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**Risk Redux: The Resurgence of Risk Assessment in Criminal Sanctioning<sup>1</sup>**

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## Introduction

Since shortly after the Civil War, American states have relied on some inchoate notion of risk assessment in applying the criminal sanction. New York State adopted a parole statute in 1876, and Massachusetts enacted probation into law in 1878, both to be applied to offenders believed to be unlikely to return to crime. The explicit assessment of an offender's risk soon became a central component of criminal sanctioning in many American jurisdictions. In California, for example, indeterminate sanctioning—whereby an offender was given a short minimum sentence and a long maximum one, and released from prison whenever he or she was assessed by an administrative board to present an acceptably low risk of recidivism—was introduced in 1917.<sup>2</sup> In the 1970's, however, indeterminate sanctioning based on forward-looking assessments of an offender's risk of committing future crime was abolished in California and in many other states in favor of “truth” in sentencing: fixed periods of confinement based on backward-looking appraisals of an offender's culpability for crime already committed.

After almost four decades of “just deserts,” the past several years have seen a remarkable resurgence of risk assessment as an essential component of criminal sanctioning. What explains the sudden return of risk to a place of penological prominence? Money appears to be the principal answer. The fiscal condition of most American jurisdictions is so dire that maintaining what is by international standards an absurdly bloated prison population is simply not a sustainable option. Adding legal to fiscal urgency, the United States Supreme Court found one state's prison system to be unconstitutionally overcrowded and ordered that state, California, to reduce its prison population by 37,000 inmates.<sup>3</sup> Although prison populations and unsustainable prison budgets could be reduced in a variety of ways, on remand from the Supreme Court the lower federal court ordered the state to release from prison those inmates determined by risk

assessment to be the least likely to return. While risk assessment, particularly its more actuarial varieties, has its modern detractors, few today are so categorically opposed to risk assessment as to call for the abolition of probation or parole.<sup>4</sup>

In this article, we review current practice in the incorporation of risk assessment into the sanctioning systems of several illustrative states, and describe the major dimensions on which state practices differ. We then elaborate the various meanings ascribed to the foundational concept of “risk” in criminal sanctioning, and contrast “risk” with what are now often called “criminogenic needs,” the fulfillment of which ostensibly reduce an offender’s level of “risk.” Finally, we address the choice of an approach to risk assessment in sentencing, particularly in the resource-starved state of current correctional practice.

We wish clearly to acknowledge at the outset that forward-looking and utilitarian risk or needs assessment in criminal sanctioning currently takes place—and in our view *should* take place—within bounds set by backward-looking and moral concerns about culpability and desert. We express no view here on how broad or narrow the bounds set by culpability or desert should be.<sup>5</sup> A mean period of sanctioning of five years, for example, might have a permissible range of sanctioning, set by moral considerations, of four-to-six years, of three-to-seven years, or of two-to-eight years—ranges within which risk or needs assessments may be used to choose a specific sanction length. As long as a sanction is not set solely by retrospective moral considerations and some meaningful role is reserved in sanctioning for prospectively distinguishing among offenders at higher or lower risk of recidivism—by whatever method that risk is assessed—we believe that the issues raised here are germane.

## **Part I: Recent State Developments in the Use of Risk/Needs Assessment in Sentencing**

Three states have taken to incorporating risk and needs assessments more explicitly into their systems of criminal sanctioning than most others: Pennsylvania, Virginia, and Utah.<sup>6</sup> We consider each briefly.

### Pennsylvania

All newly committed inmates in Pennsylvania are evaluated by the Department of Corrections with a seven-item Risk Screening Tool (RST) (e.g., current age, prior convictions, educational level) to categorize their risk of recidivism as “low,” “medium,” or “high.” Inmates categorized as low risk are not placed into prison treatment programs, while inmates categorized as medium or high risk may be given further assessments in order to devise a treatment plan that addresses an inmate’s “criminogenic needs” and that he or she must complete in order to be considered for parole.<sup>7</sup>

Pennsylvania has a discretionary parole system based on an offender’s minimum and maximum sentences. Risk assessments, in the form of the RST, the Level of Services Inventory-Revised (LSI-R), and the Static-99 (for sex offenders), play a role in the decisions of the Board of Probation and Parole, as do several other factors, including whether the inmate is classified as a violent or a non-violent offender, the inmate’s institutional behavior, and participation in institutional programming.<sup>8</sup>

A recent program of “state intermediate punishment”—a two-year step-down program for substance-abusing offenders that includes state prison, residential treatment, and community treatment—also involves risk assessment, with the RST being taken into account, augmented by the administration of other structured risk and needs assessments. Counties have their own version of intermediate punishment for substance abusing offenders not sentenced to state prison, and a variety of risk assessment tools are used in implementing these programs.

A 2010 Pennsylvania statute envisions a significant expansion of the role of risk assessment at the time of sentencing:

The Commission [on Sentencing] shall adopt a sentence risk assessment instrument for the sentencing court to use to help determine the appropriate sentence within the limits established by law...The risk assessment instrument may be used as an aide in evaluating the relative risk that an offender will reoffend and be a threat to public safety...The risk assessment instrument may be incorporated into the sentencing guidelines.<sup>9</sup>

The Commission on Sentencing has issued a series of seven interim reports carefully documenting progress on the development and validation of the “sentencing risk assessment instrument” required by the statute. One interim report, for example, evaluated 29 risk assessment tools used in sanctioning in other jurisdictions and identified 125 separate risk factors included on these tools. We list the most frequently-cited risk factors in Appendix 1. The most recent Interim Report describes the development and validation of an eight-variable scale to identify low risk offenders (see Appendix 2).<sup>10</sup>

### Virginia

In 1994, the Virginia legislature required the state’s newly-formed Criminal Sentencing Commission to develop an empirically-based instrument for use in diverting twenty-five percent of the “lowest-risk, incarceration-bound, drug and property offenders to placement in alternative non-prison sanctions,” such as probation, community service or electronic monitoring.<sup>11</sup> The risk assessment tool that the Commission developed relies on six types of risk factors: (1) offense type; (2) whether the offender is currently charged with an additional offense; (3) “offender characteristics” (i.e., gender, age, employment, and marital status); (4) whether the offender had been arrested or confined within the past 18 months; (5) prior felony convictions;

and (6) prior adult incarcerations. The criterion against which these risk factors were validated was reconviction of a felony within three years. The risk assessment instrument is scored only for offenders for whom the state's sentencing guidelines recommend incarceration in prison or jail; offenders must also meet certain eligibility criteria (e.g., a criminal history of only nonviolent offenses). If the offender's total score is below a given cut-off, he or she is recommended for alternative punishment; if the score is above that cut-off, the prison or jail term recommended by the guidelines remains unchanged.

Five years later, the Virginia legislature required the Commission to develop a second empirically-based instrument, this time in order to identify the *highest* risk rather than *lowest* risk offenders. More specifically, the Commission developed two largely similar risk assessment instruments for sexually violent offending, one for rape and one for other types of sexual assault. If the sum of the sex offender's scores on the specified risk factors (e.g., age, education, relationship to the victim) exceed given cut-offs, the offender's maximum recommended sentence can be increased by as much as a factor of three. "Increasing the upper end of the recommended range provides judges the flexibility to sentence higher risk sex offenders to terms above the traditional guidelines range and still be in compliance with the guidelines." The sentencing guidelines "are not binding on the trial judge; rather, the guidelines are merely a 'tool' to assist the judge in fixing an appropriate punishment," and as long as the sentence does not exceed the statutory maximum, "the sentence will not be overturned as being an abuse of discretion."<sup>12</sup> The Commission recently studied judicial compliance with the sentencing guidelines and found that "for the past nine fiscal years, the compliance rate has hovered around 80%."<sup>13</sup>

Utah

The approach adopted by the Utah Sentencing Commission posits that “the sentence should consider and address, but not necessarily be determined by, the specific criminogenic risks and needs of the offender.”<sup>14</sup> Those risks and needs are assessed by administering the 54-item LSI-R (e.g., adult and juvenile arrests, educational level, substance abuse, residential stability) to all convicted felons, and incorporating the results of this assessment into the presentence investigation conducted by the Department of Corrections’ Office of Adult Probation and Parole and submitted to the trial judge. When imposing a sentence, the judge must consider both the sentence calculated under the state’s sentencing guidelines—based on the crime of which the offender has been convicted and the extent of the offender’s criminal history—and the LSI-R-influenced recommendation of Adult Probation and Parole. The judge maintains discretion in the final sentencing decision.

Risk and needs assessment is also used in deciding on the type of treatment and the intensity of supervision each offender will receive. For example, state prisons feature several “life skills” classes. If the offender is sentenced to prison, his or her LSI-R scores assist in determining which of the available classes best meets the inmate’s criminogenic needs. Analogously, if the offender is sentenced to probation, LSI-R scores are used to assist in determining the conditions of probation, including the content of the treatment that will be offered to the offender in the community and the level of supervision that the offender requires during this treatment. Periodic reevaluations with the LSI-R and other assessment tools are used to evaluate whether the offender’s case management plan is being successfully implemented.

In addition to their use in sentencing, LSI-R risk and needs scores are taken into account by the Utah Board of Pardons and Parole in deciding whether and, if so, when to release an

inmate on parole. As with sentencing, the Board retains discretion in granting or failing to grant parole.

### Summary: Risk/Needs Assessment in Criminal Sanctioning

Reviewing the different ways in which these three states incorporate risk/needs assessments into their criminal sanctioning schemes raises both substantive and procedural questions. The substantive questions include (1) *How large a role should be allocated to risk/needs assessment* (i.e., within how broad or how narrow a sanction range—set by moral desert—should risk assessment be allowed to operate)?; (2) *Should the emphasis be on identifying the lowest risk or the highest risk offenders* (i.e., for reducing or for increasing the criminal sanction, respectively)?; and (3) *What correctional decisions should be informed by risk/needs assessment* (e.g., the length of the sanction, the venue of the sanction--i.e., prison or the community), the intensity and type of treatment to be offered to the offender? Procedural questions involve (4) *When in the sanctioning process should the assessment of risk/needs take place* (i.e., at the front-end (sentencing), at the back-end (parole), or at both points in the sanctioning process)?; (5) *What type of risk/needs factors should be assessed* (e.g., age, gender, employment, education)?; and (6) *What degree of compliance with the sanctioning recommendations that follow from assessed risk/needs should be expected from judges?*

We concentrate in this article primarily on one substantive question, the correctional decisions that risk/needs assessments are used to inform (#3, above), and on one procedural question, the type of risk/needs factors to be assessed (#5, above). Progress on either of these questions, we believe, is heavily contingent on a shared understanding of precisely what is meant by the concepts of “risk” and “needs.” As Kraemer<sup>15</sup> has stated, “the absence of precise language is perhaps the major problem in current risk research.” It is to this that we now turn.



## Part II: The Foundational Concepts of “Risk” and “Needs”

Adapting Kraemer and colleagues’<sup>16</sup> classic typology of risk to the context of sentencing, a *risk factor* is a variable that has been shown to (a) statistically correlate with recidivism and (b) precede recidivism in time. There are four different types of risk factors: fixed markers, variable markers, variable risk factors, and causal risk factors. See Table 1.

[place Table 1 about here]

A *fixed marker* is a risk factor that is unchangeable. Male gender is a fixed marker for recidivism. Criminal history—a ubiquitous risk factor measured in myriad ways—is usually construed as a fixed marker because an offender’s commission of a past crime(s) cannot be undone.<sup>17</sup> However, criminal history will increase if an offender commits new crimes and infractions, and will not increase if he or she stays “clean” or crime-free over time. This variability is not trivial. An increase in criminal history increases the likelihood of recidivism, and a *lack of increase* can reduce that likelihood.<sup>18</sup> Because criminal history can increase (or not) over time and each crime’s predictive shelf life may be limited, it seems important to conceptualize criminal history as a variable marker.

Unlike a fixed marker, a *variable marker* or *variable risk factor* can be shown to change over time. Three aspects of change are noteworthy. First, change can occur spontaneously or through intervention. Variable markers cannot be changed through intervention,<sup>19</sup> unlike variable risk factors. Young age is a variable marker for recidivism, whereas employment problems are a variable risk factor. Second, change can be rapid (e.g., substance abuse can change daily), or slow (e.g., antisocial traits can change over years). Even when change occurs slowly, its cumulative effect can be substantial.<sup>20</sup> Third, there is increasing evidence that change

predicts recidivism, e.g., an increase in an offender's risk factors predict an increase in recidivism risk, beyond a single time-point assessment of those risk factors.<sup>21</sup>

According to Kraemer and colleagues,<sup>22</sup> a *causal risk factor* (a) can be changed through intervention (i.e., is a variable risk factor) and, (b) *when changed through intervention*, can be shown to change the risk of recidivism. The most compelling form of evidence that a risk factor was causal would be a randomized controlled trial in which a targeted intervention was shown to be effective in changing one or more variable risk factors, and the resulting changes were shown to reduce the likelihood of post-treatment recidivism.

The point to be emphasized is that *it is nearly impossible to locate such randomized controlled tests of causal risk factors for recidivism*. Criminal thinking patterns and substance abuse come closest to qualifying as causal risk factors. Randomized controlled trials provide evidence that treatment programs that deliberately target these variables (a) reduce the targeted risk factor, and (b) reduce recidivism.<sup>23</sup> Even in these experiments, however, there rarely is any demonstration that the proposed mechanism of behavior change (i.e., reduction in the targeted risk factor) explains (i.e., causes) the reduction in recidivism.<sup>24</sup>

In short, identifying causal risk factors for recidivism is a work in progress that, as yet, cannot support definitive conclusions. Still, a lack of evidence of causality is not counter-evidence. As noted by Kraemer and colleagues,<sup>25</sup> “if the manipulability or the efficacy or effectiveness of manipulation of a variable risk factor has not been tested, the appropriate term is variable risk factor.” Provided appropriate testing, some of today's variable risk factors may become tomorrow's causal risk factors.

The crucial importance of distinguishing among these four types of risk factors is that some types are relevant to one sanctioning context, but not to another. We now turn to these sanctioning contexts.

### **Part III. The Sanctioning Context Determines the Types of Risk Factors to Use**

Generally, risk assessment serves the utilitarian goal of crime prevention. But crime prevention may be achieved through multiple routes—including incapacitation and rehabilitation—and these routes correspond to different risk/needs assessment approaches. In our view, the specific sanctioning context should determine the extent to which the approach is oriented toward the *prediction of recidivism*, the *reduction of recidivism*, or both.<sup>26</sup> A prediction-oriented approach is appropriate when the goal is simply to characterize an offender's likelihood of recidivism, compared to other offenders. For example, the goal may be to determine whether an offender is a low risk case eligible for release or a high risk case eligible for long-term incapacitation. Or the goal may be to match an offender's level of risk to a level of custody or supervision. In contrast, a reduction-oriented approach is appropriate when the goal goes beyond characterizing an offender's likelihood of recidivism, to reducing that likelihood through targeted intervention. For example, the ultimate goal may be to reduce a probationer's risk of reoffending by implementing an effective treatment plan. Put simply, a reduction-oriented approach is needed to inform rehabilitation, i.e., "any planned intervention that reduces an offender's further criminal activity, whether that reduction is mediated by personality, behavior, abilities, attitudes, values, or other factors."<sup>27</sup>

All kinds of risk factors—fixed markers, variable markers, variable risk factors, and causal risk factors—are relevant to prediction-oriented risk assessment approaches.<sup>28</sup> As summarized by Gottfredson and Moriarty, "if a variable can be measured reliably, and if it is

predictive, then of course it should be used—absent legal or ethical challenge.”<sup>29</sup> The content of the risk factors is empirically irrelevant in prediction-oriented approaches to risk assessment, because the goal is to forecast recidivism as efficiently and accurately as possible. Understanding the process that leads to recidivism is useful only if it increases predictive efficiency or accuracy.

The crucial point is that unlike prediction-oriented approaches, *reduction-oriented approaches require the assessment to include causal risk factors*. As explained by Kraemer, “successful...interventions must be based on manipulation of causal risk factors.”<sup>30</sup> Unless a variable risk factor has been shown to be causal, there is little reason to assume that reducing the risk factor will reduce recidivism. This fact is rarely recognized in current discourse, largely because variable risk factors have been confused with causal risk factors under the rubric of “dynamic risk factors” or “criminogenic needs.” Although the latter phrases typically reference a variable risk factor that (theoretically) can be changed through intervention, these phrases tend to be misused as synonyms for causal risk factors.<sup>31</sup>

This is not to say that variable risk factors hold no promise for reduction-oriented risk assessment approaches. They are the best point of reference the field presently has to offer. Some evidence—though indirect and imperfect—supports the principle of targeting variable risk factors to reduce risk.<sup>32</sup> Moreover, variable risk factors are relevant to risk management in sanctioning contexts that provide for ongoing oversight. These risk factors can be repeatedly assessed to monitor ebbs and flows in an offender’s risk state<sup>33</sup> and adjust levels of supervision and services accordingly.<sup>34</sup>

### **Conclusion: Choosing a Risk/Needs Assessment Approach**

A variety of tools are used to assess risk in contemporary sanctioning contexts. Some of these tools assess only “risk,” whereas others ostensibly assess both “risk and needs.” This distinction between “risk” and “needs” reflects the evolution of popular tools and correctional approaches over time, from an emphasis on prediction-oriented (“risk”) to reduction-oriented (“need”) approaches.<sup>35</sup> Early tools were designed to achieve efficient and effective prediction—they generally involved scoring a set of risk markers (e.g., young age, criminal history), weighting them by predictive strength, and combining them into a numerical score and/or a classification (e.g., low/medium/high risk). Pennsylvania’s RST and the Static-99 are exemplars of this approach. Later tools were infused with the concept of risk reduction and explicitly included variable risk factors as “needs” to be addressed in supervision and treatment. Some tools added an independent assessment of “needs” to accompany the longstanding approach to assessing “risk” (e.g., the COMPAS is an exemplar),<sup>36</sup> whereas others combined variable risk factors with traditional risk markers into a single “risk-needs” score (e.g., the LSI-R used in Utah is an exemplar). In our view, the distinction between “risk” and “needs” (and between “static” and “dynamic” risk factors) is an unfortunate product of history that generates more confusion than understanding. Basically, tools differ in the sanctioning goal they are meant to fulfill and in their degree of emphasis on variable risk factors.

Nevertheless, policy-makers and practitioners in the field of sentencing must now choose among a dizzying array of risk assessment options that are oriented toward risk prediction and/or toward risk reduction. In part, this is because states are increasingly developing their own “risk assessments” and because an active industry has grown up around “risk-needs” assessment. Most tools stem from the same root, i.e., a legacy of weighting individual characteristics by their

predictive utility to produce an aggregate risk score. However, contemporary tools vary considerably in their degree of complexity and independent research support. First, some tools are composed of a few well-defined risk factors that are easily administered, whereas others encompass a broad array of risk factors that include abstract constructs (e.g., psychopathy, procriminal attitudes) and require considerable professional judgment, training, and time to administer. Risk reduction-oriented tools (particularly those marketed by private companies) tend to be more complex than prediction-oriented tools.

Second, tools differ with respect to their evidence base. Although some (like the LSI-R and Static-99) have been rigorously studied, most have not. As observed by Gottfredson & Moriarty, fundamental requirements for developing, (cross-)validating, and applying risk assessment tools are “routinely ignored or violated.”<sup>37</sup> These requirements are vital. Unless a tool is validated in a *local sanctioning system*—and then periodically *re-validated*—there is little assurance that it works. Variables that predict recidivism in a jurisdiction with ample services for offenders may not predict recidivism in a resource-poor jurisdiction. Similarly, when a variable becomes relatively common in the general population and loses its specificity to offending (e.g., coming from a single-parent household, having a tattoo; being unemployed), its utility for predicting recidivism may erode over time.<sup>38</sup>

Despite heated debate about the relative utility of prediction- and reduction-oriented tools, there is no compelling evidence that one validated tool forecasts recidivism better than another. In meta-analysis of 28 studies that controlled well for methodological variation, Yang, Wong, and Coid<sup>39</sup> found that the predictive efficiencies of nine risk assessment instruments (including prediction-oriented tools like the Static-99 and reduction-oriented tools like the LSI-R) were essentially “interchangeable,” with estimates of accuracy falling within a narrow band.

Two factors may help explain the similar predictive performance of well-validated instruments. First, it is possible that each instrument is reaching a “natural limit” to predictive utility, beyond which it cannot improve. Some evidence suggests that a limiting process makes recidivism impossible to predict beyond a certain level of accuracy. A scale can reach this limit quickly with a few maximally predictive items, before reaching a sharp point of diminishing returns.<sup>40</sup> It is important to recognize that if there is a natural limit, it can be reached via alternative routes. If measured validly, some variable risk factors (e.g., attitudes supportive of crime) predict recidivism as strongly as common risk markers (e.g., early antisocial behavior).<sup>41</sup>

Second, well-validated tools may manifest similar performance because they tap “common factors” or shared dimensions of risk, despite their varied items and formats. In an innovative demonstration, Kroner, Mills, and Reddon<sup>42</sup> printed the items of four well-validated instruments (e.g., LSI-R) on strips of paper, placed the strips in a coffee can, shook the can, and then randomly selected items to create four new tools. The authors found that the “coffee can instruments” predicted recidivism as well as the original instruments did. Factor analyses suggested that the instruments tap four overlapping dimensions: criminal history, an irresponsible lifestyle, psychopathy and criminal attitudes, and substance-abuse-related problems. Each of these dimensions was similarly predictive of recidivism.

For these reasons, the choice of tool should be guided by whether the ultimate purpose of risk assessment in a specific sanctioning context is predicting or reducing recidivism:

Given a pool of instruments that are well validated for the groups to which an individual belongs, our view is that the choice among them should be driven by the ultimate purpose of the evaluation. If the ultimate purpose is to characterize an individual’s likelihood of [recidivism] relative to other people, then choose the most efficient instrument available.

This is appropriate for a single event decision in which there is no real opportunity to modify the risk estimate based on future behavior. If the ultimate purpose is to manage or reduce an individual's risk, then value may be added by choosing an instrument that includes [variable] risk factors. This choice is appropriate for ongoing decisions in which the risk estimate can be modified to reflect ebbs and flows in an individual's risk over time.<sup>43</sup>

This view comes with an important rider. The ultimate purpose of risk assessment must be a *feasible* one. Variable risk factors ("needs") require specific assessment only if there is a realistic likelihood that they subsequently will be addressed with pertinent treatment services. This may rarely be the case, given scarce correctional treatment resources. Based on a cohort of California prisoners, Petersilia and Weisberg<sup>44</sup> found that substance abuse treatment (of any sort) was offered to ten percent of those with substance abuse problems, and basic anger control treatment was offered to one-quarter-of-one-percent of those with anger problems. Evidence-based treatment programs and principles are even more rarely implemented in correctional settings.<sup>45</sup>

In short, the resources available in a specific sanctioning context must be considered when choosing a risk assessment approach. In general, efficiency and simplicity are to be preferred. A prediction-oriented assessment is sufficient, if the goal is to exclude all low risk offenders from services and provide all high risk offenders with the same generic services. Assessment of specific variable risk factors may be added, if a specific type of treatment is available to some, but not to all, high risk offenders. It is a waste of time to assess variable risk factors that a correctional system does not even attempt to change.



Table 1: Four Types of Risk Factors		
Type of Risk Factor	Definition	Example
Fixed marker	Unchangeable	Male
Variable marker	Unchangeable by intervention	Young
Variable risk factor	Changeable by intervention	Unemployed
Causal risk factor	Changeable by intervention; when changed, reduces recidivism	Criminal thinking patterns

*(Adapted from Kraemer et al., supra note 15)*

**Appendix 1: Pennsylvania Commission on Sentencing Risk/Needs Assessment Project,  
Review of Factors Used in Risk Assessment Instruments (2010)**

The Commission identified 29 “validated risk and needs assessment instruments,” with a total of 125 separate risk factors. The most frequently cited risk factors in each of 7 categories were:

**Category 1: Demographics**

- Current age

**Category 2: Criminal history**

- Prior adult convictions
- Age at first arrest
- History of probation/parole violations
- History of incarceration
- History of violence
- History of victimization

**Category 3: Psychosocial factors**

- Current employment
- Criminal associates or friends
- Current level of education
- Social support/quality of relationships
- Residential stability

**Category 4: Mental health**

- Serious mental illness (e.g., psychotic disorders, bipolar disorder, major depressive disorder)
- Emotional state
- Interpersonal anxiety

**Category 5: Antisocial/Psychopathic traits**

- Intimidating/controlling/manipulative personality
- Lack of remorse or guilt for offenses
- History of early childhood maladjustment

**Category 6: Substance abuse**

- History of illegal substance use or abuse
- Current substance use or abuse
- Negative consequences associated with current illegal substance use

**Category 7: Dynamic predictors**

- Procriminal attitudes
- Impulsivity
- Responsibility for actions
- Anger management deficits

**Appendix 2: Pennsylvania Commission on Sentencing Risk/Needs Assessment Project,**  
**Risk Scale (2013)**

<u>Factor</u>	<u>Score</u>
1. Gender	
Female	0
Male	1
2. Age	
Less than 24	3
24-29	2
30-49	1
50+	0
3. County	
Rural counties	0
Smaller, urban counties	1
Allegheny and Philadelphia Counties	2
4. Total number of prior arrests	
0	0
1	1
2 to 4	2
5 to 12	3
13+	4
5. Prior property arrests	
No	0
Yes	1
6. Prior drug arrests	
No	0
Yes	1
7. Property offender [Current Offense]	
No	0
Yes	1
8. Offense gravity score	
4+	0
1 to 3	1

## Endnotes

<sup>1</sup> We are grateful to the participants at a faculty workshop at the University of Virginia School of Law and to the participants at the 2013 meeting of the National Association of Sentencing Commissions at the University of Minnesota Law School—and especially to Kimberly Ferzan, Richard Frase, Brandon Garrett, Kevin Reitz, and Michael Tonry—for their insightful comments on previous drafts of this piece. Meredith Farrar-Owens, Cynthia Kempinen, Judge Gary Oxenhandler, Joan Petersilia, and Jacey Skinner generously provided us with information on state sentencing practices. Anthony Brown and Katherine Rumbaugh rendered exceptional research assistance.

<sup>2</sup> See Joan Petersilia, *Probation in the United States*, in 22 CRIME AND JUSTICE (M. Tonry, ed., 1997), Howard Abadinsky, PROBATION AND PAROLE (1997), and Kevin Reitz, *The “Traditional” Indeterminate Sentencing Model*, in THE OXFORD HANDBOOK OF SENTENCING AND CORRECTIONS (Joan Petersilia & Kevin Reitz, eds., 2011).

<sup>3</sup> *Brown v. Plata*, 131 S. Ct. 1910 (2011).

<sup>4</sup> For a recent review of approaches to violence risk assessment—ranging from purely unstructured (“clinical”) to completely structured (“actuarial”), with several approaches between these two extremes—see Jennifer Skeem and John Monahan, *Current Directions in Violence Risk Assessment*, 20 CURRENT DIRECTIONS IN PSYCHOLOGICAL SCIENCE 38 (2011). The leading opponent of the use of risk assessment is Bernard Harcourt, AGAINST PREDICTION: PROFILING, POLICING, AND PUNISHING IN AN ACTUARIAL AGE (2007). Compare Kelly Hannah-Moffat, *Actuarial Sentencing: An “Unsettled” Proposition*, 30 JUSTICE QUARTERLY 270 (2013) with Jennifer Skeem, *Risk Technology in Sentencing: Testing the Promises and the Perils*, 30 JUSTICE QUARTERLY 297 (2013). More recent arguments that risk assessment in sentencing is a form of unlawful discrimination can be found in Sonja Starr, *Evidence-Based Sentencing and the Scientific Rationalization of Discrimination*, STANFORD LAW REVIEW (in press), available at [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=2318940](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2318940)

<sup>5</sup> Nor do we underestimate the difficulty of making a *principled* choice in deciding on the width of the bounds set by desert. See Michael Tonry, *The Questionable Relevance of Previous Convictions to Punishments for Later Crimes*, in PREVIOUS CONVICTIONS AT SENTENCING: THEORETICAL AND APPLIED PERSPECTIVES (Julian V. Roberts & Andrew von Hirsch, eds., 2010); Kevin Reitz, *The Illusion of Proportionality: Desert and Repeat Offenders*, in Roberts & von Hirsch, *supra*; Richard Frase, *Limiting Retributivism*, in THE FUTURE OF IMPRISONMENT (M. Tonry, ed., 2004); John Monahan, *The Case for Prediction in the Modified Desert Model of Criminal Sentencing*, 5 INTERNATIONAL JOURNAL OF LAW AND PSYCHIATRY 103 (1982).

<sup>6</sup> It may be worth noting that two of these states (all but Virginia) retain discretionary parole, and two of these states (all but Pennsylvania) have no substantive appellate review of sentences. Note also the qualified endorsement of risk assessment at sentencing in the Model Penal Code, Tentative Draft No. 2 (approved 2011), Section 6B.09 (2): “The [sentencing] commission shall develop actuarial instruments or processes, supported by current and ongoing recidivism research, that will estimate the relative risks that individual offenders pose to public safety through their future criminal conduct. When these instruments or processes prove sufficiently reliable, the commission may incorporate them into the sentencing guidelines.”

<sup>7</sup> John S. Goldkamp et al., Temple University Department of Criminal Justice, Parole and Public Safety in Pennsylvania, *A Report to Governor Edward G. Rendell* 39 (2010).

<sup>8</sup> On the LSI-R, see Donald Andrews, *The Risk-Need-Responsivity (RNR) Model of Correctional Assessment and Treatment*, in USING SOCIAL SCIENCE TO REDUCE OFFENDING (J. Dvoskin, J. Skeem, R. Novaco, & K. Douglas, eds, 2012). The Static-99 is an actuarial risk assessment instrument consisting of ten empirically-derived risk factors: (1) Young (less than 25 years old), (2) Ever lived with a lover for at least 2 years, (3) Index non-sexual violence, (4) Prior non-sexual violence, (5) Prior sex offenses, (6) Prior sentencing dates, (7) Any convictions for non-contact sex offense, (8) Any unrelated victims, (9) Any stranger victims, and (10) Any male victims. See Karl Hanson and David Thornton, *Improving Risk Assessments for Sex Offenders: A Comparison of Three Actuarial Scales*, 24 LAW AND HUMAN BEHAVIOR 119 (2000). See Pa. Dep’t of Corr., Sample Risk Screen Tool (Nov. 2008).

<sup>9</sup> Act 95, § 2154.7 (a-b) (2010). See Jordan M. Hyatt, Steven L. Chanenson, and Mark H. Bergstrom, *Reform in Motion: The Promise and Perils of Incorporating Risk Assessments and Cost-Benefit Analysis into Pennsylvania Sentencing*, 49 DUQUESNE LAW REVIEW 707 (2011); Cynthia A. Kempinen, *Pennsylvania's State Intermediate Punishment Program: The Impact of Program Completion on Recidivism Summary of 2012 Legislative Report*, 11 THE RESEARCH BULLETIN 1 (2012). Reports on risk assessment in Pennsylvania are available at <http://pcs.la.psu.edu/publications-and-research/research-and-evaluation-reports/risk-assessment>

<sup>10</sup> The total possible range of the risk scale is 0 to 14. Note that for the Offense Gravity Score, *more* serious offenses, such as aggravated assault, are scored 0, and *less* serious offenses, such as writing bad checks, are scored 1. A validation study of this risk scale on 27,000 offenders sentenced in 2007-2008 took at its criterion measure re-arrest for any crime during the first three years after release. Of the twelve percent of all offenders who scored in the “low risk” category on this scale (i.e., who received total scores of 0-4), 22 percent recidivated, whereas of the eighty-eight percent of offenders who scored in the high risk category on this scale (i.e., who received total scores of 5-14), 53 percent recidivated. This report is available at <http://pcs.la.psu.edu/publications-and-research/research-and-evaluation-reports/risk-assessment/interim-report-7.-validation-of-risk-scale/view>

<sup>11</sup> Richard P. Kern & Meredith Farrar-Owens, *Sentencing Guidelines with Integrated Offender Risk Assessment*, 16 FED. SENT’G REP. 165 (Feb. 2004); Meredith Farrar-Owens, *The Evolution of Sentencing Guidelines in Virginia: An Example of the Importance of Standardized and Automated Felony Sentencing Data*, 25 FED. SENT’G REP. 168 (Feb. 2013).

<sup>12</sup> *Abdo v. Commonwealth*, 237 S.E.2d 900, 903 (Va. 1977); see also *Belcher v. Commonwealth*, 435 S.E.2d 160, 161 (Va. 1993).

<sup>13</sup> VA. CRIM. SENT’G COMM’N 2012 ANNUAL REPORT 10.

<sup>14</sup> UTAH SENTENCING COMM’N, ADULT SENTENCING AND RELEASE DETERMINATIONS PHILOSOPHICAL APPROACH 2 (2012); Jacey Skinner (2010), Use of Risk Assessments in Utah Sentencing. National Association of State Sentencing Commissions; Life Skills Programs – Department of Corrections, available at [http://corrections.utah.gov/programs/life\\_skills\\_programs.html](http://corrections.utah.gov/programs/life_skills_programs.html) (last visited June 1, 2013).

<sup>15</sup> Helena C. Kraemer, *Current Concepts of Risk in Psychiatric Disorders*, 16 CURRENT OPINION IN PSYCHIATRY 421 (2003). See also Helena C. Kraemer et al, *Coming to Terms with the Terms of Risk*, 54 ARCHIVES OF GENERAL PSYCHIATRY 337 (1997).

<sup>16</sup> *Id.*

<sup>17</sup> Commonly used measures of criminal history that robustly predict recidivism include early age of onset (i.e., when the first crime occurred) and the frequency, diversity, and severity of criminal behavior. An offender’s age of onset cannot change (i.e., it is a fixed marker). As explained here, the frequency, diversity and severity of criminal behavior can change over time (i.e., they are variable markers or variable risk factors). The precise manner in which criminal history is measured for the purpose of risk assessment at sentencing can have a large impact on the resulting sentence, as well as on racial disparities in sentence length. See Richard Frase, *What Explains Persistent Racial Disproportionality in Minnesota’s Prison and Jail Populations?* in 38 CRIME AND JUSTICE: A REVIEW OF RESEARCH 201 (Michael Tonry, ed.) (2009).

<sup>18</sup> Based on a sample of over 10,000 offenders followed for up to 27 years, Blumstein and Nakamura demonstrated that an individual’s risk of recidivism decreases with increasing “time clean.” For example, an offender arrested for aggravated assault at age 18 with at least four years clean has an estimated risk of re-arrest that is no greater than that of a member of the general population. Alfred Blumstein and Kiminori Nakamura, *Redemption in the Presence of Widespread Criminal Background Checks*, 47 CRIMINOLOGY 327 (2009). For a demonstration that the predictive utility of a risk assessment tool can be significantly improved when scores are corrected for time clean while at risk for reoffending, see Grant T. Harris and Marnie E. Rice, *Adjusting Actuarial Violence Risk Assessments Based on Aging or the Passage of Time*, 34 CRIMINAL JUSTICE AND BEHAVIOR 297 (2007).

<sup>19</sup> Technically, Kraemer et al. (*supra*, n.15) use the phrase “variable marker” both to describe risk factors that cannot be changed through intervention, and to describe risk factors that—when changed through intervention—have no effect on recidivism. Given how little is known about the latter type of variable marker, we omit it here to promote reading ease.

<sup>20</sup> Based on a cross-sectional sample of 899 prison inmates, Harpur and Hare found that each five-year increment in age corresponded to a steady decrease in the rate of antisocial personality disorder, from 65% for the youngest group (age 16-20) to 20% for the oldest group (age 46-70). Timothy J. Harpur and Robert D. Hare, *Assessment of Psychopathy as a Function of Age*, 103 JOURNAL OF ABNORMAL PSYCHOLOGY 604 (1994). These cross-sectional results are consistent with longitudinal evidence that personality traits change over time, particularly during adolescence and early adulthood. See Lee Anna Clark, *Assessment and Diagnosis of Personality Disorder: Perennial Issues and Emerging Reconceptualization*, 58 ANNUAL REVIEW OF PSYCHOLOGY 227 (2007).

<sup>21</sup> The most direct test of a risk factor’s variability requires repeated, reliable assessment of the risk factor over time. Although virtually no such tests had been published until recently, several studies now indicate that some risk factors change over periods as short as six months, and that changes in risk scores predict recidivism. For example, Jones et al. assessed 127 inmates’ risk factors near the end of their prison term, and one-, three-, and six- months after release to parole. Of the 14 potentially variable risk factors they assessed, eight changed significantly over six months. Moreover, the degree of change in some variable risk factors (i.e., pro-criminal attitudes and employment) predicted recidivism over the next several years about as strongly as a baseline assessment of “static” factors (i.e., criminal history, prison misconducts, and psychopathy). The most predictive model combined criminal history at baseline with change in variable risk factors over time (i.e., employment, attitudes, substance abuse). Natalie J. Jones, Shelley L. Brown, S. L. and Edward Zamble, *Predicting Criminal Recidivism in Adult Male Offenders: Researcher versus Parole Officer Assessment of Dynamic Risk*, 37 CRIMINAL JUSTICE AND BEHAVIOR 860 (2010). See also Philip D. Howard and Louise Dixon, *Identifying Change in the Likelihood of Violent Recidivism: Causal Dynamic Risk Factors in the OASys Violence Predictor*, 37 LAW AND HUMAN BEHAVIOR 163 (2013).

<sup>22</sup> Kraemer et al. *supra* n.15.

<sup>23</sup> See Mark W. Lipsey and Nana A. Landenberger, *Cognitive-behavioral Interventions: A Meta-analysis of Randomized Controlled Studies*, PREVENTING CRIME: WHAT WORKS FOR CHILDREN, OFFENDERS, VICTIMS, AND PLACES (Brandon C. Welsh and David P. Farrington, eds. 2007); Denise C. Gottfredson, Stacy S. Najaka, Brook W. Kearley, and Carlos M. Rocha, *Long-Term Effects of Participation in the Baltimore City Drug Treatment Court: Results from an Experimental Study*, 2 JOURNAL OF EXPERIMENTAL CRIMINOLOGY 67 (2006).

<sup>24</sup> Uncontrolled studies indicate that several risk factors change during individualized treatment of offenders, and that changes in some risk factors predict recidivism. See, for example, Mark E. Olver, Stephen C.P. Wong, Terry Nicolaichuk and Audrey Gordon, *The Validity and Reliability of the Violence Risk Scale-Sexual Offender Version: Assessing Sex Offender Risk and Evaluating Therapeutic Change*, 19 PSYCHOLOGICAL ASSESSMENT 318 (2007). Vernon L. Quinsey, G. Brian Jones, Angela S. Book and Kirstin N. Barr, *The Dynamic Prediction of Antisocial Behavior Among Forensic Psychiatric Patients: A Prospective Field Study*, 21 JOURNAL OF INTERPERSONAL VIOLENCE 1539 (2006). However, because these studies do not include an untreated control group, it is not clear whether treatment caused change in the risk factor (as opposed to, e.g., regression to the mean), or whether change in the risk factor caused reduced recidivism (as opposed to some confound). These caveats are critical, given at least one demonstration that change in a treatment-targeted risk factor does *not* explain reduced recidivism risk. Daryl G. Kroner and Annie K. Yessine, *Changing Risk Factors That Impact Recidivism: In Search of Mechanisms of Change*, LAW AND HUMAN BEHAVIOR (in press). Published online at <http://psycnet.apa.org/psycinfo/2013-10208-001/>

<sup>25</sup> Kraemer et al. *supra* n.15 at 340.

<sup>26</sup> See Kirk Heilbrun, *Prediction Versus Management Models Relevant to Risk Assessment: The Importance of Legal Decision-making Context*, 21 LAW AND HUMAN BEHAVIOR 347 (1997).

<sup>27</sup> Lee Sechrest, Susan White, and Elizabeth Brown, *THE REHABILITATION OF CRIMINAL OFFENDERS: PROBLEMS AND PROSPECTS* (1979) at 20-21.

<sup>28</sup> Across a variety of studies, risk factors that consistently have been shown to predict recidivism include young age, male gender, criminal history, substance abuse, employment problems, antisocial associates, criminal thinking patterns (e.g., feeling entitled, rationalizing misbehavior, poor empathy), and antisocial personality features (e.g., impulsive, hostile, pleasure seeking). See D.A. Andrews, James Bonta and J. Stephen Wormith, *The Recent Past and Near Future of Risk and/or Need Assessment*, 52 *CRIME AND DELINQUENCY* 7 (2006); Mary Ann Campbell, Sheila French and Paul Gendreau, *The Prediction of Violence in Adult Offenders: A Meta-analytic Comparison of Instruments and Methods of Assessment*, 36 *CRIMINAL JUSTICE AND BEHAVIOR* 567 (2009); Karl R. Hanson and Kelly E. Morton-Bourgon, *The Characteristics of Persistent Sexual Offenders: A Meta-analysis of Recidivism Studies*, 73 *JOURNAL OF CONSULTING AND CLINICAL PSYCHOLOGY* 1154 (2005); Daryl G. Kroner, Jeremy F. Mills and John R. Reddon, *A Coffee Can, Factor Analysis, and Prediction of Antisocial Behavior: The Structure of Criminal Risk*, 28 *INTERNATIONAL JOURNAL OF LAW AND PSYCHIATRY* 360 (2005); Paul Gendreau, Tracy Little and Claire Goggin, *A Meta-analysis of the Predictors of Adult Offender Recidivism: What Works!.*, 34 *CRIMINOLOGY* 575 (1996). Min Yang, Stephen C.P. Wong and Jeremy Coid, *The Efficacy of Violence Prediction: A Meta-analytic Comparison of Nine Risk Assessment Tools*, 136 *PSYCHOLOGICAL BULLETIN* 740 (2010).

<sup>29</sup> Stephen D. Gottfredson and Laura J. Moriarty, *Statistical Risk Assessment: Old Problems and New Applications*, 51 *CRIME AND DELINQUENCY* 178, 193 (2006). Current legal debate focuses on the potential use of biological variables as risk factors for recidivism. See John Monahan, *The Inclusion of Biological Risk Factors in Violence Risk Assessments*, in *BIO PREDICTION, BIOMARKERS, AND BAD BEHAVIOR: SCIENTIFIC, LEGAL AND ETHICAL IMPLICATIONS* (I. Singh, W. Sinnott-Armstrong, & J. Savulescu, eds., 2013):

If biological risk factors for violence are reviewed under the Fourteenth Amendment's rational basis test, as age is, they should have no trouble passing Constitutional muster. If biological risk factors for violence are reviewed under the Fourteenth Amendment's heightened scrutiny test, as gender is, they should also be admissible as evidence in court. But if biological risk factors for violence are reviewed under the Fourteenth Amendment's strict scrutiny test, as race is, they will likely share the fate of race and be inadmissible as evidence in civil commitment, sexually violent predator commitment, criminal sentencing, or any other legal proceeding predicated on a risk assessment of violence. *Id.* at 71.

<sup>30</sup> *Supra* n.15 at 422.

<sup>31</sup> In fact, the oft-made distinction between "dynamic" and "static" risk factors is more precisely known as a distinction between variable risk factors and fixed or variable markers. Fundamentally, "dynamic" risk factors (or "criminogenic needs") are perceived as clinically useful for risk reduction, whereas "static" risk factors are not.

<sup>32</sup> During the 1990's, a group of Canadian researchers applied meta-analytic techniques that ultimately generated a turning point in the field's understanding of "what works," i.e., how to reduce recidivism. Their approach involved aggregating controlled studies of correctional treatment to identify "active ingredients" of programs that worked, and indicate what was wrong with the many programs that did not. These meta-analyses demonstrate that the effectiveness of a correctional treatment program in reducing recidivism is associated with the extent to which the program targets variable risk factors for recidivism (e.g., pro-criminal attitudes, impulsivity, employment problems), as opposed to variables that do not predict recidivism (i.e., disturbances that impinge on an individual's functioning, like anxiety or poor self-esteem). See D.A. Andrews et al, *Does Correctional Treatment Work? A Clinically Relevant and Psychologically Informed Meta-Analysis*, 28 *CRIMINOLOGY* 369 (1990). The principle of working to change variable risk factors is known as the "need" principle of correctional treatment. At least one randomized controlled trial indicates that, compared to untrained officers, specially trained officers spend more time discussing variable risk factors for recidivism with their probationers (e.g., procriminal attitudes, antisocial associates, family problems), and their probationers manifest greater reductions in recidivism risk. James Bonta, Guy Bourgon, Tanya Rugge, Terri-Lynne Scott, Annie K. Yessine, Leticia Gutierrez, and Jobina Li, *An Experimental Demonstration of Training Probation Officers in Evidence-Based Community Supervision*, 38 *CRIMINAL JUSTICE AND BEHAVIOR* 1127 (2012). Note that this body of research does not establish that any variable risk factor(s) is causal (see



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Kraemer et al, *supra* n.15); instead, it establishes that targeting variable risk factors in treatment is more effective in reducing risk than targeting non-risk factors.

<sup>33</sup> Risk state reflects ebbs and flows in an individual's risk of recidivism over time (i.e., intra-individual variability). In contrast, risk status reflects an individual's risk of recidivism, compared to other individuals (i.e., inter-individual variability). Even within a high risk status offender, his or her risk state will fluctuate. See Jennifer L. Skeem and Edward P. Mulvey, *Monitoring the Violence Potential of Mentally Disordered Offenders Being Treated in the Community*, CARE OF THE MENTALLY DISORDERED OFFENDER IN THE COMMUNITY (Alec Buchanan, ed., 2002).

<sup>34</sup> Meta-analyses of controlled studies indicate that treatment programs for offenders yield the largest reductions in criminal behavior when they target relatively intensive services at higher-risk offenders, leaving lower-risk offenders with little or no therapeutic service (this is the "risk" principle of effective correctional treatment). *Id.*, Andrews et al. Supervision and/or treatment can be reduced or intensified as a function of ebbs and flows in an offender's risk state, as in the English and Welsh probation tiering system, Howard and Dixon *supra* n.21.

<sup>35</sup> See Andrews et al., *supra* n.28.

<sup>36</sup> The Correctional Offender Management Profiling for Alternative Sanctions, or COMPAS, is marketed by Northpointe Institute for Public Management, Inc., and consists of numerous items, scales, and types of scales. For example, there are four risk scales (e.g., pretrial release risk, general recidivism risk), and 19 "criminogenic need" scales (e.g., criminal personality, substance abuse, social isolation). See Brennan et al, *Evaluating the Predictive Utility of the COMPAS Risk and Needs Assessment System*, 36 CRIMINAL JUSTICE AND BEHAVIOR 21 (2009); Jennifer Skeem and Jennifer Eno Loudon (2007), ASSESSMENT OF EVIDENCE ON THE QUALITY OF THE COMPAS, available at [http://www.cdcr.ca.gov/adult\\_research\\_branch/Research\\_Documents/COMPAS\\_Skeem\\_EnoLouden\\_Dec\\_2007.pdf](http://www.cdcr.ca.gov/adult_research_branch/Research_Documents/COMPAS_Skeem_EnoLouden_Dec_2007.pdf) (last accessed June 13, 2013); Sheldon X. Zhang, Robert E.L. Roberts and David Farabee, *An Analysis of Prisoner Reentry and Parole Risk Using COMPAS and Traditional Criminal History Measures*, CRIME AND DELINQUENCY (in press). Published online at <http://cad.sagepub.com/content/early/2011/11/16/0011128711426544.full.pdf+html>

<sup>37</sup> *Supra* n.29.

<sup>38</sup> We are grateful to Joan Petersilia for raising this issue with us.

<sup>39</sup> *Supra* n.28. See also Campbell et al, *supra* n.28.

<sup>40</sup> For example, based on a sample of over 1,000 released prisoners, Coid and colleagues found that most individual items included in risk assessment tools do not significantly predict violence. When these items are removed, the resulting reduced scales predict violence as well as (but usually not better than) the original full scale. Jeremy Coid et al., *Most Items in Structured Risk Assessment Instruments Do Not Predict Violence*, 22 JOURNAL OF FORENSIC PSYCHIATRY AND PSYCHOLOGY 3 (2010).

<sup>41</sup> See Gendreau et al, *supra* n.28.

<sup>42</sup> *Supra* n.28.

<sup>43</sup> Skeem and Monahan, *supra* n.4 at 41.

<sup>44</sup> Joan Petersilia and Robert Weisberg, *The Dangers of Pyrrhic Victories Against Mass Incarceration*, 130 DAEDELUS 124 (2010).

<sup>45</sup> For a demonstration that high quality correctional programming is both rare and directly related to recidivism reduction, see Christopher T. Lowenkamp, Edward J. Latessa, and Paula Smith, *Does Correctional Program Quality Really Matter? The Impact of Adhering to the Principles of Effective Intervention*, 5 CRIMINOLOGY AND PUBLIC POLICY (2006).