an operational definition of violence or aggression was not reported.

In summary, there is limited research regarding the prison behavior of psychopaths and most of the existing research is flawed by definition problems, lack of independent external criteria, small samples, and low base rates. Although some promising trends are apparent, estimations of the institutional assaultive potential of psychopaths remain tentative, particularly as a few studies cite no differences according to psychopathy ratings. Until a better research base develops caution should be exercised in utilizing the PCL-R in forecasting the likelihood of future serious prison violence.

## Psychopathy and Post-Release Recidivism

Personality characteristics associated with a greater likelihood of offending in the community are of particular interest in forensic settings. A number of studies are supportive of the role of PCL-R psychopathy as a risk marker for criminal recidivism. These same studies reflect an incremental reduction in general and violent recidivism with lower PCL-R scores.
(i) Hart, Kroop, and Hare (1988). On three year follow-up, the likelihood of successful parole completion was .18 for the high psychopathy group, .38 for the medium psychopathy group, and 0.71 for the low psychopathy group.
(ii) Forth et al., (1990). Higher PCL-R psychopathy scores were significantly associated with higher rates of violent recidivism in young male offenders ( $r=.26$ ) but not general recidivism.
(iii) Harris, Rice and Cormier (1991). On ten year follow-up PCL-R scores correlated ( $r=.42$ ) with violent recidivism for adult mentally disordered offenders. The violent recidivism rate of psychopaths ( $77 \%$ ) was almost four times that of the other releasees ( $21 \%$ ).
(iv) Cornell, Warren, Hawk, Stafford, Oram, $\mathcal{G}$ Pine (1996). PCL-R scores were used to distinguish the two primary types of aggression: purposeful goaldirected violence (instrumental) $(z=54.6)$ compared to reactive or emotional aggression ( $z=47.2$ ). Findings support psychopathy as having a discrete association with instrumental violence.
(v) Serin and Amos (1995). On five year follow-up male psychopaths were five times more likely to engage in violent recidivism than nonpsychopaths. A linear relationship for violent recidivism was demonstrated ranging from $5 \%$ for male nonpsychopaths to $25 \%$ for psychopaths.
(vi) Serin (1996). Reported violent reoffense rates of $0 \%$ for nonpsychopaths ( $\mathrm{PCL}-\mathrm{R} \leqslant 16$ ), $7.3 \%$ for a mixed group ( $\mathrm{PCL}-\mathrm{R}=17-28$ ), and $25 \%$ for psychopaths ( $\mathrm{PCL}-\mathrm{R} \geqslant 29$ ). General failure rates were $40 \%$ for nonpsychopaths, $51.2 \%$ for the mixed group, and $85 \%$ for psychopaths. The PCL-R proved superior in predictive efficiency to three actuarial risk scales and prior history of violent crimes.
(vii) Hill, Rogers, and Bickford (1996). PCL-SV scores of adult male mentally disordered offenders correlated significantly ( $R=.69$ ) with broadly defined aggression ranging from irritability to fighting during a six month follow-up.
(viii) Salekin et al. (1996) in their review and meta-analysis of 18 PCL/PCL-R studies concluded that the instruments appeared to be good predictors of violence and general recidivism among an Anglo-American population. When violence was used as the primary outcome criterion, the effect sizes ranged from .42 to 1.92 with a mean effect size of .79 obtained across all predictive studies.

## Psychopathy and Aging

While the above studies found a markedly higher rate of post-release violent recidivism for PCL-R psychopaths, use of the PCL-R in sentencing must be approached cautiously. The recidivism studies cited above tended to follow a younger cohort of parolees. There is scant research on the effects of old age on violence in this disorder, a particularly relevant limitation in multi-decade sentencing cases given the advanced age of a potential parolee at the conclusion of a 20-40 year incarceration. Harpur \& Hare (1994) described reduced prevalence of APD and PCL-R-defined psychopathy with age. Additionally, there is evidence of "burn out" in nonviolent offending in psychopaths after age 40 when their offending rates resemble those of non-psychopaths (Hare \& Jutai, 1983; Hare, McPherson, \& Forth, 1988).

## Psychopathy in Minorities and Across Cultures

Salekin et al. (1996) in a meta-analysis of the PCL and PCL-R described the research on the instruments as primarily composed of white males in the Canadian criminal justice system, with insufficient investigation of ethnic minorities, females, and adolescents. Accordingly, Salekin et al. (1996) concluded that the validity and reliability data are insufficient to recommend use of the instrument with these under-investigated populations. Consistent with this caution, Thornquist \& Zuckerman (1995) found differences between Anglo-American and AfricanAmerican inmates with only Anglo-Americans showing a significant relationship between PCL-R psychopathy and both passive-avoidance learning and impulsive sensation seeking. These authors described their findings as illustrating the current
limitations in the understanding of ethnic differences in the field of personality and psychopathology.

Kosson, Smith, \& Newman (1990) found that African-American male inmates receiving a psychopathy diagnosis displayed passive-avoidance-learning deficits similar, but not identical to those of white psychopaths. Kosson et al. also identified racial differences in PCL score distribution, underlying factor structure of psychopathy ratings, and correlation between psychopathy and impulsivity. More importantly, however, Kosson et al. found that psychopaths of both races committed more violent and nonviolent crimes than nonpsychopaths, with African-American offenders more prone to violent offenses.

Consistent with Kosson et al., no significant relationship between Caucasian and native Canadians was found on ratings of psychopathy in Wong's (1984) report of criminal and institutional behavior of psychopaths. Moreover, a recent large scale study of ten North American samples by Cooke \& Michie (1997) using Item Response Theory (IRT) found no differences in item functioning on the PCL-R between black or Caucasian prisoners or between combined Canadian and combined American samples. Similarly, Cornell et al. (1996) reported that psychopathy scores for Caucasian and African-American inmates and pretrial forensic defendants did not differ on ratings of instrumental or reactive violence, with higher psychopathy ratings in both groups associated with planned, purposeful violence. No studies were located which looked at psychopathy in a Hispanic or Asian population.

The few available studies looking at psychopathy among different racial groups have produced tentatively favorable results for use of the construct. However, the components and expression of psychopathy may differ for non-whites. Should replication of validity findings on the PCL-R emerge from other studies involving ethnic minorities, broader utilization of the PCL-R with these populations will become increasingly supportable.

The single study of 100 federally incarcerated females in Canada yielded results generally comparable to males but with some important differences (Loucks, 1995). Compared to the male prison population, the incidence of psychopathy for women in this sample was about half that of the men. The strong predictive power of psychopathy among 22 criterion variables was demonstrated. Consistent with the findings for incarcerated male offenders, criminal recidivism for women was predicted by both PCL-R psychopathy Factors I and II. Also similar to men, psychopathy predicted violent behavior within the prison and in the community for these female offenders. However, for females the chronic antisocial lifestyle factor of psychopathy was more significantly related to violence than the aggressive narcissism personality component.

## Psychopathy and Rehabilitation

Treatment intervention studies with psychopaths are sparse and contradictory. Ogloff, Wong, \& Greenwood (1990) reported that prison inmates scoring in the low and moderate ranges on the PCL-R (many who would meet APD criteria) showed clinical improvement in response to treatment. Ogloff et al. asserted that these results clearly dispute the "nothing works" philosophy. Meloy (1996) also described
individuals scoring in the mild (PCL-R $=10-19$ ) and moderate ( $\mathrm{PCL}-\mathrm{R}=20-29$ ) range of psychopathy as amenable to psychotherapy with firm limit setting and confrontation. These findings suggest some potential for rehabilitation of offenders in the low to moderate range on the PCL-R, even if diagnosed with APD.

In other research, the prognosis for inmates obtaining PCL-R scores over 25 has not been so optimistic. Rice, Harris, \& Cormier (1992) found that on a follow-up averaging 10.5 years inmates obtaining PCL-R scores over 25 treated in a Therapeutic Community exhibited a $78 \%$ violence recidivism rate-a higher rate of violent recidivism than untreated psychopath and nonpsychopath controls. These authors concluded that psychopaths used treatment to enhance their manipulative and exploitive skills to be better criminals. Such results are not promising for the successful treatment of psychopaths.

## IMPLICATIONS OF THE ABSENCE OF APD AND PSYCHOPATHY

An alternative use of the concepts of APD or psychopathy lies in their absence. In other words, the presence of increasingly prosocial attitudes and behavior patterns which are inconsistent with APD criteria or which result in lower PCL-R scores predict better prison adjustment and lower post-release recidivism. Supportive evidence is available from prison classification models and from parole recidivism.
Quay (1984) identified a subset of most adaptable inmates designated as "situational-normal or moderates" who have a very low rate of prison disciplinary infractions. These inmates are characterized by reliability and cooperative behavior, industriousness, concern for others, a non-criminal identification, and lower rates of aggressiveness. These characteristics are inconsistent with APD or psychopathy features.
Beck \& Shipley (1989) in analyzing the follow-up of 16,000 released state prison inmates over a three year period identified a number of factors that were associated with parole success or failure. Factors most strongly associated with the lowest likelihood of rearrest after release from prison were (in descending order of magnitude): age 35 or older at release; three or fewer prior arrests; no prior escape or revocation; no prior period of incarceration. With all five favorable factors, the probability of rearrest was estimated at $17.1 \%$. Conversely, factors most strongly associated with rearrest following prison release were younger than age 24 at release, seven or more prior adult arrests, prior escape or revocation, incarceration for property offense, and multiple periods of incarceration-with a $90.4 \%$ three year rearrest rate for parolees with all five risk factors. Younger age at first arrest, prior violent offense arrest, and prior drug arrest were statistically significant factors, but relatively weak predictors.

## CONCLUSION

The forensic clinician is faced with a problematic dilemma in attempting to diagnose or categorize patterns of antisocial behavior for the court. Antisocial Personality Disorder is a part of the "official" DSM diagnostic nomenclature of the
profession. To the extent that DSM is accepted as a "learned treatise", disputing this or any other diagnosis within DSM may leave the expert vulnerable to challenge. At the same time, APD as a diagnostic construct is fraught with weaknesses. Most importantly, APD has not demonstrated satisfactory performance as a predictor of criminality, institutional violence, and violent recidivismissues of particular interest in a forensic sentencing context. It cannot be assumed that these weaknesses are well known to the court.

If the standards of Daubert are to be met, and if the court is to have ample opportunity to weigh issues of diagnostic validity, reliability, and relative predictability, the expert must proactively discuss the weaknesses and the empirically validated implications of any diagnosis offered. This would seem particularly important when making a diagnosis of APD, because of the widespread pejorative misunderstandings surrounding this diagnosis.

Proactive education and clarification for the court should arguably include the following elements: acknowledge possible subtypes, discuss temporal instability of the diagnosis, detail prevalence statistics among an inmate population, review etiologic factors, and discuss the possibility of rehabilitation or aging out. This proactive obligation increases as the gravity of the associated legal determination or sentencing increases.

Mental health clinicians who determine that the diagnosis is too flawed to utilize in a forensic context might assume a more descriptive role of addressing individual personality characteristics and behaviors, noting contributing etiological factors. This descriptive and explanatory approach is also more likely to assist risk assessment as case specific information is used to individualize base rate data (Cunningham \& Reidy, 1998). These descriptive and probabilistic contributions may well provide the court with more useful information than is communicated by a flawed diagnostic label which has an associated misleading and prejudicial impact on the trier of fact.

Psychopathy as incrementally measured by the PCL-R shows much promise for assessing personality features and behavioral proclivities of particular interest to questions of community crime and violence, and post release recidivism. In this sense it is preferable to DSM-IV APD. In addition to providing a diagnostic cutoff score, the instrument provides verifiable scoring and norms that assist in comparing a given score with a prison inmate population and a forensic psychiatric population. The relevance of PCL-R psychopathy to institutional security and classification remains insufficiently investigated.

Research supports the utility of the PCL-R for assessing post-release criminal and violent recidivism in the community among a Caucasian male population up to middle age. PCL-R scores and failure rates increased in linear fashion for violent and nonviolent recidivism. Research regarding adolescent, female, and ethnic minority responses to the PCL-R is limited, suggesting caution in a forensic sentencing context. Descriptive alternatives similar to those noted above regarding APD may be preferable when describing individuals from these particular populations. Salekin et al. (1996) identified pending work in progress which may broaden future application of the instrument.

Application of the psychopathy diagnosis in a sentencing proceeding incurs the same cautions as those described above regarding APD. Clinicians utilizing the PCL-R in sentencing evaluations should also consider the standard error of
measurement in determining whether to adjust the diagnostic cutoff upward to reduce the possibility of type 1 errors.

Capital sentencing represents a forensic context of extraordinary ethical responsibility. Given the limited research on minority populations, psychopath prison behavior, and recidivism following release at advanced age, any use of the PCL-R at capital sentencing must be cautious or arguably be restricted to ruling out psychopathy with probable lower violence risk rather than in assigning increased risk in its presence. Whether this limited function justifies use of such a pejoratively loaded diagnostic label is a troubling professional issue.

Ethical considerations of making a diagnosis of APD or psychopathy at sentencing in the absence of sufficient research on predictive implications were articulated over 15 years ago (Dix, 1981) and appear to remain relevant:
... the danger of undue prejudice flowing from testimony which includes such a diagnosis may be exceptionally great. In common usage the terms used to describe this diagnosis have a connotation of dangerousness and arguably an emotional flavour that strongly militates against rational evaluation of their objective value in predicting assaultive conduct (p. 44, at note 219).

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# Integrating Base Rate Data in Violence Risk Assessments at Capital Sentencing 

Mark D. Cunningham, Ph.D., and Thomas J. Reidy, Ph.D.

## ADMITTED


#### Abstract

Prediction of violence in capital sentencing has been controversial. In the absence of a scientific basis for risk assessment, mental health professionals offering opinions in the capital sentencing context are prone to errors. Actuarial or group statistical data, known as base rates, have proven far superior to other methods for reducing predictive errors in many contexts, including risk assessment. Actuarial follow-up data on violent recidivism of capital murderers in prison and post release have been compiled and analyzed to demonstrate available base rates for use by mental health experts conducting risk assessments pertaining to capital sentencing. This paper also reviews various methods for individualizing the application of base rates to specific cases. (C) 1998 John Wiley \& Sons, Ltd.


If one only starts from an assumption ... that social policy is better built upon a foundation of information than of ignorance, of studies of large numbers of people than of a few individuals, of systematic than of haphazard observation, then the value of statistical analysis should be apparent (Sagarin, 1982).

The future dangerousness of a capital defendant is identified as a statutory aggravating factor that may be considered in twenty-one states when imposing a death sentence (McPherson, 1996). Federal capital proceedings often allege future dangerousness as a non-statutory aggravator. Mental health experts routinely testify regarding future dangerousness in capital proceedings, but much of this testimony seems to be uninformed by available empirical data (Cunningham \& Reidy, in press; Grisso \& Appelbaum, 1992).

The involvement of mental health professionals in making these predictions of future dangerousness in capital sentencing has been among the most controversial issues in the arena of risk assessment (Davis, 1978; Dix, 1981; Ewing, 1983; Appelbaum, 1984; Worrell, 1987; Kermani \& Drob, 1988; Leong, Weinstock, Silva, \& Eth, 1993). Errors at capital sentencing could result in either over- or under-estimations of future acts of violence. Consistent with well established

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clinical proclivities to over-predict violence (Monahan, 1981; McNeil \& Binder, 1991), the most notorious mental health expert testimony at capital sentencing has grossly overstated the magnitude of risk and the accuracy level of the prediction (Barefoot v. Estelle, 1983; Estelle v. Smith, 1981). Shah (1978) noted that when predictive evidence has poor reliability, the greater the move away from base rates and greater the probability of error. Hart, Webster, \& Menzies (1993) characterized the failure to acknowledge the possibility of error and the failure to make risk assessments in probabilistic terms as poor practice and potentially unethical.

The majority opinion in Barefoot v. Estelle (1983) implied that the potentially dishonest and inaccurate psychiatric opinions at capital sentencing could be exposed by adversarial cross-examination (Leong et al., 1993). Multiple factors, however, create difficulty in effectively neutralizing erroneous mental health expert testimony regarding future dangerousness at capital sentencing (Dix, 1981). There is a real danger that a jury may be inappropriately and significantly influenced by poorly grounded predictions of future violence offered with great confidence, even when the prediction is based on intuition rather than solid scientific evidence (Worrell, 1987). As the Barefoot v. Estelle (1983) dissenting justices wrote: "In a capital case, the specious testimony of a psychiatrist, colored in the eyes of an impressionable jury by the inevitable untouchability of a medical specialist's words, equates with death itself" (p.916).

The mental health expert in a capital sentencing assumes an ethical obligation to formulate clinical judgments that are primarily founded on a scientific basis (Ewing, 1983; Poythress, 1992). This goal can be accomplished by objectivity, informed expertise, and honest acknowledgment of the limitations of the expert opinion (American Academy of Psychiatry and the Law, 1992; American Psychological Association, 1992; American Academy of Forensic Psychology, 1991).
A scientific basis for a risk assessment estimate is well informed by incorporating an acknowledgment of the indispensable contribution of statistical or actuarial data. Dawes, Faust, \& Meehl (1989) identified group statistics as quite relevant and applicable to individuals:

A common anti-actuarial argument, or misconception, is that group statistics do not apply to single individuals or events. The argument abuses basic principles of probability. Although individuals and events may exhibit unique features, they typically share common features with other persons or events that permit tallied observations or generalizations to achieve predictive power (p.1642).
Actuarial or group statistic methods have been repeatedly described as not just an adjunct to, but rather superior to clinical methods in predicting the behavior of individuals (Dawes et al., 1989; Meehl, 1954; Monahan, 1981, 1996; Showalter \& Bonnie, 1984; Tonry, 1987). As Poythress (1992) summarized, "In virtually every area of behavior that researchers have pitted clinical prediction against statistical prediction, clinical prediction has been shown to be inferior. This is true in the case of violence prediction studies also ..."(p.142). Thus, integration of actuarial data may reduce error associated with either under- or over-estimation of violent recidivism (Litwak et al., 1993).

The advantage of an actuarial approach over clinical judgment may stem in part from inherent limitations in human cognitive processing. Dawes et al. (1989) described the clinical judgment method as involving the combining or processing
of information in the decision maker's head, with the underlying interpretive strategies resting on prior experience and knowledge. Associated faulty interpretive strategies leading to clinical judgment error include difficulty distinguishing between valid and invalid variables, inability to optimally weight the variables, minimal or absent information on the accuracy of diagnoses or predictions, self fulfilling prophesies, skewed exposure samples, and inflated confidence in accuracy of judgment.

The purpose of this paper is to review the scientific basis for violence risk assessment of capital offenders. The integration of statistical and actuarial methods using base rate data will be demonstrated. Mechanisms are discussed for integrating base rate information into capital risk assessments that reflect ethical and scientific soundness with correspondingly greater probabilistic accuracy.

## THE ROLE OF BASE RATES IN MODELS OF RISK ASSESSMENT

The fundamental group statistic in risk assessment is the base rate, which is the statistical prevalence of a particular behavior in aggiven group over a set period of time (usually one year). Monahan (1981) emphasized the importance of anchoring any estimate of the probability of violence in the individual case to the statistical base rate, describing: "knowledge of the appropriate base rate is the most important single piece of information necessary to make an accurate prediction" (p.60).

Mental health experts at capital sentencing may err by inappropriately emphasizing predictive ramifications of the instant offense or limited case information while neglecting base rates. As Smith (1993) stated, "the most common significant error made by clinicians in the prediction of violent behavior relates to ignorance of information surrounding the statistical base rate of violence in the population in question" (p.539). Base rate data is incorporated in multiple risk assessment models described in the research, with empirically validated factors being employed to cautiously individualize this base rate. The summary of various risk assessment models which follows is not intended to be exhaustive, but will serve to illustrate specific variations around a generally consistent theme of individualizing group base rates.

Monahan (1981) described approaching the risk assessment task with a combination of: (1) actuarial methods and (2) dispositional/interactional/contextual approaches. Monahan recommended beginning with a base rate. This base rate or actuarial estimate would then be conservatively individualized by examining individually specific dispositional, interactional, and contextual information.

Morris and Miller (1985) described risk assessments of future violence as being of three types: (1) anamnestic (using how the individual behaved in the past to estimate behavior in similar circumstances); (2) actuarial (using how people like the defendant have behaved to estimate how the defendant will behave); and (3) clinical (using life experience, training, knowledge of mental illness, observations, and diagnosis to estimate future behavior).

Anamnestic reliability is dependent on a sufficiently established pattern and continuing close similarity of context. Actuarial techniques require relevantly applicable group outcome data. Clinical assessments rely on traditional methods
of interview, testing, inference, and diagnosis. Morris and Miller asserted that actuarial and anamnestic approaches are more reliable than clinical approaches, which they described may add little to the accuracy of actuarial or anamnestic assessments.

Hall (1987) proposed varying formulas for risk assessment depending on whether long-range, short-term, or imminent forecasting of violence was being attempted: (1) long-range violence is best estimated by the base rate of violence in the group to which the individual belongs; (2) short-term (next several months) violence potential is a function of the interaction of historical variables (nature of violent exposure, experience, and behavior), current operating variables (long-term disposition and short-term triggers), opportunity variables, and inhibitory variables; and (3) imminent (next several days) violence is a function of perpetrator variables, contextual stimuli, victim characteristics, and inhibitory factors.

Serin and Amos (1995) proposed a decision tree for the assessment of dangerousness that consisted of four sequential steps: (1) derive a group base rate estimate from relevant group demographic and dispositional factors; (2) consider clinical information regarding past use of violence, disinhibitors, and persistence of antisocial behavior in conservatively revising the group base rate estimate to an individual base rate estimate; (3) evaluate what risk management variables and what contextual factors might be modified to reduce the likelihood of violence; and (4) establish a final revised estimate of violence potential.

## ESSENTIAL SPECIFICATIONS OF CAPITAL SENTENCING RISK ASSESSMENTS

Regardless of the risk assessment model employed in a capital sentencing, the relevance and precision of a risk assessment of future violence is increased by considering the following fundamental questions posed by Monahan (1981): (1) what violence? (2) what severity? (3) what context? (4) at what time?

## What Violence?

Future violence of greatest concern in capital sentencing would likely involve serious institutional violence or violent felony parole recidivism.

## What Severity?

Violence severity at capital sentencing is arguably assumed to be of a magnitude that a preventive measure of death seems reasonable. Specification of the magnitude or severity of the forecasted violence is an essential aspect of risk assessment. This is because mild violence is much more common (i.e., has a higher base rate) than severe violence. Thus, predictive accuracy increases as definitions of what constitutes "violence" expand. In many instances, the clinician fails to modify the risk estimate or the reliability of his prediction according to the severity of violence involved. Monahan (1981) described this failure to specify the level of violence as
one of the more common errors committed by clinicians in undertaking a violence risk assessment. It is important then for the clinician to differentiate exactly what is being forecasted at capital sentencing and how that likelihood might vary by the severity and associated infrequent base rate of that violence.

## What Context?

In capital sentencing, assessments of future criminal violence risk can be viewed as involving two general contexts: (1) within the prison system over the period of a capital life incarceration (many jurisdictions sentence to life without possibility of parole); and (2) in free society if eventually paroled.

Context is a critically important variable in assessing the likelihood of violence as base rates may vary depending on the setting or context. This is a common sense notion. As Smith (1993) stipulated: "It is clear that in order to adequately predict individual aggressive behavior, one must know something about the environment in which the individual is functioning" ( $\mathbf{p} .541$ ). Similarly, Hall (1987) conceptualized the likelihood of violence as involving the interaction of the individual with environmental factors at a certain time, place and setting: "Individual persons are never dangerous in toto" (p.10).

In a capital sentencing assessment of violence potential in prison, it would seem relevant to consider that prison is a highly structured and intensively supervised setting quite distinct from free society, warranting utilization of base rates that are specific to that context. For example, Brown, Gilliard, Snell, Stephan, and Wilson (1996) described U.S. Bureau of Justice Statistics showing that $47.4 \%(429,400)$ of state prison inmates are incarcerated for violent offenses and $10.7 \%(96,900)$ are incarcerated for murder.

Based on the violent offense histories of these inmates and the high rate of Antisocial Personality Disorder (ASPD) in a prison population estimated at $75 \%$ (Hare \& McPherson, 1984; Widiger \& Corbitt, 1995), a high rate of prison homicide could be predicted. In fact, despite a heavy concentration of individuals with criminal violence histories, the base rate of murder in prison is below that of the community at large. For example, in Texas prisons the homicide base rate was seven per 100,000 in 1994 compared to 15 per 100,000 in the general population of Texas, and 49 per 100,000 in Dallas (Brown et al., 1996). In the New Orleans Calliope public housing area, the annual male victim murder rate extrapolated from 1985-1992 NOPD police data was 513 per 100,000 (Cunningham, 1997). Obviously, the context of the prison custodial supervision has a marked effect on the frequency of lethal violence even among individuals who might be expected to have a greater violence propensity.

Quay (1984) reported that rates of federal prison inmate-on-staff assault and inmate-on-inmate assault were halved by providing separate housing for inmates according to three psychological classification groups and initiating specific unit management procedures. Even the most problematic inmates who had been identified as "Aggressive-Manipulative" were "surprisingly easy to handle" (p.23) when grouped together and specifically programmed. Housing and programming context have significantly affected rates of inmate violence even among inmates who had been identified as more aggressive.

Consistent with the above, Menzies, Webster, McMain, Staley, and Scaglione (1994) reported violence base rates in prison and in a psychiatric hospital that were one-fourth and one-half, respectively, the cohort's community base rate of violence. Thus, serious predictive errors may occur by inferring violence potential to individual dispositional characteristics or behavioral history alone without reference to context (Monahan, 1981; Hall, 1987).

## At What Time?

Relevant capital defendant periods of potential violence risk would include: (1) the course of a capital life prison term; (2) post release on parole (age at conviction + years of capital sentence before parole eligibility).

## THE PROBLEM OF ILLUSORY CORRELATION

In the absence of base rates and empirically derived dispositional, interactional and contextual data, the clinician is subject to making errors of illusory correlation (Monahan, 1981). An illusory correlation occurs when an observer reports that a correlation exists between classes of events which are not correlated, or correlated to a lesser degree, or are correlated in the opposite direction to that reported. Smith (1993) cautioned that clinicians erroneously describe relationships in material presented to them which "make sense" in terms of their prior biases rather than in terms of what they have actually seen. Smith has noted that, "systematic errors of observation have consistently been linked with the clinician's prior expectations about which characteristics imply dangerousness" (p. 540).

Illustrative of the illusory correlation problem is a study of experienced psychologists and case managers within the Federal Bureau of Prisons who employed 17 demographic and biographical variables as cues to forecast violence during the first six months of incarceration of male inmates at a medium security federal correctional institution (Cooper \& Werner, 1990). Both groups of correctional professionals exhibited disappointingly low levels of predictive accuracy (mean corrected hit rate of -0.16 for psychologists, and 0.07 for case managers). Specifically, both psychologists and case managers consistently emphasized current offense, severity of current offense, and history of violence, none of which were significantly correlated with actual inmate violence during the first six months of incarceration. The professionals de-emphasized cues that were empirically related to prison violence (younger age, more arrests and convictions, non-urban residence).

Similarly, extensive experience in making predictions of future dangerousness at capital sentencing in the absence of group base rates or subsequent systematic long-term follow-up and comparative analysis of the personally predicted individual is unlikely to result in improved accuracy with experience. An analogy of a blind person throwing a baseball would seem descriptive. Without feedback regarding the trajectory and impact point of the thrown baseball, no improvement in accuracy is possible.

Consistent with Cooper and Werner's findings of the low predictive value of offense severity, Alexander and Austin (1992) reviewed the literature and concluded in a U.S. Justice Department publication: "the severity of the instant offense has rarely been found to be a very useful predictor of (prison) disciplinary adjustment ... (or) danger to the public" (p.25).

## BASE RATES OF PRISON VIOLENCE OF CAPITAL MURDERERS

The first context of interest in capital sentencing involves consideration of the defendant's anticipated behavior during a pending capital life prison term. Thus, the post conviction incidence (base rate) of serious prison violence of capital offenders is fundamental to the estimated risk these offenders represent while incarcerated. In the only study providing both capital offender and broad comparative base rates of prison violence, Marquart, Ekland-Olson, and Sorensen (1989) examined the institutional disciplinary records spanning from 1974 to 1988 of 92 Texas capital murderers convicted after 1973 who were released from death row by commutation to life sentence, retrial and sentence to prison, or case dismissal. The prison experience of these commuted death penalty inmates was compared to a group of Texas life sentence capital murderers, as well as the prison behavior of inmates "system wide" in the Texas Department of Corrections, and inmates at a Texas high security prison facility. The prior criminal histories and homicide characteristics of the capital murderers reflected a broad range of past arrests and homicide contexts.
Of greatest comparative significance is the review of total infractions on a yearly average per 100 inmates. This represents an annual base rate or estimated experience per 100 inmates per year as displayed in Figure 1. It will be noted that the "release from death row" base rate of 1.61 (i.e., 1.61 violent rule infractions per 100 inmates per year) is less than that of the "life sentence" inmates of 2.60 and is $1 / 7$ of the "systemwide" base rate of 11.66 and $1 / 12$ that of the high security prison. These base rates provide both a specific and comparative framework for the risk of serious violent rule violations. An argument could be made that much prison violence goes unreported and thus the statistics are unreliable. This argument has several fallacies: The issue of unreported offenses would apply to all categories of offenders; the offense least likely to go unreported (striking of an officer) occurred at a low rate for both capital murder groups and displayed a similar proportion across groups as did the total infractions.

Additionally, Marquart and colleagues noted that approximately $90 \%$ of both the former death row inmates and the life sentence control cohorts who were still incarcerated held trustee status. A minority of death row inmates exhibited persistent serious disciplinary problems. Marquart et al. indicated that eight of the former death row prisoners and six of the life sentence control group were identified as prison gang members and confined indefinitely in administrative segregation. The prison context of these problematic inmates was modified by increased restriction, supervision, and isolation so that any opportunity they might have to be assaultively aggressive was almost entirely negated, likely resulting in a negligible subsequent violence base rate. Thus the prison system does appear to


Figure 1. Reported serious violent prison rule violations: Average number of violations per 100 inmates per year (homicide, assault with weapon, sexual abuse by threat, striking officer)
have appropriate mechanisms for the virtual complete restriction of inmates who require this degree of control.

Quite similar base rate data emerge from other retrospective tracking studies of commuted capital offenders. Marquart and Sorensen (1989) reported on the institutional behavior of 533 former death row inmates nationwide whose sentences were commuted as a result of the Furman v. Georgia (1972) decision, and whose disciplinary behavior was tracked across the following 15 years. The associated base rates are illustrated in Figure 2. More than half of the total serious rule violations were committed by a small group of chronic offenders ( $7.4 \%$ ). Marquart and Sorensen concluded, "These data demonstrate, at least among these violators, that most serious infractions were one time events or situations. In short, most of the Furman inmates were not violent menaces to the institutional order" (p. 20).

Marquart and Sorensen (1988) studied the institutional behavior of 47 capital offender former death row inmates in Texas whose sentences were commuted following the Furman decision in 1972. Across a 13 year period of confinement in the general prison population, these 47 former death row inmates committed three weapons related offenses. Additionally there were two incidents of striking a guard. Of the Furman group, $93 \%$ committed no assaultive weapons offenses while incarcerated in the Texas Department of Corrections. Marquart and Sorensen (1989) cited Wagner (1988) who conducted an extensive analysis of the prison behavior of 100 commuted capital offenders from 1924 to 1971 in Texas. He found that 80 commutees $(80 \%$ ) did not commit any serious prison rule violations such as murder, aggravated assault, sex by force, striking a guard, or escape. Three of the commuted capital offenders (4\%) killed four fellow inmates. Earlier, Bedau (1964) found no allegations of unmanageable behavior during incarceration among 55 New Jersey capital offenders who had been released from death row between 1907 and 1960 and were serving life imprisonment terms.


Figure 2. Serious prison rule violations committed by death row inmates over 15 years (homicide, aggravated assault, sexual attack, escape, riot, work strike)

Limited base rate data regarding prison violence of non-capital murderers are available. Corollary, but unspecified, base rate perspective of the prison behavior of murderers in general was provided by Flanagan (1980) who identified murderers as being "settled" prisoners who are infrequently involved in violent behavior within the institution. Wolfson (1982) examined 1973 U.S. Department of Justice national prisoner statistics and identified that one in 577 imprisoned murderers ( $0.02 \%$ ) murdered again in prison that year, none of whom were commuted death penalty offenders. Wolfson acknowledged that convicted murderers were increasingly overrepresented in prison murders: murderers represented $10 \%$ of the prison population but were responsible for $25 \%$ of the prison murders. Wolfson pointed out, however, that $99.8 \%$ of the imprisoned murderers did not repeat their offense in that year.

It is important to note that the sentence a capital defendant receives does not appear to significantly affect subsequent base rates of violence while incarcerated. Sorensen and Wrinkle (1996) analyzed the records of two groups of first degree murderers, including 93 death sentence inmates and 323 life-without-parole inmates, both housed in Missouri general prison population. These two groups were contrasted with 232 life-with-parole second degree murderers. The three groups were not significantly different in their rates of assaultive rule infractions which had a combined prevalence rate of $20 \%$ (of which $29 \%$ were minor assaults). There were eight murder/manslaughter's committed by the combined groups across the 1977-1992 period of disciplinary record review, yielding a prevalence rate of $1.2 \%(8 / 648)$. The lack of significant difference in the prevalence of assaultive
behavior among the three sentencing groups provides support for the generalization of base rate data regarding prison violence to capital murder inmates regardless of type of sentence. This finding mirrors the similar violent rule infraction incidence of the two capital inmate groups in the Marquart and colleagues (1988) Texas comparative study.

## BASE RATES OF VIOLENT RECIDIVISM OF MURDERERS AND CAPITAL MURDERERS ON PAROLE

The second environmental context of interest regarding future acts of criminal violence involves the post-release community setting, if the defendant is eventually paroled following a capital life prison sentence. Base rate statistics from multiple longitudinal studies indicate a low base rate of post-release violent recidivism among capital, as well as other, murderers as shown in Table 1.

Bedau (1964) reported on 31 New Jersey capital offenders commuted and subsequently released on parole between 1907 and 1960, and identified that only one was returned to prison ( $3 \%$ ). Of 15 commuted capital offenders released from prison between 1903 and 1964 in Oregon, three ( $20 \%$ ) returned to prison for technical violations and new offenses. None of the capital offenders in New Jersey or Oregon committed an additional criminal homicide while in prison or on parole.

Stanton (1969) studied the post-release behavior of 63 first degree murderers paroled between 1930 and 1961 in New York. Sixty-one of these murderers had had their sentences commuted from death to life imprisonment. Stanton found that as of 1962 , only three $(4.8 \%)$ of these murderers had been returned to prison-two for technical parole violations and one for burglary.

Vito \& Wilson (1988) described a study initially presented in a 1986 meeting of the Southern Association of Criminal Justice Educators which tracked 17 former death row inmates whose capital sentences were commuted in the Furman decision. Twenty-nine percent of this sample was returned to prison; four of the defendants were reincarcerated for committing new crimes, although none of the paroled offender's had committed another homicide.

Wagner (1988) studied the post-release behavior of 84 commuted capital offenders paroled over the course of 64 years (1924-1988) in Texas. Of this sample, $8.3 \%$ were returned to prison for committing new felonies. None committed a post-release murder. Most were described as successfully completing their parole without incident.

Marquart \& Sorensen (1989) followed 188 Furman commuted capital murder inmates who were subsequently released to society. They reported that $38(20.2 \%)$ recidivated, with $20(10.6 \%)$ committing a new felony offense. Only one of the 188 ( $0.053 \%$ ) was returned to prison for committing a subsequent homicide.

Base rate data regarding the post-release outcome of non-capital murderers is also available. Stanton (1969) additionally studied 514 inmates convicted of second degree murder and released from New York state correctional facilities between 1945 and 1961. Of these, $22.4 \%$ became delinquent. This was broken down by recidivism offense severity as follows: 17 of the 115 (3.3\% of the total sample) were convicted of felonies, 33 others were convicted of misdemeanors or lesser offenses,
Table 1. Base Rates of Parole Recidivism of Capitol Murderers, Murderers, and General Population Inmates

| Study | Sample | Follow-up Interval | N | Recidivism Rate | New Murder Rate |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Capitol Murderers |  |  |  |  |  |
| Marquart \& Sorensen (1989) | National Sample | 1972-87 | 188 | .20-prison/.10-new felony | . 005 |
| Bedau (1964) | NJ | 1907-60 | 31 | . 03 new felony | 0 |
| Bedau (1965) | OR | 1903-64 | 15 | . 20 return to prison | 0 |
| Vito \& Wilson (1988) | KY | 1972-85 | 17 | . 29 returri to prison, 6 jailed | 0 |
| Wagner (1988) | TX | 1924-88 | 84 | . 08 new felony | 0 |
| Stanton (1969) | NY | 1930-61 | 63 | . 05 return to prison | 0 |
| Non-Capitol Murderers 6 , 65 return to prison |  |  |  |  |  |
| Donnelly \& Bala (1984) | NY | 1977, 5 yr post-release | 66 | . 27 return to prison | - |
| Bedau (1982) | 12 States | 1900-76, 4-53 yr post-release | 2646 | . 03 new felonics | . 006 |
| Bedau (1982) | Nationwide | 1965-69, 74-75, 1st ys of release | 11,404 | . 015 major violations | . 003 |
| Bedau (1982) | Nationwide | males, 1 st yr of release | 6094 | . 01 new felony | . 002 |
|  |  | females, 1st yr of release | 756 | . 004 new felony | . 001 |
| Stanton (1969) | NY | 1945-61 | 514 | .22-prison/.03-new felony | . 004 |
| Beck \& Shipley (1989) | 11 States | 1983, 3 yr post-release | 506 | . 21 return to prison | . 07 |
| Eisenberg (1991) | TX | 1986, 5 yr post-release | 56 | .45-return to prison | cearrested |
| Perkins (1994) | 29 States | parole discharge 1992 | 5371 | . 33 return to prison | - |
| Canestrini (1996) | NY | 1985-91, 3 yr post-release | 5054 | . 24 return to prison | . 024 |
| General Prison PopulationBeck \& Shipley (1989). |  |  |  |  |  |
|  | 11 States | 1983, 3 yr post-release | 16,355 | 41.4 return to prison | . 03 |
| Perkins (1994) | 29 States | parole discharge 1992 | 209,995 |  | rearrested |
| Eisenberg (1991) | TX | 1986, 5 yr post-release | 1539 | . 48 recturn to prison |  |
| Canestrini (1996) | NY | 1985-91, 3 yr post-release | 121,555 | . 44 return to prison | . 004 |

and 65 were returned for technical parole violations. Stanton reported that of the 17 convicted of felonies, two ( $0.4 \%$ of the total sample) were convicted of another first degree murder.

Bedau (1982) studied recidivism rates of released convicted murderers in 12 states over periods ranging from four years to 53 years. In this sample, he identified $0.6 \%$ as having committed a new homicide and $3.3 \%$ convicted for another felony. In a second compilation, Bedau studied nationwide recidivism rates during the first year of release for convicted murderers paroled from 1965 to 1975; he identified $0.3 \%$ as committing a new homicide and $1.5 \%$ committing some other felony. In a third study, Bedau examined male convicted murderers released from 1971 to 1974 and found $1.1 \%$ reincarcerated for new offenses and $5.5 \%$ reincarcerated for technical violations. Bedau concludes: "Both with regard to the commission of felonies generally and the crime of homicide, no other class of offender has such a low rate of recidivism" (p. 180).

Donnelly and Bala (1984) studied the five year follow-up of 66 murderers released on parole from New York State prisons in 1977. They reported that 27.3\% were returned to prison for a new offense or technical violation, while $72.7 \%$ had successful parole performance.

Beck and Shipley (1989) analyzed recidivism data on a sample of 16,000 inmates released from prison in 11 states in 1983 and followed across the subsequent three years. Murderers had a reincarceration rate of $20.8 \%$. Six percent were rearrested for another murder/manslaughter (conviction data was not reported). In generalizing these findings to current capital sentencing, it should be cautioned that $94 \%$ of the total sample studied were younger than age 45 at prison release and that age at release was the strongest factor (inversely correlated) in predicting recidivism.
Eisenberg (1991) described a five year follow-up of a random sample of 1533 inmates paroled from the Texas Department of Corrections in 1986. The overall return to prison rate was $48 \%$. Of this sample, 25 of 56 paroled murderers were returned to prison ( $45 \%$ ). Data on new homicides were not recorded.
Perkins (1994) analyzed 209,995 parolees from 29 states who were discharged from parole in 1992, with $46.2 \%$ reincarcerated. Within this sample, 5371 parole discharged murderers had a $33.3 \%$ rate of return to prison. New homicide data were not reported.
Canestrini (1996) reported on the three year recidivism rate of 5054 inmates released between 1985-1991 from the New York Department of Correctional Services after original commitments for murder, attempted murder, manslaughter, and all other homicides. Of this sample, $24.5 \%$ returned to prison within three years, $15.2 \%$ for parole violations, and $9.4 \%$ for new felonies. This recidivism rate was much lower than the return rate of $44.3 \%$ for the 121,555 offenders whose prerelease offense was other than homicide. Among the homicide releasees, $2.4 \%$ returned to prison for a new homicide.

## AGING EFFECTS ON BASE RATES

Aging is well established as a significant factor in reduced base rate likelihood of criminal violence in both community and prison contexts. Hirschi and Gottfredson (1983) presented arrest record data from an English cohort in 1842-1844



Figure 3a. Age distribution of criminal offenders in the general population of England and Wales, 1842-1844. (From: Hirschi \& Gottredson, 1989; copyright 1989 by The University of Chicago Press; used by permission of the publisher)
(Figure 3a), and a 1977 U.S. Department of Justice annual crime report (Figure 3b) which demonstrated almost identical and dramatically disproportionate overrepresentation of younger offenders. Miller, Dinitz, and Conrad (1982) reported similar decreasing incidences of arrest for aging cohorts after age 30 when tracking incidence of murder, rape, or robbery.

Swanson, Holzer, Granju, and Jono (1990) described NIMH Epidemiologic Catchment Area data which found a marked progressive reduction in rates of community violence among successively older community members. This community data on preceding year prevalence of violent behavior by age is quite relevant to base rate estimates in risk assessments as demonstrated by findings for males shown in Figure 4. These data on community violence and age parallel the historic agearrest relationship described by Hirschi and Gottfredson (1989).
The decrease in rates of criminal activity and violence with age is matched by age related declines in Antisocial Personality Disorder (ASPD) incidence. Large scale representative community samples have found lower prevalence rates of ASPD


Figure 3b. Age distribution of criminal offenders in the general population of the United States 1977. (From: Hirschi \& Gottredson, 1989; copyright 1989 by The University of Chicago Press; used by permission of the publisher)
among community residents over age 45 as compared to those younger than 45 (Myers et al., 1984; Regier et al., 1988). In a study of 889 male prison inmates ranging in age from 16 to 69, Harpur and Hare (1994) reported that over $60 \%$ of the 18-25 cohort was diagnosed ASPD, yet less than $20 \%$ of the post age 46 group was diagnosed ASPD. Hare Psychopathy Checklist (PCL) scores reflected a marked decline with age for Factor 2 (Socially Deviant Behavior).

Prison disciplinary problems also decrease as inmates get older, regardless of how the inmates are treated (Alexander \& Austin, 1992). Hirschi and Gottfredson (1989) cited 1975 New York prison infraction base rates which were 10-fold greater for inmates in their 20s than inmates over age 60 (Figure 5). The age related effects demonstrated by this figure are remarkably similar to the distributions of community criminal activity depicted in Figures 3a and 3b. In a study of death sentenced and life-without-parole inmates, Sorensen and Wrinkle (1996) reported that rates of infractions were higher for younger inmates, tended to rise during the initial period of confinement, and then decreased over time. Flanagan (1980)


Figure 4. Community prevalence of violent behavior by age
identified lower prevalence rates for prison misconduct among older cohorts of inmates. Additionally, Flanagan reported that inmates facing long-term sentences had lower rates of prison misconduct than age matched inmates with short-term sentences, though the type of misconduct of the long-term inmates tended to be more serious. Thus, progressive aging across a prison sentence may be reflected in a decreasing violence base rate over time.

The findings of Wormith (1984) provided a descriptive rationale for the lower incidence of disciplinary problems of inmates as they age across an extended sentence. Wormith described negative correlations between time served and MMPI scale elevations. California Psychological Inventory profiles of long-term incarcerated inmates were noted to reflect better social and psychological adjustment. Additionally, he noted that inmates who had served long sentences expressed more prosocial attitudes toward the criminal justice system. These apparent improvements in psychological status, whether the product of aging, incarceration, or an interaction of the two, may account for the decreasing trend of disciplinary problems across an extended prison confinement.

Aging effects are also evident in recidivism rates. Hoffman and Beck (1984), in a two year follow-up of 6,287 released federal prison inmates, found a decline in recidivism rates with increased age at release even with statistical control for the effect of prior criminal record. Releasees, who were age 41 or older and considered to be a poor risk by criminal history, had a $60 \%$ favorable outcome, while those who were considered a very good risk enjoyed a $96 \%$ favorable outcome. Thus, even cohorts of career criminals exhibited "burnout"-a decline in offense frequency after a certain age. Similarly, Beck and Shipley (1989) described parole recidivism as being strongly inversely related to the age of the inmate at release across each of the five-year age cohorts. Inmates who were younger than age 17


Figure 5. Incidence of prison infractions in NY, 1975, by age. (From: Hirschi \& Gotfredson, 1989; copyright 1989 by The University of Chicago Press; used by permission of the publisher)
at release had a $75.6 \%$ rearrest rate and a $50.6 \%$ reincarceration rate, while inmates over 45 at release had a $40.3 \%$ rearrest rate and a $25.7 \%$ reincarceration rate.

Age related declines in the base rate of community criminality and violence may explain the lower post-release violent recidivism rates of paroled capital offenders as compared to other violent offenders. Quite simply, the capital parolees have typically served sentences of such length that they are in older age brackets when released. For example, when it is considered that current Texas capital inmates must serve a 40 year minimum sentence, the inmate would be at least in his late 50 s before parole eligibility. It is hypothesized that the base rate of violent offending for these aging capital parolees would be lower than that of the studies cited whose age at release was often younger.

## INDIVIDUALIZING RISK ASSESSMENTS

With the base rate as an anchor, Monahan $(1981,1996)$ recommended examining the context of the subject's past aggression and dispositional characteristics associated with this aggression to individualize the risk assessment. It is at this juncture that a defendant's history, behavior pattern, and disposition become relevant in individualizing the risk assessment. Individualizing base rates, however, should be undertaken conservatively (Monahan, 1981; Harris, Rice, \& Cormier, 1993; Serin \& Amos, 1995), and only when reliable indicators are present that the individual varies significantly from the comparison group.

## Pre-Confinement Factors

Marquart and Sorensen (1989), in studying the Furman commutees, found that neither offense characteristics nor the offenders race, age, or prior criminal history significantly differed between those who committed violent acts in prison and those who did not. These researchers were not able to identify a pre-confinement variable that served as a predictor of who would commit these violent institutional acts.

## Broad Risk Factors

Although not specifically theorizing on a criminal population, Steadman et al. (1994) identified four domains of risk factors, including dispositional, historical, contextual, and clinical. The significance, weighting, and interaction of these factors remain an area of active research investigation.

## Violence Characteristics

Litwak (1994), while not focusing on capital sentencing specifically, emphasized that an adequate general clinical assessment of dangerousness would, in addition to base rate considerations, include a detailed history of the behavior, context and meaning of the subject's past violence. Weighting of the associated variables apparently remains intuitive and systematically applied predictive accuracy research was not reported. The practical relevance of Litwak's considerations can be seen in the observations of O'Leary and Glaser, as cited by Flanagan (1980), who discussed the meaning and implications of a given inmate's involvement in prison violence. O'Leary and Glaser are quoted as contending:
... some prisoners highly committed to a law abiding life may be especially upset by imprisonment, and they may be pressured by the more criminalistic inmates in a manner which impairs ability to conform to prison staff expectations. Thus a record of fighting in prison may show either aggressiveness, emotional instability, social ineptness, or defensive efforts of a prisoner to avoid subordination to more aggressive inmates (pp. 159-160).

## Neuropsychological Findings

A history of severe head injuries, clinically significant neuropsychological findings, abnormal EEG or MRI, and other neurological findings have been variously demonstrated as being disproportionately over-represented among convicted murderers (Langevin, Ben Aron, Wortzman, Dickey, \& Handy, 1987; Blake, Pincus, \& Buckner, 1995), violent forensic psychiatric inpatients (Martell, 1992), and death row inmates (Lewis, Pincus, Feldman, Jackson, \& Bard, 1986). This might suggest brain damage as an individualized variable which results in a broad increased likelihood of severe violence.

The relationship of neuropsychological factors to violence incidence, however, seems to be mediated by context. For example, while Lewis et al. identified a disproportionate incidence of severe head injury histories among death row inmates, Marquart et al. (1989) found that capital offenders were disproportionately less likely to be involved in serious violent disciplinary offenses in prison. Lower commuted capital inmate post-release recidivism rates speak to aging as an additional factor in the complexity of application. Obviously, it is much too simplistic to add neuropsychological findings as a risk factor without consideration of context and aging.

## Self-Report Instruments

Minnesota Multiphasic Personality Inventory (MMPI) profiles appear to have very limited practical utility in differentiating those inmates likely to cause more than their share of serious discipline problems. Carbonell, Megargee, \& Moorhead (1984) described statistically significant findings in using the MMPI to forecast prison adjustment, but cautioned that the accompanying correlation coefficients were too low to support using the instrument in individual decision making.

Quay (1984) obtained MMPI profiles on 1824 inmates in U.S. federal prison who had been assigned to one of five inmate classification groups based on characteristic behaviors determined by record review and institutional observation. Statistically significant differences on Scale 4 (Pd) scores were observed for the five groups, with the "Heavy" group of more aggressive and predatory inmates scoring highest. This finding is of limited practical discriminating or predictive benefit, because all of the inmate groups obtained elevated Scale 4 scores to varying degrees, with distributions that overlapped each other. For example, if an inmate obtained an elevated T-score of 76 on Scale 4, the clinician would have no clear indication of the group to which the inmate's institutional behavior would correspond, as this score is within one standard deviation of the mean of all five groups. Elevated MMPI Scale 4 scores seem to be characteristic of a male prison inmate population and thus provide little assistance in differentiating which inmates are more likely to be violent in prison:

A literature review by Kennedy (1986) of psychometric approaches to prison inmate classification found the Megargee system of utilizing the MMPI to differentiate 10 types of inmates ineffective as a predictor of inmate violence or aggression during incarceration, particularly with high-risk maximum security inmates (who would seem to be the population of interest at capital sentencing).

Van Voorhis (1994) also described the Megargee MMPI-based system as "disappointing" in the prediction of disciplinary-related prison outcomes.

Zager (1988) also reported that the MMPI was not able to predict violent inmate behavior. Zager further described the MMPI as less effective in assessing the prison adjustment of African-American inmates than Caucasian inmates. Indicative of the complexity in applying traditional MMPI interpretations to a prison population, Zager identified MMPI Code type 4-9 (which clinical lore has commonly associated with antisocial personality) as not among the most deviant prison adjustment Megargee profile types. Echoing Megargee (1984), Zager described the prison behavior of the 4-9 MMPI profile type as "manipulative", but also characterized them as "achievement oriented" and "often adjust well to incarceration" (p.42).

Shaffer, Watson, \& Adams (1994) studied 150 prison inmates: a discriminant function containing variables of MMPI Scale F, MMPI Scale 1, juvenile arrest history; and marital status successfully predicted only $33 \%$ of the violent inmates, even when violence was broadly defined as battery or verbal threats that resulted in isolation.

MMPI profile patterns have been observed to change over time so that an inmate's corresponding Megargee classification may shift (Clements, 1996; Craig, 1996), further limiting predictive usefulness of the MMPI in evaluating long term violence potential. MMPI findings thus should not be considered to represent immutable personality characteristics.

## Risk Assessment Instruments

Borum (1996) provided a status report on research regarding several risk assessment instruments which attempt to combine actuarial and clinical information and which might be applicable to forensic populations. He described the Dangerous Behavior Rating Scheme (Webster \& Menzies, 1993) as being a conceptual advance in assessment technology, but having disappointingly weak predictive validity. Borum reported more favorable early reports regarding the Violence Prediction Scheme (Webster, Harris, Rice, Cormier, \& Quincey, 1994) and the HCR-20 (Webster, Eaves, Douglas, \& Wintrup, 1995). These remain, however, research instruments that, while promising, have not been sufficiently validated for clinical or forensic use.

## Inmate Classification Techniques

Van Voorhis (1994), in an extensive comparative study, evaluated five systems of inmate psychological classification: Megargee's MMPI-based typology; Quay's Adult Internal Management System (AIMS); Interpersonal Maturity (I-level); Jesness Inventory (I-level) System; and Conceptual Level. A sample of 179 low-maximum security federal inmates were tracked across six months of incarceration to determine whether psychological characteristics could be identified that would predict prison adjustment and problematic behaviors. Multiple outcome measures were examined through official records, staff ratings, and self-report. Discipline-related prison outcome findings were quite complex. Specifically,
"situational" inmates who had the least psychopathology, the least criminal history, and who had been predicted to have the least trouble adjusting to prison, had a surprisingly high incidence of non-aggressive disciplinary difficulties. Van Voorhis interpreted this result as stemming from the "situational" inmate's prison inexperience and lack of knowledge about how to "do time". Another unexpected finding was that "neuroric" type inmates, identified by several classification systems, obtained consistently high scores on measures of aggression. It was hypothesized that the aggression of the neurotic group was more idiosyncratic than predictable by life events, environmental conditions, or risk assessment measures. Consistent with predictions, asocial, aggressive and committed criminal inmates had higher rates of self-reported aggression. Aggression was not well defined in this study and criterion measure scores by classification system were not detailed for the various inmate groups, nor were cutoff, sensitivity or specificity data provided. Given the absence of this critical data and the moderate sample size, predictive utility at capital sentencing is correspondingly limited.

## Antisocial Personality Disorder (ASPD)

The reliability and validity of the ASPD diagnosis has been questioned because of shifting diagnostic criteria (Davis, 1978; Rogers \& Dion, 1991; Widiger \& Corbitt, 1995), criterion innumeracy (Rogers \& Dion, 1991), and Substance-Related Disorder symptom overlap (Spitzer, Endicott, \& Robins, 1978; Gerstley, Alterman, McLellan, \& Woody, 1990). These concerns regarding diagnostic integrity suggest caution in applying the diagnosis in arenas of great portent such as sentencing (Cunningham \& Reidy, in press). Additionally, contextual exclusionary criteria and lifetime pervasiveness requirements (American Psychiatric Association, 1994) call for careful consideration in the application of an ASPD diagnosis.

An ASPD diagnosis may not be relevant to forecasts of institutional violence. Again, statistical data on prevalence is informative: estimates of an ASPD diagnosis in an incarcerated male population range from 49-80\% (Widiger \& Corbitt, 1995). The diagnosis of ASPD alone describes little about prison behavior and recidivism outcome, except that the individual is similar to most prison inmates, and thus ASPD is not in and of itself an indication of a particularly dangerous or incorrigible inmate.

## Psychopathy

Psychopathy, as defined and measured by the Psychopathy Checklist-Revised (PCL-R; Hare, 1991) is a diagnostic construct that has been explored as a more reliable construct of both maladaptive personality features and socially deviant behaviors that may be relevant to determinations of recidivism and violence risk assessment both in and out of an institutional setting. Cunningham and Reidy (1997) critically examined research regarding the application of the PCL-R psychopathy construct in a sentencing context, identifying minority application, prison context, and age related cautions.

Briefly, most of the standardization of the PCL-R has been with a White male population and application to minorities remains under-investigated (Salekin,

Rogers, \& Sewell, 1996). Also problematic is the limited research regarding prison behavior of psychopaths; existing research is insufficiently precise. As a result, estimations of the institutional assaultive potential of psychopaths remains speculative and application of the PCL-R in capital sentencing regarding likelihood of prison violence is correspondingly limited (Cunningham \& Reidy, in press).

Research regarding psychopathy as a risk marker for post-release violence and its measurement with the PCL-R is reviewed by Hart et al. (1994), with multiple studies (Hart, Kroop, \& Hare, 1988; Forth, Hart, \& Hare, 1990; Harris et al., 1991) demonstrating markedly higher rates of recidivism and violent recidivism among high PCL scorers as compared to low scorers. This trend has also been demonstrated by a five year follow-up study (Serin \& Amos, 1995). While the above studies reflect a markedly higher rate of post-release violent recidivism for PCL-R psychopaths, use of the PCL-R in capital sentencing to estimate post-release violent recidivism must be approached cautiously. The violent recidivism studies cited above tended to follow a younger cadre of parolees. There is scant research on the effects of age on violence in this disorder, a particularly relevant limitation given the advanced age of a potential capital parolee at the conclusion of a 40 year capital incarceration.
i

## PRACTICAL APPLICATIONS

Practical incorporation of base rate data in risk assessments at capital sentencing may be facilitated by the mental health expert responding to the following selfcheck questions in formulating an opinion:

1. Has the risk assessment been expressed in terms of a reasonably specific probability continuum?
2. Has the type of violence been specified with some severity consideration of the pending preventive measure of death, and estimations correspondingly stratified?
3. Have base rates specific to the capital offender in a prison incarceration context been utilized?
4. Have base rates specific to capital offenders in a post-release context been utilized?
5. Has individualization of base rates considered aging effects during incarceration and post-release?
6. If the risk estimate is a substantial departure from the base rate, are the underlying observations and data sufficiently reliable and empirically validated to justify this departure?
7. Has individualization of base rates considered interpersonal-situationalcontextual components as well as personal disposition factors?
8. Has the risk estimate incorporated considerations of how more restrictive confinement, inmate grouping, medication, treatment, or other risk management techniques might reduce the probability of violence?
9. Has the clinical judgment task been scrutinized for errors?
10. Has the risk evaluator frankly acknowledged issues of clinical judgment fallibility?

## SUMMARY

The risk assessment testimony of a mental health expert at capital sentencing invariably carries an implication of base rates. The assumption, implicitly or explicitly conveyed by the role as an expert, is that the risk factors identified and weighted are soundly based on empirical evidence and that the resultant probability opinion is consistent with the actual violence outcomes of similar individuals. Whether grounded by intuition, clinical lore, "experience", or statistical data, the expert is offering a base rate to the court. What other expertise does the expert bring to bear on this violence probability issue? Actuarial follow-up data on the violent recidivism ourcome of capital murderers in prison and post-release has been compiled and synthesized in this paper with the hope that capital sentencing risk assessment testimony will be more empirically based and thus will more closely reflect the probabilities demonstrated by this group of offenders. As the cited studies indicate, the individuation of base rates should be based on empirical data of how a given factor operates in a specific context at a specific time period. Current research suggests that this individuation is far from simplistic, and thus substantial departures from base rates may be speculative. Koehler (1996) asserted that people routinely utilize base rates in making probability judgments. Base rate data regarding capital offenders thus may be actively incorporated and utilized by the trier of fact.

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# DON'T CONFUSE ME WITH THE FACTS <br> Common Errors in Violence Risk Assessment at Capital Sentencing 

MARK D. CUNNINGHAM<br>THOMAS J. REIDY<br>American Board of Professional Psychology

The life and death context of a capital risk assessment requires a comprehensive forensic evaluation. Mental health professionals routinely testify regarding future dangerousness in capital proceedings but too often limit assessment to DSM-IV diagnoses and criminal history without integrating empirical and actuarial data from other sources. Given the grave magnitude of a capital risk assessment both for the defendant and society, methodological and conceptual errors of this type must be avoided. This article will describe violence risk-assessment errors made by mental health professionals testifying at capital sentencing. Observed errors include inadequate reliance on base rates, failure to consider context, susceptibility to illusory correlation, failure to define severity of violence, overreliance on clinical interview, misapplication of psychological testing, exaggerated implications of antisocial personality disorder, ignoring the effects of aging, misuse of patterns of behavior, neglect of preventive measures, insufficient data, and failure to express the risk estimate in probabilistic terms.

It has been 20 years since Saleem Shah's seminal article on assessments of dangerousness in a forensic context detailed conceptual pitfalls common to this arena of forensic activity (Shah, 1978). Seventeen years have passed since John Monahan's highly influential monograph on violence risk assessment and methodological errors

AUTHORS' NOTE: Correspondence concerning this article should be addressed
to Mark D. Cunningham, Ph.D., 500 Chestnut, \#1735, Abilene, TX 79602; e-mail.
mdc@bitstreet.com.
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requently occur in this task (Monahan, 1981). Thirteen years ago Morris and Miller (1985) identified weaknesses of clinical methods of risk assessment in comparison to actuarial and anamnestic approaches. Dawes, Faust, and Meehl (1989) described errors associated with the unsystematic methods frequently employed by clinicians in their decision making. Serin and Barbaree (1993) described the unacceptably high false-positive error rate in estimates of future violence with uncritical reliance on simplistic factors.

Faulty methods of risk assessment in capital sentencing, such as those occurring in Estelle v. Smith (1981) and Barefoot v. Estelle (1983), were subsequently widely criticized in the legal and scientific literature as grossly inadequate in methodology and as profoundly flawed in overestimating both the magnitude of risk and the accuracy of the prediction (Applelbaum, 1984; Davis, 1978; Dix, 1981; Ewing, 1983; Green, 1984; Grisso \& Appelbaum, 1992; Leong, Weinstock, Silva, \& Eth, 1993; Worrell, 1987; Wyda \& Black, 1989). Errors of underprediction of violence at capital sentencing are also possible, although the focus of legal and psychological literature would suggest that underprediction is less frequently observed. The testimony of James Grigson, M.D., who has testified in nearly one third of the Texas cases involving death row inmates (Marquart, Ekland-Olson, \& Sorensen, 1994), can be used to illustrate the more egregious examples from either end of the error continuum. Overprediction of violence was reflected in Rodriquez $v$. Texas (1980):

He absolutely will, regardless of whether he's inside an institution-type setting or whether he's outside. No matter where he is, he will kill again. . . . He would be a danger in any type setting, and especially to guards or other inmates. No matter where he might be, he is a danger. (p. 925)

Underprediction of violence was made in the case of the State of Texas v. Billie Wayne Coble (1990):

Billie does not represent a continuing threat to society and will not be involved in future acts of violence. . . . He would be less likely to do something like this again than one of the members of the jury or one of us here. (pp. 1128, 1133)

Methodology and testimony in capital-sentencing violence risk assessment has significant ongoing forensic relevance. Future violence potential is a statutory aggravating factor at capital sentencing in 21 states (McPherson, 1996). In Texas and Oregon, the jury must respond affirmatively to a special question regarding the probability of future violence for the death penalty to be imposed. This is often framed as the potential for violence in prison as well as on possible parole at the conclusion of a capital life sentence. Altematively, evidence regarding the likelihood that the defendant will make a successful prison adaptation is admissible in a capital proceeding (Skipperv. South Carolina, 1986). Testimony involving this positive prisoner evidence is frequently presented in mitigation (D. Bruck, personal communication, June 17, 1998). The concem of the jury with the defendant's criminal violence potential appears to significantly influence its deliberations as to whether the issue is overtly advanced at trial (Costanzo \& Costanzo, 1992; Geimer \& Amsterdam, 1988; Sandys, 1991).

Despite the recommendations and cautions of a literature extending two decades, poorly grounded conclusions of violence risk at capital sentencing continue to be advanced by attorney argument and, more disturbingly, supported by mental health testimony. Allegations of future dangerousness have been increasingly represented in federal capital prosecutions. Future dangerousness was alleged against a heterogeneous group of defendants in notices of aggravating circumstances in 21 of $37(57 \%)$ of federal capital cases prior to January 1 , 1995 and in 75 of 84 (89\%) after this date (M. O'Donnell, personal communication, January 4, 1999).'

The assertion that "there is a probability that the defendant will commit criminal acts of violence that would constitute a continuing threat to society" (Texas Code of Criminal Procedure 37.071.2, 1996) has been advanced in all death penalty prosecutions as a matter of statute in Texas since 1973. This statute was affirmed by the U.S. Supreme Court in Jurek v. Texas (1976). Marquart et al. (1994) reported that between 1974 and 1988, 421 offenders were sentenced to death in Texas after the jury found a probability of future criminal vio-lence--roughly three times the number of convicted capital murderers who received capital life sentences.

No systematic empirical study of the frequency or content of expert testimony at capital sentencing, whether asserting a high or low
probability of acts of future criminal violence, is available. In the experience of the authors and in the response of the literature, the former testimony is more common. Regardless of whether error occurs in over- or underestimating the probability of future violence, methodological and conceptual errors in this life and death context are of grave magnitude. Capital risk assessment conclusions have unequaled consequences for the defendant and society.

This article will describe violence risk assessment errors that unfortunately continue to occur at capital sentencing.

## INADEQUATE RELIANCE ON BASE RATES

The base rate is the statistical prevalence of a particular behavior over a set period of time. It is the fundamental group statistic in risk assessment and is considered to be the single most important piece of data necessary in making an accurate risk estimate (Monahan, 1981; Webster, Harris, Rice, Cormier, \& Quinsey, 1994). Failure to anchor individual violence risk assessments to the base rate of violence in the estimated group is a common fundamental error (Monahan, 1981, 1996; Smith, 1993). Without this anchor of a comparative reference point, individual risk estimates at capital sentencing may be little more than speculation.

The problem of using clinical methods in risk assessments of longterm violence potential increases when the actual base rates are counterintuitive. For example, base rates of serious institutional violence in capital commutees, murderers, long-term inmates, and federal highsecurity prisoners do not significantly exceed and in some studies are below inmates convicted of less serious offenses (Bedau, 1964; Cunningham \& Reidy, 1998b; Flanagan, 1980; Harer, 1992; Marquart, Ekland-Olson, \& Sorensen, 1989; Sorensen \& Wrinkle, 1996).

More specifically, a natural experiment created by the commutation of 533 death row inmates across the United States following Furman v. Georgia (1972) found that, despite the heinousness of their offenses, almost $70 \%$ of the commuted capital murderers and rapists committed no acts of serious institutional violence across up to 15 years of follow-up in the general prison setting (Marquart \& Sorensen, 1989). In a post-Jurek $v$. Texas sample, both commuted death sentence
and life sentence capital murderers followed for an average of more than 7 years in the Texas general prison population demonstrated one fifth the rate of serious violent prison rule violations compared with the prison system as a whole, with $90 \%$ of these capital inmates eventually serving as trustees (Marquart, Ekland-Olson, \& Sorensen, 1989). Sorensen and Wrinkle (1996) analyzed the institutional violence rates of 648 Missouri death row, life-without-parole, and life-with-parole convicted murderers, finding that $78.2 \%$ had no reported assaults across 15 years of follow-up. Of the assaults that did occur, one third were classified as minor. The type of sentence did not significantly affect prison violence rates. Repetitive serious prison violence was observed in these studies but tended to involve only a small minority of the capital inmates. Cumulative incidence of inmate-oninmate homicide across multiyear follow-up in these studies ranged from . 005 to 012 .

Parole can be granted to capital murderers in some states. Follow-up of capital commutees on parole indicates that most do not retum to prison, much less commit new acts of serious criminal violence in the community. The incidence of return to prison was .20 , and incidence of new felonies was .08 (Wagner, 1988) and .10 (Marquart \& Sorensen, 1989). In applying these parole base rates to current capital defendants, it should be noted that the sentence duration before parole eligibility is now longer (Texas minimum is now 40 years), resulting in the current defendants being much older when paroled than earlier groups of parolees were.

Noncapital murderers demonstrate lower base rates of parole recidivism than parolees with other offenses of conviction. In a large'scale study of 3-year parole recidivism in 11 states, Beck and Shipley (1989) reported that 506 paroled murderers had a 21 rate of retum to prison compared to a rate of .41 for 16,355 general parolees. Perkins (1994) analyzed data from 29 states and reported that 5,371 paroled murderers had a .33 return to prison rate compared to a return rate of .46 for 209,995 all-offense parolees.

Base rates such as these demonstrate why multiple authors (Hall, 1987; Monahan, 1981; Morris \& Miller, 1985; Serin \& Amos, 1995) have asserted that base rates are essential to an accurate violence risk
nt. Faulty estimations of the violence likelihood of capital defendants in prison or on parole may result from ignorance of base rates.

## FAILURE TO CONSIDER CONTEXT

Prison is a fundamentally different context than free society. It cannot be reliably assumed that behavior in the community will be observed in prison. This can be illustrated with base rate data. Of inmates in state prison, $\mathbf{4 7 \%}$ are serious violent felons, and $12.4 \%$ have been convicted of murder or manslaughter (Brown, Gilliard, Snell, Stephan, \& Wilson, 1996). In spite of this concentration of individuals with demonstrated histories of serious criminal violence, the annual base rate of inmate-on-inmate homicide in state prisons nationwide is 5.6 homicides per 100,000 inmates as compared with 8.2 homicides per 100,000 for the U.S. population (Maguire \& Pastore, 1997). The rates of homicide in the community are much higher if the community base rates are adjusted to match the prison population for gender, age, and ethnicity. The annual base rate of inmate-oncorrectional staff homicide nationwide across 1994 and 1995 was only 1.5 staff homicides per $1,000,000$ inmates (Maguire \& Pastore, 1997; Schramm, 1995). The obvious implication of these base rates is that prison works. The restrictions, structure, and supervision of prison are effective in limiting the incidence of serious violence within the institution. Significant error results from not modifying the risk estimate for the context of prediction (Monahan, 1981; Shah, 1978).

Context may also be relevant to consider because much violence is a product of the interaction or convergence of situational factors, interpersonal relationships and influences, substance abuse, and other contributors as well as individual violence proclivity (Monahan, 1981, 1996; Shah, 1978). The convergence of these factors may well not be replicated in prison or on old age parole. The relationship of a context of substance abuse to violence may illustrate this point. Alcohol abuse has a well-established association with community violence (Swanson, Holzer, Granju, \& Jono, 1990), aggressive responses in experimental paradigms (Bushman \& Cooper, 1990; Gustafson, 1993; Taylor \& Chermack, 1993), violent crime (Murdock, Pihl, \& Ross, 1990), and homicide (Lindqvist, 1991).

Beck et al. (1993) reported that more than $40 \%$ of state prison inmates convicted of homicide or assault committed this offense under the influence of alcohol or alcohol with drugs. The average amount of ethanol consumed by violent offenders before their offense was more than 9 ounces-the equivalent of three six-packs of beer. Of general state prison inmates, $29 \%$ had maintained a pattern of daily drinking across the year preceding the current offense. Of violent offenders, $46 \%$ had abused drugs in the month preceding their offense, $28 \%$ committed the violent offense under the influence of drugs, and $12 \%$ reported committing the violent offense to obtain money for drugs.

Although alcohol and drugs are available in prison to a limited degree, that availability does not match the degree of abuse that can be sustained in the free community. Thus, the context of prison arguably removes a major component from the algebra of violence for many offenders.

## SUSCEPTIBILITY TO ILLUSORY CORRELATION

An illusory correlation occurs when a clinician believes that two variables are correlated, when, in fact, they are not or are correlated opposite of the predicted direction. In the absence of base rates, careful attention to context, and reliance on empirically demonstrated factors, risk assessments can become quite vulnerable to illusory correlations. This is because many risk assessment variables regarding prison behavior are counterintuitive. For example, Flanagan (1979) identified that inmates facing more that 5 years of confinement ( $47 \%$ of whom were murderers) had lower rates of disciplinary infractions than did short-term inmates. In other words, inmates convicted of more serious offenses and facing longer prison sentences displayed better prison adjustment than short-term, less serious offenders did. Disciplinary offenses of any sort among long-term inmates ranged from approximately .5 to 1.5 per inmate annually, depending on the age of the inmate at initial incarceration. Only $11.8 \%$ of these infrequent disciplinary write-ups were for fighting or some form of physical assault. Flanagan hypothesized that long-term inmates adopt a perspective regarding doing time that promotes adaptation.

Similar counterintuitive findings were reported by the U.S. Bureau of Justice Statistics (Stephan, 1989), as inmates convicted of violent offenses had lower rates of prison disciplinary infractions than property offenders did. Cooper and Wemer (1990) found that severity of the offense of conviction did not predict violent infractions in the first 6 months of federal prison confinement, despite expectations of prison caseworkers and psychologists that this was an important predictive factor.

Studies sponsored by the U.S. Justice Department (Alexander \& Austin, 1992; National Institute of Corrections, 1992) have concluded

1. Past community violence is not strongly or consistently associated with prison violence.
2. Current offense, prior convictions, and escape history are only weakly associated with prison misconduct.
3. Severity of offense is not a good predictor of prison adjustment.

Prison violence does not predictably follow from preconfinement violence or the capital offense of convition. Clinicians then must take care to rely on empirically validated factors, rather than inferring proclivity for prison violence from factors they believe to be related to this risk. The face validity of their logic is not proof against illusory correlation.

## FAILURE TO DEFINE SEVERITY OF VIOLENCE

Rates of violence in prison and in the community are markedly different depending on the type and severity of violence. Failure to specify the severity of violence being estimated is one of the most common errors in violence risk assessment (Monahan, 1981). This problem is illustrated by analyzing rates of inmate violence in federal prison. Using data from Harer (1992), there were approximately 1.16 physical assaults with injury annually on federal correctional staff per 100 inmates, but only one fiftieth of these were serious enough to result in stitches, broken bones, concussion, or hospitalization. Thus, a low base rate of staff assault becomes even lower when measured in assaults that result in more significant injury. Inmate-on-inmate assaults in federal prison had an annual rate of 1.1 per 100 inmates but
more often resulted in significant injury, as one fifth of these were classified as serious or major as defined above. If the inmate violence of concern is specified as inmate or staff homicide, then the associated base rates are profoundly lower, as cited above. For a violence risk assessment to be meaningful and reasonably informative, the severity of violence being estimated must be defined and the probability of these various levels of seriousness delineated.

## OVERRELIANCE ON CLINICAL INTERVIEW

Clinicians relying on traditional techniques are poor at accurately estimating the future behavior of others-particularly low base-rate behaviors. Actuarial methods have been identified repeatedly as superior to clinical methods in predicting most human behavior, including the probability of violence (e.g., Poythress, 1992). Morris and Miller (1985) asserted that clinical methods add little to the accuracy of actuarial or anamnestic risk assessment measures. Shah (1978) and Dawes et al. (1989) cautioned that clinical decision making is subject to multiple faulty conceptual strategies when predictions are made under "conditions of uncertainty," such as a violence risk assessment. Specifically, clinicians have difficulty distinguishing between actual violence risk variables and those they intuitively believe to be predictive but which are not. They have difficulty incorporating all of the available data and thus emphasize variables that are most memorable or most consistent with personal bias, resulting in faulty weighting.

Clinicians tend to ignore base rates in the face of specific information or when confronted with a specific individual. Typically, their exposure is limited to only a narrow and skewed portion of the population under consideration. Rarely do clinicians gather systematic feedback regarding the accuracy of their past judgements, resulting in growing confidence over time entirely unrelated to any increase in accuracy. Given these caveats, traditional clinical information is most relevant to conservative modifications of base rates in risk assessment rather than as a primary basis of opinion.

Webster et al. (1994) quite cogently describe the cautions and limited risk assessment applications of clinical interview and methods:

We have a profound distrust of unbridled clinical opinion. . . . With the actuarial estimate of risk in hand, it is our point, one made repeatedly throughout the VPS (Violence Prediction Scheme), that the figure be adjusted in a conservative manner based on the idiosyncratic aspects of the particular case. We have made it clear that such adjustment may be warranted by therapeutic outcome, changed opportunity, adequacy of supervision, current compliance with medication and supervision, and so on. (p. 64)

## MISAPPLICATION OF PSYCHOLOGICAL TESTING

Psychological testing of personality appears to add little to the reliability of a capital risk assessment and may even distract the clinician from attending to more valid base rate, contextual, and situational determinants.

As a basic premise, psychological testing is only inferentially related to psycholegal issues in forensic practice and as such should be used to raise and not confirm hypotheses (Heilbrun, 1992). Heilbrun elaborated on this limited role of psychological testing in a forensic context:

Psychological testing typically does not provide data that are directly relevant to the immediate legal issue. Rather, testing can provide information relevant to the threshold issue of mental or emotional disturbance; the causal connection between mental state and functional, legally relevant behavior remains to be assessed. Data obtained through psychological testing may, for a variety of reasons, provide an inaccurate representation of the individual. (p. 263)

Even this use requires that the trait in question is operationally defined and that the base rate of the inferred trait in the applicable group is specified so that interpretive comparisons are reasonably meaningful. More important to a capital risk assessment, the relationship of a hypothesized trait to prison violence must be empirically demonstrated. For example, suppose antisocial traits and impulsivity are suggested by the testing profile. Both of these traits are arguably ubiquitous in a prison population and thus of little benefit in distinguishing those inmates likely to be a particular violence risk. Not
surprisingly, then, personality assessments using psychological testing have not been demonstrated as being particularly useful in identifying those inmates who are likely to have a disproportionate rate of violent infractions in prison (Cunningham \& Reidy, 1998b).

Research examining the relationship between personality testing and prison violence has primarily involved the Minnesota Multiphasic Personality Inventory (MMPI) and MMPI-2 (Butcher, Dahlstrom, Graham, Tellegen, \& Kaemmer, 1989; Hathaway \& McKinley, 1940), with almost no empirical research on the application of projective measures to violent prison misconduct. Although a comprehensive review is beyond the scope of this article, limited reference is illustrative. Quay (1984) obtained MMPI profiles on 1,824 inmates in U.S. federal prison who had been divided into five groups based on record review and observation of prison behavior. Scale 4 (Pd) $T$-scores were elevated for all five groups with overlapping distributions. Generally, the MMPI/MMPI-2 has been disappointing in the prediction of disciplinary-related prison outcomes. (Clements, 1996; Craig, 1996; Kennedy, 1986; Shaffer, Waters, \& Adams, 1994; Van Voorhis, 1994; Zager, 1988).

## FAULTY IMPLICATIONS OF ANTISOCIAL PERSONALITY DISORDER AND PSYCHOPATHY

Cunningham and Reidy (1998a) comprehensively reviewed sentencing and risk assessment implications of antisocial personality disorder (APD) and PCL-R psychopathy. Antisocial personality disorder is not in and of itself an indication of a particularly dangerous or incorrigible inmate. Again, base rates are instructive. The prevalence or base rate of APD in a prison population is about $75 \%$ (Meloy, 1988). Thus, a diagnosis of APD alone describes little about prison behavior and recidivism outcome except that the individual is similar to other prison inmates. Contrary to the most egregious capital testimony asserting that the disorder is unremitting, APD typically wanes in symptom intensity by the fourth decade (DSM-IV; American Psychiatric Association, 1994). Other problems with making inferences from a diagnosis of APD disorder to sentencing determinations include shifting diagnostic criteria, innumerable symptom variations, absence of symptom weighting, temporal instability, overlap with (Cunningham \& Reidy, 1998a; Widiger \& Corbitt, 1995).

Although the Psychopathy Checklist-Revised (PCL-R) (Hare, 1991) holds much promise for identifying risk in multiple populations and contexts, its current application to capital sentencing remains limited. Increasing scores on the PCL-R have been reliably demonstrated to be associated with higher risk of both general and violent recidivism in the community among White males through midlife (e.g., Hare \& McPherson, 1984; Hare, McPherson, \& Forth, 1988; Hart, Kroop, \& Hare, 1988; Serin, 1991, 1996; Serin \& Amos, 1995). There is scant research, however, regarding the instrument and prison violence, and the existing research is flawed (Cunningham \& Reidy, 1998a). There is insufficient published research on the violence implications of psychopathy among ethnic minority groups or women, particularly regarding violence within prison. Similarly, there is little research on psychopathy and parolees in old age - the age of a capital defendant at the conclusion of a capital life term in some states.

## IGNORING THE EFFECTS OF AGING

Lower likelihood of criminal activity and violence with aging is one of the most well-established principles of criminology (Hirschi \& Gottfredson, 1989). The shape of the distribution is quite similar regardless of the criminal behavior being plotted, with incidence of criminal and violent behavior peaking in the late teens and early twenties and falling steadily across the lifespan. Base rates of crime and violence after age 60 are only a small fraction of the rates during young adulthood. The impact of aging on base rates of crime and violence has been widely demonstrated regarding institutional disciplinary offenses (Alexander \& Austin, 1992; Flanagan, 1979; Sorensen \& Wrinkle, 1996), criminal activity and arrests in the community (Hirschi \& Gottfredson, 1989), violence in the community (Swanson et al., 1990), arrests for violent offenses and murder in the community (Brown, Flanagan, \& McLeod, 1984; Maguire \& Pastore, 1997; Miller, Dinitz, \& Conrad, 1982), prison admissions (Flanagan \& McGarrell, 1986), prison population demographics (Maguire \& Pastore, 1997), and parole recidivism (Beck \& Shipley, 1989; Hoffman \&

Beck, 1984). Risk estimates that fail to address the reduced likelihood of violence with progressive aging are fundamentally flawed.

## MISUSE OF PATTERNS OF BEHAVIOR

Clinicians frequently quote the well-known maxim: The best predictor of future behavior is past behavior. This assertion is true up to a point. Patterns of behavior can reliably estimate future behavior, but only when the pattern is sufficiently established and the predicted context is sufficiently similar (Morris \& Miller, 1985). Unfortunately clinicians may group behaviors into "patterns" that reflect confirmatory bias, ignoring or giving little attention to situational, interpersonal, or contextual factors. Behaviors that are infrequent or of a heterogeneous nature may not constitute a predictive pattern. Altematively, the context of the past pattern (e.g., the community) may not be predictive of behavior in a very different context (e.g., prison) (see discussion above).

## NEGLECT OF PREVENTIVE MEASURES

Assessment of risk is not simply a static enterprise. It also involves consideration of what preventive measures can be undertaken that would modify or reduce the level of violence risk posed by a particular inmate (Serin \& Amos, 1995). Consistent with this conceptualization, Heilbrun (1997) identified two broad forensically relevant models of violence risk assessment: (a) accurately forecasting the probability of violence, and (b) managing risk to reduce violence incidence.

Analogous exercises in active risk management in automobile travel are the interventions of padded dash, safety glass, seat belts, air bags, etc. for reducing the risk of injury. In capital risk assessment interventions, medication or treatment for psychological disorders, separate confinement from codefendants or fellow gang members, special management provisions, or modified confinement should be considered in determining a revised estimate of risk.

Most prison systems have levels of unusually high security to contain inmates who would otherwise represent a significant risk to staff and other inmates (Buchanan, Unger, \& Whitlow, 1988). These may
be referred to as administrative segregation, administrative detention, administrative maximum, super-max, or other terms where the inmate is single celled and locked down 23 hours daily, with individual or small group exercise, and shackled movement under escort. Under such confinement, opportunity for serious violence toward others is greatly reduced. Similarly, there are provisions for limiting the contact that an inmate may have with other inmates or the free community if there are well-founded concerns that the inmate might use this communication to continue criminal enterprise or direct violence against others.

There is both statute and case law supporting the authority of the state to enforce special conditions of confinement on an inmate when there is substantial risk that an inmate's contacts or communications could result in death or serious bodily injury to others. Risk reduction techniques provided by the Code of Federal Regulations, 28 C.F.R. § 501.3 (a) (1997), to the federal Bureau of Prisons include housing the inmate in administrative detention and limiting correspondence, visitation, or use of the telephorte. Similar statutory authority is granted under the United States Code, 18 U.S.C. § 3582 (d) (1987), to the U.S. District Court to impose special risk management conditions of imprisonment in particular situations.

Special conditions of confinement must be "reasonably related to legitimate penological interests" (Turner et al. v. Safley et al., 1987) and thus cannot be imposed punitively, arbitrarily, or without periodic review of whether these restrictive conditions remain necessary. That said, the posture of the Court appears to be one of allowing the prison system substantial discretion in applying these risk reduction conditions to maintain order and safety both within the institution and in the community. As an example, in September 1985, the Texas Department of Corrections responded to rapidly escalating prison gang membership and an associated marked increase in inmate violence by ordering the indefinite administrative segregation lockdown of more than 1,200 known prison gang members. This policy of confining known gang members in administrative segregation continues to date.

Capital risk assessment, then, calls for consideration of how the probability of institutional violence would be affected by confinement of the defendant under special conditions of increased security, supervision, and isolation.

## INSUFFICIENT DATA

Clinicians who rely on traditional mental health evaluation sources of information in performing a capital risk assessment are woefully data deficient. Violence risk assessment at capital sentencing is a broadly data intensive task. These assessments require knowledge of multiple applicable base rates, various prison contexts, differing empirical correlates of violence risk factors in the community and within prison, parole recidivism risk correlates, institutional records of the defendant, patterns of criminal conduct, and situational and interpersonal variables.

Improved decision making in the capital arena is emerging from new research, technologies of assessment, and better training that must be integrated into practice (Borum, 1996). A more reliable scientific foundation for communicating risk assessments, which derives from the second generation of violence risk studies, may serve to reduce the battle of experts so prevalent in the courts.

## FAILURE TO EXPRESS THE RISK ESTIMATE IN PROBABILISTIC TERMS

Clinicians continue to confuse crystal balls with science at capital sentencing, undertaking predictions of violence rather than assessments of risk. Violence risk assessment in any context involves an estimate of likelihood, not a dichotomous prediction (Grisso \& Appelbaum, 1992). Thus, the risk assessment task for the forensic mental health expert at capital sentencing is not reliably answered in terms of a prediction of whether or not the defendant will commit future acts of serious violence. The distinction between prediction and assessment is more than simply semantics. Probabilistic estimates acknowledge that anticipation of future behavior is less than certain and that experts are not oracles of supernatural divination. Probabilistic estimates keep the focus on the data as opposed to emotional reasoning, untestable assumptions, and dueling conclusionary testimony of competing experts. Probabilistic estimates communicate that serious violence among capital offenders in prison or on possible capital parole are low base rate behaviors and are not exhibited by the majority of capital offenders. Most importantly, the concept of relative likelihood
provides more information to the court than a dichotomous prediction, allowing the trier of fact to apply the best available data and methods to what is ultimately a social consideration of what degree of violence risk is acceptable.

## DISCUSSION

Error in violence risk assessment at capital sentencing is minimized when the forensic expert assumes the role of well-informed educator, articulating the best available risk assessment methodology and probabilistic data. This education function can be reliably exercised in two fundamental ways:

1. Discussion of risk assessment methodology, presentation of relevant base rate data, and delineation of custody options to provide the cour with representative group risk estimates and risk management information.
2. Conservative particularization of the above group data to a specific defendant using empirically derived risk enhancemen/protective factors and context relevant past patterns of behavior.

The educative function of the risk assessment expert is facilitated by use of demonstrative exhibits such as overhead transparencies or charts. These teaching aides assist the comprehension of the court by providing visual depiction of various risk assessment methodologies, empirical research findings, base rate statistics in numeric and graph form, custody options and enhanced security provisions, and individualized risk modification factors.

There is ongoing discussion in the violence risk assessment literature regarding how risk information is best communicated (Monahan \& Steadman, 1996; Schopp, 1996). The unresolved issue involves both what form of risk communication is most understandable and functional for the court or other institutions and what are the parameters of the clinician's expertise, the limits of empirical research, and the delineation of responsibility between the expert and the court. Monahan and Steadman (1996) contrasted the various merits of statistical risk communications and categorical risk classification systems, using weather forecasting as an analogous model. Categorical
systems are being incorporated in some newer risk assessment instruments such as the Violence Prediction Scheme (Webster et al., 1994).

Schopp (1996) cautioned that, depending on the assessment context, using categorical risk statements may inappropriately extend the role of the forensic expert from describing and explaining the risk of violence, both to making evaluative normative social judgements of what level of risk is acceptable and to assuming responsibility for determining what prescriptive action should be undertaken to contain the risk. Schopp asserted that the blurring of boundaries between the descriptive/explanatory and the evaluative/prescriptive risk assessment functions may result in the clinician's role extending "beyond the scope of competence and authority" and, in the court, "promoting circumstances that encourage various legal actors to inappropriately shift their policy making and prescriptive responsibility to psychologists and other experts" (p. 941). The discussion of violence risk assessment communication and associated role boundaries has an obvious close association to the debate on ultimate issue testimony (Fulero \& Finkel, 1991; Goldstein, 1989; Slobogin, 1989).

For both educative and role clarity reasons, we prefer risk communications at capital sentencing that are predominantly statistical, with any categorical summary statements accompanied by an explicitly stated statistical basis. Two primary considerations drive this recommendation. First, categorical systems compress the data (Monahan \& Steadman, 1996). The educative role of risk assessment at capital sentencing, though, calls for more rather than less information. Assessment of long-term violence risk at capital sentencing is a task of substantial complexity. The likelihood of violence for a capital defendant will vary depending on severity of violence being estimated, the conditions and restrictions of confinement; the varying age of the defendant across the course of incarceration, the defendant's age at capital parole eligibility (if this is even an option), and individualized aspects of the defendant that might cause risk of violence to vary somewhat from the reference group of capital defendants, other inmate populations, or parolees. As this article has detailed, the complexity of capital nisk assessment does not lend itself to traditional clinical methods, easy assumptions based on the offense of conviction, neglect of context, diagnostic inference, dichotomous prediction, or unelaborated conclusionary testimony. This complexity is also not served by
the data compression of categorical risk statements that are not accompanied by extensive discussion of underlying methodology, base rates, context, aging, preventive measures, and so on.

Second, categorical risk communications encourage a compression of risk assessment roles, merging the descriptive/explanatory function of the expert with the evaluative/prescriptive function of the court (Schopp, 1996). We believe that the failure of experts to be well-informed educators and the blurring of risk assessment role boundaries by experts and the court account for much of the legacy of error in capital risk assessment testimony. Too often in capital risk assessment testimony, the common errors described in this article have coalesced with categorical characterizations of the defendant as "sociopathic" and inevitably violent in all contexts, making a preventive intervention of death an implicit, if not overt, conclusion. We are concerned, then, that when the risk assessment roles are blurred at capital sentencing, there is increased risk that the educative function will be discarded, the expert will go beyond the limits of science, and the court will abdicate its responsibility to the expert. Any of these increases susceptibility to error at capital sentencing.

The role-blurring potential of categorical risk communications may be exacerbated at capital sentencing by a hypothesized demand characteristic that Marquart et al. (1994) termed the logic of exclusion: "a set of beliefs and practices that place some persons in a category apart, separate from the rights and duties otherwise applied" (p. 17). In other words, when the defendant is characterized as fundamentally different from other citizens or even other inmates, the death penalty becomes more palatable, more appropriate, and more necessary. The philosophical arguments regarding the place of exclusionary logic in death penalty determinations are not the concern of this article. It is the potential presence of this phenomenon, not its legitimacy, that may represent a significant demand characteristic for the forensic clinician making a capital risk assessment. Specifically, categorical identification of the defendant as perpetually violent can serve as a rubric for the logic of exclusion. This characterization of inevitable violence is assisted immeasurably when the weight of apparent science and expert authority is added to the horror of the offense and the fears of the jury. A forensic clinician conducting a capital risk assessment may experience some pressure to blur the descriptive/explanatory and meet this demand.

Although overestimations of violence risk and overreaching categorical characterizations at capital sentencing have been the greater concem of the literature, errors of underestimation of violence likelihood at capital sentencing can also occur. These are most likely to occur when risk estimates are not anchored to base rates, when a pattern of serious past institutional violence is neglected, when ongoing prison gang participation is present, or when features of the capital defendant ortype of violence are outside of those accounted for by the base rates. This latter factor could be represented by an organized crime figure attempting to order violence in the community from within prison. That said, it is arguable that with current prison technology, facilities, and procedures, there is a level of confinement security, isolation, supervision, and restriction from communication that can substantially limit the likelihood of serious prison violence in any capital defendant.

The educative function of the risk assessment expert at capital sentencing rests on a foundation of being methodologically well informed and scientifically sound. The task is much more rigorous than expressing a risk estimate in probabilistic terms, whether statistical or on a categorical continuum. The task is not simply a matter of asserting a percent likelihood, using modifiers such as "low," "moderate," or "high" risk or incorporating the word "probability" in conclusionary testimony. The probabilistic terms used to convey the risk estimate must rest on a methodology that is probabilistic, statistically anchored, and empirically grounded. Otherwise, the words of science are fraudulently enlisted in the expression of speculation. Further, the underlying probabilistic methodology and empirical data must be conveyed to the court in sufficient detail that the court can retain and reliably exercise its sentencing responsibility of unparalleled gravity.

NOTE

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Code of Criminal Procedure, 1996). Twenty-one states have statutory
 ness of a capital defendant as a statutory aggravator (McPherson,
 nonstatutory aggravator in $87 \%$ of the capital prosecutions since January 1, 1995 (M. O'Donnell, personal communication, August 13, 1999).' It is the experience of the authors that in arguing future dangerousness in death penalty sentencing hearings, the state typically asserts that it is more likely than not, or even inevitable, that the defendant will commit acts of serious violence in prison.
Even when it is not overtly alleged at trial by the prosecution, future
 (Bowers \& Steiner, 1999; Costanzo \& Costanzo, 1992; Geimer \&
 with this future dangerousness determination, it is critically important that their risk assessments rest on sound methodology.
[ет! 80 очо testing have proven to be unreliable in estimating long-term violence likelihood. Three primary sources of error are implicated in the disappointing performance of this approach. First, clinical techniques in





 rience with a narrow and skewed population, and failing to obtain fol-low-up data on the accuracy of past risk estimates.
Second, clinically identified characteristics that might be predictive of violence in one context (i.e., the community) may not be predictive in another context (i.e., prison). This may result from the marked differences in the frequencies of various personality traits or
sor of criminal justice ai the University of Texas-Pan American. The authors wish to thank the Indiana Department of Corrections and, in particular, Kathy Lisby and James Holdeman for their invaluable assistance during the study. Correspondence concerning this article should be addressed to Thomas J. Reidy, Ph.D., ABPP, The Sargent House, 154 Central Avenue, Salinas, CA 93901; e-mail: tomreidy@aol.com.


population. Marquart and Sorensen (1989) subsequently examined the incidence of prison violence among this former death row group across 15 years following their Furman commutation. Remarkably consistent group statistical data on the incidence of prison violence among former death row inmates (by commutation, retrial, or plea agreement) have also emerged from a limited number of other studies. These studies have reported on the prison behavior of other cohorts of former death row inmates-before and since Furman. Two studies have tracked the prison violence incidence among capital offenders who were sentenced to a life prison term rather than death at their trials (Marquart, Ekland-Olson, \& Sorensen, 1989, 1994). As inspection of Table 1 indicates, the comparison life sentence groups display violence frequencies that are quite similar to the former death row inmates, suggesting that the sentence of death was not a substantial explanation for their low level of violence. Similarly, Sorensen and Wrinkle (1996) found that the sentence, whether death, life-with-
 for Missouri offenders across 15 years of follow-up.
 prison misconduct for former death row inmates across
 thirds of the former death row or life sentenced inmates in one of the Texas samples (Marquart et al., 1989) were never confined in administrative segregation and $90 \%$ were ultimately designated as "trustees"



 lence risk assessment of a capital defendant.

The reliability and predictive validity of this base rate anchor are tested by research on the disciplinary experience of other former death row samples. This additional research is important to determine the confidence a mental health expert, and subsequently a capital sentencing jury, may have in generalizing from these base rates to a given cap-
 text specific limitations with regard to the application of earlier base
 yielding confirmatory findings would increase the robustness of
 plinary write-ups among the participants varied from 0 to 88 .
This sample was $64 \%$ Caucasian, $33 \%$ African American, and 3\% Hispanic. Only one individual was identified in the records as belong-
 incarceration for the capital offense was 28 years (range $=16-50$



 time in the general population was 112 months (range $=16-287$

 prior to the capital offense. For purposes of this study, pre-capital vio-
 assault, and robbery.

## data collection





 racy of the extracted data. Discrepancies were presented to the authors who resolved any differences.
ANALYSIS AND FINDINGS

 that either caused, or had the imminent potential to cause, serious bodily injury. Our definition includes homicides and physical assaults committed against correctional officers or inmates. However, incidents involving the mere tossing of urine or feces were excluded.


year and the prevalence to $20.5 \%$. Of the 8 inmates committing violent


 ( $35.9 \%$ ) inmates were involved in 24 violent acts ( 3.8 per 100 inmates per year).

Although our definition of violent acts includes potentially harmful
 number. Serious bodily injury is defined herein as homicide, sexual assault, stabbing, laceration requiring sutures, broken bone, concus-




 inmates per year. Of the 10 incidents reported in the general popula-


 1.1 per 100 inmates per year and a prevalence of $15.4 \%$
 of a violent act. To accomplish this task, survival analysis is employed (see Luke \& Homan, 1998). Survival analysis is a statistical procedure used to model the time to an event. It differs from traditional measures,

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 survival analysis is concerned with which type of inmate commits a violent act sooner than the others.

An inmate is considered a failure if he or she commits one of the violent acts described above. The time to failure (hazard) is coded in months. For those who fail, the time to failure is considered the at-risk
 who did not commit a violent act, the at-risk period includes the total
time served on both death row and the general prison population until being "censored," which means that any of the following occur: death, parole, or end of the observation period.

Survival analysis typically proceeds in a manner similar to traditional methods of analysis. First, univariate life tables are constructed that provide an overall description of sampled participants' behavior across specific time intervals. Second, bivariate analyses are used to compare the survival probabilities of different groups within the sample. Third, multivariate hazard models are estimated using continuous or categorical predictor variables. Finally, diagnostic procedures are performed to determine if the assumptions of the analyses were violated. Most important, log minus log plots are consulted for categorical covariates to make sure that the hazard ratio for one type of person is proportional to that of others across time intervals. Parallel curves indicate that the proportional hazards assumption has not been violated. Influence plots are consulted for continuous variables to make
 on hazard rates.
One of the simplest yet most illuminating functions of survival analysis is its ability to summarize and provide overall descriptive statistics with regard to the occurrence of an event over time. A life table was used to group rates of survival-no violent acts-by months served. Figure 1 illustrates the pattern of survival over the course of these inmates' incarceration. Estimates from the life table used to plot
 inmate by the end of the 131 months was 601 . The predicted rate of survival was estimated by projecting survival rates of those successful inmates censored before the end of this 11 -year period. Had all of the censored inmates been present in the sample throughout the 11-year period, the rate of success would have been slightly lower than the observed rate of success, .641 , found in Table 2.
 vival curve through the 11 th year. In the 11 th year, four inmates committed violent acts. What Figure 1 does not show is that the series continues with one inmate surviving 432 months, or 36 years, without any further incidence of violence. Whether due to the effects of aging or institutional control mechanisms, for inmates who have succeeded

| With General Population Inmates |  |  |
| :--- | :---: | :--- |
|  | Annual Rate of Inmate <br> and Staff Assault <br> (rate per 100 inmates) | Year |
| Corrections Department | 2.8 | 1972.1999 |
| Indiana former death row | 2.3 | $1988-1989$ |
| Federal Bureau of Prisons systemwide | 4.5 | $1988-1989$ |
| U.S. penitentiaries | 4.3 | 1998 |
| California | 2.6 | 1999 |
| Texas | 3.3 | $1998-1999$ |
| South Carolina | 2.4 | 1998 |
| Colorado |  |  |

The relationship of preconfinement criminal activity in the commu-
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 of their correlations were significant.
 of the former death row inmates had no disciplinary write-ups whatsoever following transfer to the general prison population, and $60 \%$ had

 Kreu!id! infractions.

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 ons. Comparisons to the general prison population of other prison systems are undertaken cautiously as operational definitions of violence
 are presented in Table 4.

TABLE 3: Proportional Hazards (Cox regression) Model Predicting Months to

| Variable | $B$ | SE | Exp(B) |
| :--- | :--- | :--- | ---: |
| Age | $-.285^{* * *}$ | .082 | .752 |
| Race_African American | $1.394^{*}$ | .659 | 4.030 |

NOTE: $\chi^{2}=13.126^{* *},-2 L L$ Change $=21.223^{* * *} . L L=\log$ likelihood.
$\cdots p<.05 .{ }^{\circ} p<.01 . \cdots p<.001$.
will fail-commit a violent act-during the next time interval having survived to a given point in time.
 hazard model that included the two control variables simultaneously.
 dicted direction, whereas race was not significant. The diagnostics for
 covariates, revealed a similar pattern for African Americans and Cauәч7 јо uond



 lent incident. Because this case unduly influenced the model estimates, it was removed from the equation, and the Cox model was again computed.

The results presented in Table 3 show that the model is significant $\left(\chi^{2}=13.126\right)$, and it presents a significant reduction in the error of prediction over the intercept alone $(-2 \log$ likelihood $=21.223)$. Again, age is significantly related to the hazard rate. Not surprisingly, after ridding the analysis of the 17-year-old outlier, an African American, the race variable proved to be significant and positively related to the hazard rate. The last column on Table 3 (expB) is most useful for interpreting the strength of the relationships between the predictors and the hazard rate. The coefficient for age (.752) tells us that each yearly increase in age beyond the mean ( 28.44 years of age) results in a $25 \%$ reduction in the hazard rate. The coefficient for race (4.030) indicates
 Caucasians.

The majority of former Indiana death row inmates did not commit
 general prison population. With the exception of a single inmate homicide, generally the violence that did occur among these former death row inmates did not result in serious injury. The prevalence rate of violence (see Table 2) of these capital inmates in the general prison population was $20.5 \%$. This base rate is broadly consistent with the prison violence base rates identified in studies of other former death row, capital offender, and life sentence samples (see Table 1).
$\ddagger 0$ SəाE」 əวuәן administrative segregation in these samples. We observed that more than $60 \%$ of the Indiana participants were never confined in administrative segregation following their removal from death row. This is quite consistent with the report that two thirds of former death row inmates and capital offenders in Texas were never confined in administrative segregation (Marquart et al., 1989). Similarly, almost $70 \%$ of
 infractions following their commutation (Marquart \& Sorensen, 1989).

The proportion of Indiana former death row inmates without disciplinary write-ups in the general prison population (20\%) was quite similar to the $27 \%$ of the Texas former death row inmates and the $22 \%$ of Texas life-sentenced capital inmates who had no violations of any type (Marquart et al., 1989).

Consistent with past research demonstrating an inverse relationship between age and prison misconduct (Flanagan, 1980; Sorensen \& Wrinkle, 1996), the former Indiana death row inmates displayed a progressive marked drop in their likelihood of violence each year after age 28 . The combined effects of age and prison adaptation over time were also evident. Inmates who had served slightly more than a decade without an assault had no subsequent incidents of assaultive violence.

Consistent with the above, it is acknowledged that the prevalence rate of violence in the general prison population among these inmates may have been lowered both by aging and by prior adjustment to institutionalization while on death row. The prevalence rate of vio-
lence on death row may have been limited by the more restrictive conditions and higher level of supervision on death row. Altematively, it could be argued that the stresses and adverse conditions of death row (Johnson, 1979; Lewis, 1979; Lombardi, Sluder, \& Wallace, 1997; Yuzon, 1996) contributed to an elevated prevalence of violence. Some confirmation of this latter hypothesis comes from a riot that occurred in response to conditions on the Indiana death row during the study period.

The Indiana former death row inmates had an annual rate of 2.8 violent incidents per 100 inmates per year following their transfer to the general prison population. Comparison of this rate with the assault rates in federal and various state prison systems provides inferential support for the conclusion that the rate of assault among former Indiana death row inmates was not disproportional to the violence incidence of other general population inmates.

The African American inmates who exhibited institutional violence in this study did so earlier in their incarceration histories than Caucasian inmates. This finding may be of little substantive import,

 from analysis. Despite the faster rate of violent failure of these African American inmates, the overall prevalence rates of institutional vio-


 Wrinkle, 1996) was not observed in this sample. Whether an "impor-


 the current data.
 tion between history of community violence and prison violence (Alexander \& Austin, 1992; National Institute of Corrections, 1992),
 significantly correlated with their institutional violence or rates of disciplinary misconduct. This finding illustrates how important it is in violence risk assessments to consider contextual/situational factors
rather than simply personal proclivity (Hall, 1987; Heilbrun, 1997; Monahan, 1981; Shah, 1978).

A question of unreported violence and neglected disciplinary sanctions could be raised with regard to the data derived from this study as well as past studies of capital offenders. How much prison violence goes unreported is difficult to quantify and likely varies by the level of supervision and staffing in different correctional departments. However, there are several reasons to believe that underreporting is not grossly distorting these data.

First, it is anticipated that more mutual fighting and minor violence go unreported than the more serious violence incidents. It seems particularly unlikely that violence resulting in serious injury would go unreported. As the trend in this research, and adopted in this article, is to operationally define violence in terms of actual assaults, the level of unreported violence is minimized.

Second, capital inmates are routinely confined in maximum-security units in which the more intensive level of supervision increases the likelihood that assaults and other misconduct would be detected by staff (Harer, 1992).

Third, it is unlikely that correctional staff is being intimidated into underreporting by particularly violent or gang-affiliated inmates. Inspection of disciplinary files of the former death row inmates in the current data pool give little indication that the staff was intimidated by the more violent or disruptive inmates. Several inmates repeatedly received long sanctions of administrative segregation for staff assaults or other misconduct.

There is little indication that unreported violence against staff has compromised past studies. Disciplinary follow-up of capital offenders in Texas (Marquart et al., 1989) noted that $7 \%$ of the capital offenders in that sample had been identified as prison gang members and locked down indefinitely in administrative segregation. In fact, in 1985 the Texas Department of Corrections locked down more than 1,200 known or suspected gang members. These sanctions suggest that the Texas correctional staff was not intimidated into granting these inmates "trustee" status or ignoring their serious violence. Similarly, the Indiana Department of Correction has a well-developed protocol for identifying gang-affiliated inmates (K. Lisby, personal communication, October 13, 1999). ${ }^{3}$

Fourth, virtually all prison systems in the United States, including Texas and Indiana, have super-maximum security units that are specifically intended for inmates whose affiliation with security threat groups and/or history of institutional misconduct cause them to be a
 without recourse when subjected to intimidation by inmates. The data with regard to whether correctional staff feel particularly at risk by gang members are mixed. In a large national sample of adult state cor-
 ( $N=323$ ), $81.3 \%$ of superintendents reported that gang members had not been a problem in terms of assaults on their staff. Approximately $63 \%$, though, reported that threats against correctional staff by gang members were a problem (Knox et al., 1996).

At the very least, there is no reason to believe that prison violence by capital offenders, whether gang affiliated or not, is reported less often than for the surrounding inmate population.

In summary, despite the heinousness of their capital offenses, the
 serious violence on death row or in the general prison population. Furthermore, most presented little persistent disciplinary management

 that the associated base rates are robust and can be generalized to other capital defendants for violence risk assessment purposes.
 Project who has coordinated the review of federal court documents in federal capital cases including the Notice of Intent to Seek the Death Penalty that is filed in each case. The Federal Deach Penalty Resource Counsel Project is a program of the defender services division of the administrative office of the United States Courrs designed to assist the federal court and appointed counsel in connection with maters relating to the defense function in federal capital cases.
2. Dfbetas are "infuence residuals that are obtained by performing the regression with and without each case in the model. and finding the difference between the resulting coefficients for the predictor' (Luke \& Homan, 1998, p. 373).

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# A Matter of Life or Death: Special Considerations and Heightened Practice Standards in Capital Sentencing Evaluations 

Mark D. Cunningham, Ph.D., ${ }^{\dagger \dagger}$ and Thomas J. Reidy, Ph.D. ${ }^{\ddagger}$



## ADMITTED


#### Abstract

Mental health evaluations at capital sentencing represent a complex and specialized arena of practice. The moral culpability focus of capital sentencing is distinct from guilt-phase considerations of criminal responsibility, and has a specialized literature. Capital violence risk assessment is uniquely oriented to a prison context, relying on past adjustment to incarceration, as well as group statistical data specific to capital offenders and other inmate groups. Personality testing is a more complex consideration in capital sentencing evaluations. The implications of interviewing the defendant, as well as the parameters and documentation of an interview, make full disclosure and informed consent of particular importance. Defense- and prosecution-retained experts are subject to specific ethical vulnerabilities. These are examined in this paper through the lens of current professional standards. Copyright (C) 2001 John Wiley \& Sons, Ltd.


No other consultation in forensic psychology, psychiatry, or social work has greater life-or-death implications than capital sentencing evaluations. Indeed, the U.S. Supreme Court in Satterwhite v. Texas (1988) characterized psychiatric testimony at capital sentencing as "a life or death matter" (at 1802). Unfortunately, the highest levels of competence and professionalism have not always matched the gravity of the determination. Both the legal and forensic literature have expressed grave concern with the objectivity, thoroughness, and scientific basis of evaluations and testimony by mental health experts in these proceedings. Adherence to professional ethics in capital evaluations has been a longstanding concern (American Psychiatric Associa-

[^5]tion, 1984; Showalter, 1990). Liebert and Foster (1994) lamented the failure of the judicial system to articulate minimum standards for mental health evaluations in capital cases. A recent series of papers has also been critical of unreliable approaches to violence risk assessment at capital sentencing, and described how scientifically sound methodology and data that can be brought to bear in this testimony (e.g. Cunningham \& Reidy, 1998a, 1998b, 1999; Reidy, Cunningham, \& Sorensen, 2001).

With the exception of recent data and applications specific to capital violence risk assessments, the mental health literature on capital sentencing has largely addressed basic standard of practice issues-at a meta-level that could apply to any forensic consultation (i.e. objectivity, reasonable clinical thoroughness, scientific grounding of findings, ethical sensitivity). The absence of an extensive literature that would comprehensively orient mental health experts to the specialized arena of capital sentencing practice is particularly problematic given the variability in experience and knowledge among mental health experts involved in these evaluations on the one hand, and the lack of familiarity many attorneys have with the interface of mental health and the law (see Perrin \& Sales, 1994). In other words, mental health experts cannot invariably depend on the retaining attorneys to be familiar with the parameters or repercussions of mental health evaluations at capital sentencing.

This paper seeks to address this deficit by examining the dilemmas, considerations, obligations, and perils particular to evaluations and testimony by mental health experts in capital sentencing-with citations to the Specialty Guidelines for Forensic Psychologists (SGFP) (Committee on Ethical Guidelines for Forensic Psychologists, 1991), and the Ethical Guidelines for the Practice of Forensic Psychiatry (EGPFP) (American Academy of Psychiatry and the Law, 1995) as models that encourage high ethical awareness and professional excellence. While aspects of the discussion are equally relevant whether the prosecution or the defense retains the forensic psychiatrist or psychologist, some are more specific to the defense or prosecution respectively. In these latter instances, the discussion is tailored to the issues most germane to that consultation.

## UNIQUE PSYCHOLEGAL QUESTIONS AT CAPITAL SENTENCING

## What is Mitigation?

In order to competently assess the issue at stake in any forensic consultation, the mental health expert must accurately identify the relevant psycholegal question(s). The Specialty Guidelines articulate this requirement as a "fundamental and reasonable level of knowledge of the legal and professional standards. . ." (SGFP: III. C). The psycholegal issue of primary salience at capital sentencing is mitigation, a phenomenon that according to the U.S. Supreme Court in Lockett v. Ohio (1978) includes: "...any aspect of a defendant's character or record, or any of the circumstances of the offense that the defendant proffered as a basis for a sentence less than death" (at 604).

While mitigation is a multi-faceted consideration, a central component is the concept of moral culpability. Moral culpability involves what the Supreme Court in Woodson v. North Carolina (1976) characterized as "the diverse frailties of humankind" (at 304). The concept of moral culpability acknowledges an elementary psychological reality: we do not all arrive at our choices out of equivalent raw material. More specifically, the nature and quality of understanding, perception, impulse control, judgment, and values that underlie choice-even choice that results in heinous violence-are influenced by developmental, cognitive, neuropsychological, relationship, cultural, community, and situational factors (Haney, 1995; Staub, 1996). Haney (1997), as well as others (Shah, 1978; Monahan, 1981, 1996), have identified this "interactional" convergence of "nature, situation, context, and structure" as the primary explanation for criminal violence.

## Are Moral Culpability and Criminal Responsibility Synonymous?

The contrasting conceprualizations of moral culpability and criminal responsibility emerge from the differing perspectives of the defense and the prosecution. Understandably, a view that interacting adverse biopsychosocial factors underlie violent criminal behavior is not heartily advanced or endorsed by the prosecution at capital sentencing. Instead, the prosecution is likely to frame the capital offense almost exclusively in individualistic terms emphasizing the operation of willful choice (Haney, 1997). Accordingly, the questions posed to the mental health expert by the prosecution may represent a subtle, but substantial reframing of the psycholegal issue from moral culpability to criminal responsibility-recasting the evaluation of sentencing phase considerations in terms of guilt phase constructs of wrongful awareness, purposeful behavior, and volition. For example, the state may ask "Did the defendant know right from wrong?" -rather than "What shaped the defendant's values?" (e.g. Eddings v Oklahoma, 1982; Penry v. Lynaugh, 1989). Arguably, the expert has an obligation to clarify that criminal responsibility is not the psycholegal issue under consideration at capital sentencing-taking "reasonable steps to correct misuse or misrepresentation of their products, evidence, and testimony" (SGFP: VII. A).

In the absence of a clear understanding of the distinct psycholegal parameters at stake at each phase of the capital proceedings, mental health experts may misidentify or be seduced into misunderstanding the issues before the court. Alternatively, the defense-retained mental health expert may leap from identifying the adverse developmental events as cumulative risk factors for criminal violence, to asserting that they were exhaustively causative - that the defendant lacked choice or that the offense did not represent purposeful behavior. In a corresponding over-identification with the retaining party, the prosecution-retained mental health expert may assert that even a profoundly disrupted developmental history had little or nothing to do with the defendant's violent criminal outcome. The hyperbole reflected in both of these distortions would be avoided by following Specialty Guidelines that recommend examining "the issue at hand from all reasonable perspectives, actively seeking information that will differentially test rival hypotheses" (SGFP: VI.C). Similarly, the Ethical Guidelines emphasize "striving for objectivity" (EGPFP: IV).

## What is the Likelihood the Defendant Will Seriously Hurt Someone in the Future?

Future risk of serious violence is the secondary core psycholegal issue at capital sentencing. In some jurisdictions, a probability that the defendant will commit future acts of criminal violence may be alleged as a statutory or nonstatutory aggravator by the prosecution. Alternatively, an assertion may be advanced by the defense as a mitigator that the defendant will make a positive adjustment to prison as provided by Skipper v. South Carolina (1986). Even when it is not overtly argued, the "furure dangerousness" of capital offenders appears to be a primary concern of their sentencing jurors (Costanzo \& Costanzo, 1992).

This question has a particular framework as a psycholegal issue at capital sentencing. To state the obvious: the life-without-parole or multi-decade sentences faced by convicted capital murderers in most jurisdictions make prison the primary or exclusive context of future violence risk. Despite the obviousness of the issue, failure to consider that the context of prediction is prison rather than the community is a recurrent error among mental health professionals engaged in these capital sentencing risk assessments (Cunningham \& Reidy, 1999). This distinction is not an inconsequential one. Risk is always a function of context (Shah, 1978; Monahan, 1981; Hall, 1987), and factors that are associated with violence in the community do not demonstrate the same relationship with prison violence (Cunningham \& Reidy, 1998a, 1998b, 1999; Reidy et al., 2001).

## SPECIALIZED RESEARCH IN CAPITAL MITIGATION EVALUATIONS

The U.S. Supreme Court in Eddings v. Oklahoma (1982) held that at capital sentencing the trial court cannot refuse to consider any mitigating information. A mental health expert conducting an evaluation of mitigation for capital sentencing, then, is faced with the rather daunting task of screening for any factors that might adversely affect physical, cognitive, neuropsychological, psychological, interpersonal, social, academic, vocational, civic, and/or moral development, as well as for positive behavior contributions that might be viewed as having some moral blameworthiness balancing value. Several independent lines of research point to the importance of investigating a wide range of factors, as well as to the nexus of these factors to criminal violence. Knowledge of this research is critical to experts maintaining "current knowledge of scientific, professional, and legal developments within their claimed area of competence" (SGFP: VI.A), as well as only claiming competence "in areas of actual knowledge and skills, training, and experience" (EGPFP:V).

First, research on factors associated with an increased risk of chronic delinquency and serious violence in the community has been conducted and synthesized under the sponsorship of the U.S. Department of Justice (DOJ) as part of their increasing commitment to violence prevention programs. Consistent with past explanations (e.g. Masten \& Garmezy, 1985), DOJ sponsored reviews have concluded that risk of violent criminal outcome is a function of the interaction or balancing of risk and protective factors (U.S. Department of Justice, June 1995).

Hawkins et al. (2000), in research sponsored by the DOJ, identified a number developmental arenas and associated specific factors that have a cumulative effect on the risk for chronic delinquency and serious violence by young adulthood. Other DOJ sponsored longitudinal studies detail the effects of child maltreatment (Widom, 2000; Kelley, Thornberry, \& Smith, 1997); and the cumulative effects of hostility, observed violence, and personal violent victimization within the family (Thornberry, 1994) on violence rates.

Second, research on samples of death row inmates is also relevant to evaluation of mitigating factors. These studies describe a significant incidence among death row inmates of intellectual limitations; poor academic achievement; learning disabilities; psychological disorders; family of origin histories of child maltreatment and abuse; parental substance dependence; and pre-confinement substance dependence (Cunningham \& Vigen, in press). High rates of neurologically significant histories, neuropsychological deficits, and/or neurological findings have been reported among death row inmates (Cunningham \& Vigen, in press), as well as among murderers and violent felons (Blake, Pincus, \& Buckner, 1995; Langevin, Ben-Aron, Wortzman, Dickey, \& Handy, 1987; Martell, 1992). The diagnosable presence of brain dysfunction and its potential association with violent acts may be a significant mitigating factor in a jury's deliberation regarding whether a penalty of death is justified.

A third area of relevant research at capital sentencing encompasses literature on the disruptive effects and resultant vulnerabilities associated with any number of adverse developmental factors, as well as research specific to problematic impacts and outcomes associated with various mitigating factors identified in a specific case. For example, there are empirical findings illuminating adverse outcomes associated with a teenage mother, father absence, youthfulness, learning disability, peer alienation and rejection, frequent moves and household instability, observed community violence, personal victimization, corruptive family and/or community, sexual abuse, trauma exposure, and other adverse circumstances and developmental risks.

Fourth, rates of criminal violence in the community, including homicide, have been linked to substance dependence and mental disorder (Swanson, Holzer, Granju, \& Jono, 1990; Tiihonen, 1993). Research associated with the progression and disruptive effects of any number of mental disorders may be relevant to explaining a defendant's involvement in the capital offense (American Psychiatric Association, 1984; Showalter, 1990), as well as precursor behaviors such as substance dependence, relationship failure, criminal activity, and other social deviance (Haney, 1995).

## SPECIAL CONSIDERATIONS IN VIOLENCE RISK ASSESSMENT

## Methods and Empirical Data

The methodology and empirical data that can be applied in performing reliable violence risk assessments on capital defendants has been extensively reviewed
elsewhere and the reader is directed to those sources (Cunningham \& Reidy, 1998b, 1999; Reidy et al., 2001; Sorensen \& Pilgrim, 2000). These applications will be briefly summarized below.

Long-range assessment of the probability of future serious violence is most reliable when
(i) based on the past pattern of conduct displayed by the individual in a similar context (Morris \& Miller, 1985),
(ii) anchored to the base rate of violence for the group to which the individual most closely corresponds, and conservatively individualized (Hall, 1987; Monahan, 1981; Morris \& Miller, 1985), or
(iii) adjusted for risk management or violence prevention/reduction procedures that can be brought to bear (Heilbrun, 1997; Serin \& Amos, 1995).

These tenets guide the data collected in performing a violence risk assessment at capital sentencing as illustrated below.

## Past Pattern

Information regarding the defendant's adjustment to incarceration, particularly prior prison confinement, is quite important as this context most closely approximates that of the pending capital life term. Particular attention is directed to the circumstances of any acts of violence while incarcerated. Inquiry should also include description of the security level and celling arrangement; any disciplinary write-ups; any prison gang affiliation; out-of-cell activities; involvement in work, academic, treatment, or religious programming; visitation contacts; and inmate and staff interactions. Names of cellmates as well as the names of unit staff members should be obtained for follow-up third party interviews. Data on security level, celling, and activities additionally allows for appraisal of opportunities for violence, as well as representing a practical indicator of the degree of risk the staff has judged the defendant to be. Of lesser, but still relevant interest is the defendant's past adjustment to structured settings -including juvenile correctional, school, and psychiatric hospital.

## Base Rate Data

In the absence of a prior history of prison incarceration or serious violence in jail pretrial, the most reliable anchor for a violence risk assessment at capital sentencing involves the application of relevant base rates. Base rates of violence among capital offenders in a general prison population have reflected remarkable consistency across varying correctional settings, capital statutes, and periods of the last century - indicative of a very robust finding with broad generalization to current correctional experiences. Other relevant base rates include the frequency of serious violence in specific correctional settings (i.e. jail, state correctional facility, forensic hospital, federal Bureau of Prisons), rates of inmate and staff homicide nationally and in the particular department of correction, disciplinary infraction rates of longterm inmates, and rates of prison disciplinary infractions as a function of age of the inmate.

Conservative individualization of base rates examines various factors that might serve to modestly raise or lower the risk as compared to the relevant group anchor such as age of inmate, continuing availability of community supports and visitation, history of employment in the community, prior responses to structured environments, psychological disorder, etc. It is cautioned that before identifying a particular factor as risk enhancing or reducing, the base rate of that factor among a prison inmate population must be considered. For example, Antisocial Personality Disorder as well as a number of other factors that might be related to risk of violence in the community are so pervasively represented among prison inmates that they lose any predictive value in that setting.

## Risk Management

An important final step in violence risk assessment entails consideration of what risk management procedures might be brought to bear to reduce the risk (Cunningham \& Reidy, 1999; Heilbrun, 1997; Rogers, 2000; Serin \& Amos, 1995). This may include among others: medication or other treatment of psychological disorders, programming and psycho-educational services such as anger management, academic/work activities, classification and celling procedures, and modifications in confinement including both psychiatric and super-maximum units. This latter risk management option is a particularly critical context variable to consider in violence risk assessment at capital sentencing. To explain, virtually all prison systems maintain units of unusually high security, often referred to as administrative segregation or super-maximum confinement. Under the very restrictive celling and controlled movement of inmates on such units, opportunities for serious violence towards others are profoundly limited.

## Errors in Violence Risk Assessment at Capital Sentencing

Common errors in violence risk assessment at capital sentencing have been identified elsewhere (Cunningham \& Reidy, 1999). In supplementing these considerations, it is noted that capital cases create particular dissonance for forensic evaluators undertaking violence risk assessments because of the violence and horror of the offense. As Shah (1978) noted, even forensic clinicians tend to ignore base rates in the face of specific information or when confronted with a specific individual. Some effort, then, on the part of mental health expert may be required to maintain focus and reliance on the empirical data.

Second, the mental health expert may err in capital sentencing evaluations by utilizing risk assessment instruments such as the Psychopathy Checklist Revised (PCL-R) (Hare, 1991), Violence Risk Appraisal Guide (VRAG) (Quincey, Harris, Rice, \& Cormier, 1998), or HCR-20 (Webster, Douglas, Eaves, \& Hart, 1997). Simply stated, elevations on these scales have not been demonstrated to reliably predict serious violence in the context of American prisons (Cunningham \& Reidy, 1998a, 1998b, 1999; Reidy et al., 2001; Edens, in press). Such misuse is particularly problematic with the PCL-R as the label of "psychopath" and associated behavioral descriptions are so profoundly pejorative as to equate with a sentence of death (e.g.

Barefoot v. Estelle, 1983 (dissent at 916); U.S. v. Barnette, 2000). Employment of measures that have not been validated for applications they are being purported as demonstrating is in violation of Specialty Guidelines of responsibility (SGFP: II), competence (SGFP: III.A), methods and procedures (SGFP: VI. A, C), and communications (SGFP: VII.D).

## SPECIAL EVALUATION CONSIDERATIONS

Because the range of biopsychosocial factors to be considered is so broad, the evaluation components are also unusually comprehensive in capital sentencing consultations (see Liebert \& Foster, 1994). It is assumed that forensic clinicians undertaking these capital sentencing evaluations are familiar with the extended interviews, wide-ranging third party contacts, and complete review of records necessary to develop an exhaustive analysis of potential mitigating factors. It is also assumed that reader is familiar with the routine referrals for specialized consultation in capital case work-ups, which almost always entail neuropsychological assessment and neurological evaluation, and may include other highly specialized areas of expertise including neuroradiology, endocrinology, mental retardation, psychobiology, toxicology, psychopharmacology, genetics, learning disabilities, addiction medicine, and community violence. Discussion will thus be limited to more subtle considerations.

## Inhibited ©isclosure

In the experience of the authors and others (Dekleva, 2001), capital defendants routinely minimize rather than exaggerate family dysfunction and childhood trauma experience. In some cases, even histories of physical and sexual abuse that were adjudicated and detailed in associated official records were denied until these defendants were confronted with documentation. Similarly, relatives of the defendant are frequently reluctant to admit histories that place themselves or other family members in a negative light. Orientation of the defendant and his family to why these issues are being explored, multiple and extended interviews, and sampling of a wide range of family members maximizes the likelihood of relevant disclosure.

## Personality Testing Considerations

The use of personality testing in capital sentencing evaluations is a complex consideration. Objective and projective personality tests often increase descriptive richness and depth, give insight into response style, provide for systematic comparisons to norm groups, and may aid in diagnostic and psychodynamic formulation. Further, the disproportionate incidence of Axis I disorders among murderers (Blake et al., 1995; Yarvis, 1990, 1994), as well as high rates of psychological disorder and elevated personality testing profiles among death row inmates (Cunningham \& Vigen, in press) suggest that sensitivity to and perhaps formal screening for these conditions could be important to mitigation.

At the same time, personality testing at capital sentencing is associated with important limitations and potential adverse consequences, particularly when an Axis I disorder is not indicated by interview or record review. Specifically, we have the following.
(i) Personality testing and its interpretation have not been extensively standardized on an incarcerated population, and standardization with a population facing capital murder charges is extraordinarily limited.
(ii) Often personality testing profile patterns, including MMPI Megargee profile classifications, change over time (Clements, 1996; Craig, 1996).
(iii) Personality assessment provides little or only highly inferential data regarding any adverse developmental factors that may have contributed to the defendant's current psychological status or personality traits.
(iv) Personality assessment does not reliably differentiate those inmates who commit acts of serious violence in prison from those who do not (Kennedy, 1986; Zager, 1988) and is thus of little or no value for these risk assessments in this specialized context.
(v) Personality assessment is likely to implicate the presence of a personality disorder and associated descriptions of maladaptive traits, an unsurprising finding in an individual who is assumed for purposes of the assessment to have been so damaged as to perpetrate a capital murder.

After considering the limitations of personality resting, as well as the potential for misunderstanding and abuse of the results, a defense-retained psychologist may determine that its use is inappropriate in a given case.

The requirements for psychological testing by prosecution-retained experts may be broader in examining potential mitigation. This stems from a difference in anticipated functions. Often the prosecution-retained psychologist is a potential rebutal witness, standing by to counter assertions by the defense if these are not adequately supported by clinical findings or empirical research. At the time the capital consultation is initiated, the prosecution-retained expert typically does not know what mitigating factors will be asserted by the defense. The prosecutionretained expert may thus desire to undertake a comprehensive psychological assessment including personality testing in order to be prepared for whatever is put forward by the defense. At the same time, the Constitutional and statutory rights of the defendant may constrain the ability of a prosecution-retained expert to conduct such a wide-ranging examination.

The breadth of testing in preparation, though, does not relieve the prosecutionretained expert from carefully considering the appropriateness and purposes of the tests selected, nor does it reduce responsibility for limiting the application and interpretation of these results in light of the specific issues, contexts, and populations (see Standards for Educational and Psychological Testing: AERA, APA, \& NCME, 1999).

## Documentation of the Evaluation

The stakes of a capital sentencing proceeding demand a high standard of documentation, particularly regarding the interview of the defendant. The associated
detailed notes or recordings of the interviews by the mental health expert should become a part of the expert's file, and be present with the expert on the stand during any testimony (see SGFP: VI.B).

The taping of interviews, particularly videotaping, is an issue of some complexity in capital sentencing evaluations. On one hand, audio and video recordings provide the most accurate record of the interview questions and responses. These technologies thus insure the greatest accuracy and verification of content. Indeed, Standard 7-6(d), ABA Criminal Justice Mental Health Standards, specifies that "[a]ll courtordered evaluations of the defendant initiated by the prosecution should be recorded on audiotape or, if possible, on videotape, and a copy of the recording should be provided to the defense attorney."

Unfortunately, these same technologies may have both undesirable effects and abusive applications. First, electronic recording may inhibit disclosure-a more likely and problematic outcome among capital defendants given the developmental histories of abandonment, maltreatment, trauma, and other forms of betrayal/trust violation commonly demonstrated among this group (see Cunningham \& Vigen, 1999; Haney, 1995; Norton, 1992, Showalter, 1990). Second, selective use of videotape at the sentencing phase may encourage erroneous conclusions by the jury. Specifically, in instances where the defendant does not testify at trial, any suspicious, flat, or irritable responses may be the jury's only exposure to the defendant's demeanor and personality. Of course, selective audio or video segments obtained under conditions of marked stress have not been empirically validated as a reliable assessment of personality, trauma history, or future prison adjustment. The alternative hypotheses for interpersonal demeanor, particularly in the face of interview by an adversary expert, are legion. Further there is risk that the equation of death worthiness will be reduced to no more than likeability.

## A HIGHER STANDARD FOR INFORMED CONSENT

Informed consent involves the requirement that the legal representative of the party seeking services has a right to information that might reasonably affect the decision to contract with the mental health expert (see SGFP: IV.A. 1-4). Three fundamental rationales point to a uniquely high standard of informed consent in capital sentencing cases. First, as a general principle, the greater the magnitude of the potential harm, the greater the corresponding right of the recipient of the service to be fully informed. Second, the unique complexity of capital sentencing cases results in significant, but less apparent repercussions from the mental health evaluation procedures and content. Third, because of the breadth of issues in play at capital sentencing, there is a corresponding greater range of matters that would be reasonably expected to bear on a decision to utilize the service.

## Fees and the Anticipated Services

Comprehensive evaluations at capital sentencing are uniquely time intensive as compared to other mental health evaluations in forensic criminal practice. It is not
uncommon for capital sentencing evaluations and testimony to consume 60-100 hours of professional time. Accordingly, it is critical to establish at the outset, preferably in writing, the comprehensive or limited nature of the evaluation and the corresponding projected fees. In defense-retained cases, a written fee estimate or appointment affidavit outlining a description of the anticipated services, the relevance of each component to a thorough evaluation, and the associated hours that are likely to be incurred in each of the primary activities of the evaluation may additionally have an educative function for the court, if unfamiliar with the complexities of capital evaluations. Further, should funding authorization be denied, such an affidavit may become an important part of the record at the appellate stage in "proving up" the rationale for the evaluation and what relevance it could have had to sentencing outcome.

## Assume One Role and Stick to It

The role the mental health expert will perform in the case is critically important to establish at the outset, as these may be mutually exclusive (see SGFP: IV.D.1). The boundaries of these roles, or the implications of performing multiple functions within a given role, may not be familiar to the retaining attorney. This education and clarification is an important aspect of informed consent - both at the outset of involvement in a capital case and in response to requests to perform an additional function or role.

Briefly, the mental health expert can function at capital sentencing as a litigation consultant or as a testifying expert - but not both. The role of consultant directly involves the expert in the strategy and advocacy of the case-without any pretense of neutrality. In this sense, the consultant is at risk to become over-identified with perspectives and purposes of those who have retained the expert. Within such a role, objectivity is presumed to have been lost or at least degraded to such a degree that the impartiality expected from expert testimony is not possible (see SGFP: VI.C). Consultant functions include jury selection, focus groups and shadow juries, witness preparation, drafting of arguments, and similar tasks that are directly related to advancing a particular case outcome. Defense counsel may elect for a consultant to first interview the defendant, so that a determination of whether to have a testifying expert examine the defendant can be reasonably informed. The consultant may subsequently meet with the expert, but only to ask questions. If the consultant provides input to the expert, the privilege of the consultant may be compromised - and the consultant could be called to testify.

Even within the role of testifying expert, clarification of the evaluation function is important to informed consent. For example, a number of problems may accompany the same expert undertaking evaluations of both guilt phase (competency, sanity) and sentencing (mitigation, violence risk assessment) issues. These include violations of the defendant's Fifth and Sixth Amendment rights (see e.g. Estelle $v$. Smith, 1981; Satterwhite $v$. Texas, 1988), loss of compartmentalization of information that might have otherwise been afforded, and jury fatigue regarding the expert (see SGFP: V.A.; VI.G).

## Rocks and Shoals in Interviewing

## Undertaking an Interview

While vitally important data for the mitigation investigation may be depend on the mental health expert's interview of the defendant, this technique can substantially limit the defendant's Fifth Amendment and Sixth Amendment rights. To explain, there is evolving law and substantial variability among jurisdictions regarding the access of the prosecution to evaluate a defendant for capital sentencing. In some jurisdictions, a defense-retained mental health expert can interview or otherwise directly evaluate a capital defendant without opening the door to the defendant being interviewed by a prosecution-retained mental health expert. In other jurisdictions, though, such an interview would trigger access to the defendant by the prosecution's expert. Should the defendant then not cooperate with evaluation by the prosecution's expert, the defense may be barred from putting on the testimony of the defense-retained expert (for discussion of applicable federal statutes and case law see U.S. v. Beckford, 1997). Such considerations are relevant to mental health experts in that there is "an obligation to understand the civil rights of parties in legal proceedings in which they [psychologists] participate, and manage their professional conduct in a way that does not diminish or threaten those rights" (SGFP: III.D). Further, disclosure of such potential repercussions is certainly relevant to informed consent.

Alternatives to direct interview of the defendant by the mental health expert include limited evaluation and associated more tentative testimony based on review of records and interview of family and other third parties, or the expert could function as a teaching witness-providing the jury with the methodology and research data to assist their understanding of the evidence presented at sentencing, but without conclusive particularization to the defendant.

## Interview Content

The content as well as the occurrence of an interview of the defendant by a mental health expert may impact on whether the defendant has waived Fifth Amendment rights. In some jurisdictions, if the defense-retained expert does not obtain a report from the defendant regarding the capital offense or prior unadjudicated offenses, the defendant is allowed to decline to answer such questions when posed by the prosecution-retained expert. Alternatively, if the defense-retained expert has obtained such information from the defendant, then the defendant must cooperate in providing the same information to prosecution's expert-or face the sanctions of the court on what issues and/or testimony in mitigation may be advanced at his capital sentencing.

There appear to be rather narrow issues that are illuminated by inquiry regarding the capital offense. First, offense specific inquiry could explore the extent to which the defendant's perceptions and thought processes at the time of the offense were compromised by psychotic thought process, mood disturbance, lack of deliberation, or other disturbance of judgment. Second, offense specific inquiry could yield
expressions of remorse-though this would likely be characterized as self-serving by the prosecution.

Many cases, however, do not involve Axis I disorders where acute disruptions of mental status are more likely to be demonstrated. Further, the specifics of the instant offense may provide little illumination on the developmental, family, community, neuropsychological, or other mitigating factors. Similarly, in most instances the defendant's account of the capital offense will likely add little or nothing to the violence risk assessment regarding the probability of violence across a capital life term in prison.

Finally, defense counsel cannot make an informed decision regarding the potential benefits and costs of the defendant discussing the capital offense and/or prior unadjudicated conduct with a mental health expert until after the attorney has obtained, independent of the testifying mental health expert, a detailed description of this data from the defendant. Informed consent requires that the attorney be advised that if highly aggravating data is disclosed to the expert, defense counsel may be faced with a "Scylla and Charybdis" dilemma of withdrawing the expert or putting the aggravating information before the jury through the defenseretained expert witness. Even this option may be lost if the findings of the defense-retained expert are discoverable, or if interview by a prosecution-retained expert is triggered by the defense interview.

Beyond whether the defendant is interviewed regarding the capital offense, Showalter (1990) specifies that informed consent entails conveying to the capital defendant "the gamut of 'door opening possibilities' that exist" (p. 269), rendering the findings of the expert a "double edged sword" as both favorable and unfavorable clinical observations are likely to occur.

The mental health expert's interest in the degree of evaluation access or range of interview content should extend only to the nature and certainty of the resulting clinical/forensic opinions. The mental health expert should have no personal strategic investment in the decision defense counsel ultimately makes regarding these parameters. Rather the mental health expert is actively disclosing the potential benefits, limitations, alternatives, and adverse repercussions of the evaluation format-all matters that could affect the attorney's decision to utilize the service.

## Obligations of Prosecution Experts to the Defendant

## Notice of Participation and Parameters

Being retained by the prosecution does not relieve a mental health expert from the prohibition against diminishing or threatening the defendant's civil rights (see SGFP: III.D). It cannot be over-emphasized that the prosecution-retained mental health expert should not cooperate with an attempt to examine a capital defendant in the absence of notice and agreement of defense counsel. Indeed, "ethical considerations preclude forensic evaluation prior to access to, or availability of legal counsel (EGPFP: III). The Specialty Guidelines express similar warnings (at VI.D.). Mental health experts are cautioned that well known U.S. Supreme Court decisions (e.g. Estelle v. Snith, 1981; Satterwhite v. Texas, 1988) have addressed the problem of prosecution-retained mental health experts performing evaluations
without the knowledge of defense counsel-and potentially under some subterfuge regarding the actual purpose of the examination--and subsequently testifying regarding future dangerousness at capital sentencing. It is strongly recommended that mental health experts seek verification from the court or directly from defense counsel that this defense notice and agreement have been satisfied.

Prior to initiating a capital sentencing evaluation interview of the defendant, the prosecution-retained expert must also obtain information regarding the allowed parameters of the content of the interview-particularly whether the mental healch expert will be allowed to inquire about the capital offense and/or any prior unadjudicated conduct. The defendant should be reminded at the outset of the interview, and periodically through the interview as necessary, of these restrictions on the evaluation parameters. Again it is recommended that written verification of these content parameters be sought.

A prosecution-retained mental health expert should ensure that written notice has been provided to defense counsel of the intended evaluation procedures and measures, as well as how the evaluation will be memorialized (see SGFP: IV.E). This notice of evaluation measures and any intention to record the evaluation should be sufficiently in advance to allow defense counsel to consider and litigate any objections.

## Am I Really fust Here to Help?

It is critically important that the prosecution-retained mental health expert frankly acknowledges the affiliation with the prosecution, and explains to the defendant the nature and the potential purpose of his evaluation with a level of candor that will assist the defendant in not only hearing, but also grasping the import of the introduction. The role of the expert as a doctor and associated connotations of a healing role, the expert's profession as a mental health expert and associated connotations of empathy and understanding, the expert's status as a professional, and the expert's interpersonal skills may inadvertently communicate a profoundly erroneous expectation of benevolent outcome from the consultation (Showalter, 1990). This would arguably require informing the defendant that should the prosecution-retained expert identify information from the evaluation that is of assistance to the prosecution, that information will be used via expert consultation or testimony in efforts by the prosecution to persuade the jury to sentence the defendant to death.

Prosecution-retained experts may well want to be cautious about setting a capital defendant at ease during the interview (see Shuman, 1993). Perrin and Sales (1994) quite cogently differentiate between rapport building techniques in treatment, and the same tools being used in forensic consultations: "Whereas receptive empathy focuses on the examinee and the examiner sharing an awareness of the examinee's experiences, reflexive empathy uses therapeutic relationship building to manipulate the examinee to reveal more information, possibly against his or her self-interest" ( $p$. 380). Thus as a defendant begins to warm to a prosecution-retained mental healch expert, the expert should assume that this is behavioral evidence that the warning regarding the application of the expert's findings bears repeating (American Psychiatric Association, 1984). Consistent with the above discussion, should
the prosecution-retained expert make contact with the defendant's family and associates, it is essential that they be candidly informed of the expert's affiliation with the prosecution, and the potential application of the findings.

## Death Penalty Opposition and the Defense-Retained Expert

Defense-retained experts in capital cases may agree or disagree with capital punishment as an available sanction in the American criminal justice system. For those who oppose capital punishment, their rationales may range from intellectual (i.e. empirical, social, political) to deeply held moral qualms. While an opinion in opposition to the death penalty is perhaps not a bar to providing consultation in these cases, it does raise objectivity considerations. This becomes more problematic with escalation in the attitudinal force of the conviction. As the intensity of the personal attitude, moral repugnance, and associated advocacy increase, so does the difficulty in maintaining a position of nonaligned integrity as a forensic professional. Two potential ethical pitfalls are implicated. First, dual-role problems may accompany the mental health professional who is both an advocate against a particular social policy and an expert in proceedings that might apply that policy. Second, the intrusion of strong attitudes into a forensic consultation at capital sentencing promotes tunnel vision (failing to consider the data from all reasonable perspectives (SGFP: VI.C). At its greatest influence, such attitudes may interfere with the expert forming or giving an opinion detrimental to a defendant. A posture of unilateral opinions has grave objectivity implications. Strongly held personal attitudes may require the expert to decline participation in capital cases. At a minimum, experts with strong opposition to the death penalty should consider limiting the range of referral issues, providing informed consent regarding their beliefs to the retaining attorney, and acknowledging these attitudes to the court.

## DISCUSSION

Evaluation and testimony at capital sentencing are unique among forensic mental health functions. The ultimate stakes of sentencing trials where the death penalty is a potential outcome raise the bar considerably for psycholegal sophistication, informed consent, maintenance of constitutional rights, thoroughness of evaluation procedures, familiarity with the relevant empirical literature, and professional objectivity. Further, in the media attention and judicial review that accompany these cases, the competency of the mental health professions and the integrity of all testifying experts are held up for scrutiny. Despite the life or death outcome at stake for the defendant, and future credibility of mental health testimony before the judiciary, there are continuing exceptions to a high standard of practice in evaluation and testimony (Edens, in press). We believe that substandard practice in mental health evaluations at capital sentencing often stems from inadequate orientation to the unique psycholegal issues, failure to utilize the specialized developmental and capital risk assessment literature, neglect of comprehensive interviewing and records
review, misapplication of assessment instruments, ignorance of the implications of evaluation parameters and procedures, and/or lapses in professional ethics.
The combination of this insufficient preparation and the uncommonly intense advocacy by both sides of this litigation has grave potential to erode the thoroughness, accuracy, and professionalism of the evaluation and testimony. Because research points to prosecution-retained mental health experts being regarded more credibly than defense-retained experts by death qualified juries (Sundby, 1997; Williams \& McShane, 1991), prosecution-retained experts arguably bear a heavier weight for insuring against error and distortion in their evaluations and testimony.

The best proof against the twin vulnerabilities of ignorance and advocacy are specialized continuing education, journal reading, colleague consultation, and awareness of ethical applications in professional practice. The Specialty Guidelines for Forensic Psychologists provide an aspirational model for psychologists practicing in the capital arena. The principles of competence, responsibility, respect, expertise, honesty, neutrality, and objectivity, however, cross professional boundaries. The Ethical Guidelines for the Practice of Forensic Psychiatry are less detailed, but encourage similar values and professionalism. In this sense both are viewed as broadly useful to mental health professionals who are seeking to maintain a compass heading of integrity and professionalism in challenging seas.

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Today!
Chaplain Dick Kastner and his wife, Darleen, are in the service today as my very special guests. These are people you do not know, but they had a profound impact upon my life when I was a brand new Christian. Also
with us today are surprise guests, Pastor \& Mrs. Leo Miller from Lyndale, with us today are surprise guests, Pastor \& Mrs. Leo Miller from Lyndale,
Texas. Pastor Miller and I met in a prison chapel, and it is a thrill to have the Millers with us as we honor Chaplain Kastner.

Next Sunday! I have a very special message to bring to you next sunday morning you will do your very best to be here!

Congratulations, Kids!
Let me wish all of our school kids a great summer!
Laboring in Love,

## Maury Davis

Morning Service - 10:00 AM

## dIHSyOx K





[^0]:    * Correspondence concerning this article should be addressed to Mark D. Cunningham, Ph.D., 500 Chestnur, \#1735, Abilene, TX 79602, (915) 670-0545, FAX (915) 670-0566; or, Thomas J. Reidy, Ph.D., The Sargent House, 154 Central Avenue, Salinas, CA 93901, (408) 757-6673, FAX (408) 757 1646.

[^1]:    ${ }^{1}$ A recalculation of the factorials provided by Rogers et al. yields a product of 397683 rather than 497683 reported in the article (p. 481 ).

[^2]:    American Psychiatric Association. (1968). Diagnostic and statistical manual of mental disarders (2nd ed.). Washington, DC.

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    * Correspondence to: Mark D. Cunningham, Ph.D., 500 Chestnut, \#1735, Abilene, TX 79602, USA.

[^4]:    1. Eight additional cases are pending analysis.
[^5]:    *Correspondence to: Dr Mark D. Cunningham, Suite 1735, 500 Chestnut Street, Abilene, TX 79602, USA. E-mail: mdc@bitstreet.com
    ${ }^{\text {t}}$ Abilene, $T X$
    ${ }^{1}$ Monterey, CA.
    Mark D. Cunningham, Ph.D., maintains a clinical and forensic psychology practice in Abilene, TX.
    Thomas J. Reidy, Ph.D., is a forensic psychologist in Monterey, CA. Drs. Cunningham and Reidy are Diplomates in Forensic Psychology, American Board of Professional Psychology.

