Risk Technology in Sentencing: Testing the Promises and Perils

(Commentary on Hannah-Moffat, 2010)

Jennifer Skeem, Ph.D.

Professor of Psychology & Social Behavior

University of California, Irvine

skeem@uci.edu

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Few ideals have gained greater traction in contemporary discourse than "evidence-based practice." According to this ideal, the best research informs practice that improves outcomes. Two bodies of research have helped fuel a recent movement toward evidence-based sentencing and corrections. First, research has established that using validated, structured tools significantly improves professionals' ability to predict future violent or other criminal behavior (see Skeem & Monahan, in press). Increasingly, these tools are being applied in response to statutes and regulations that require specialized assessments to identify "high risk" individuals for detention or "low risk" individuals for release. Second, research suggests that correctional programs reduce recidivism when they (a) match the intensity of services and supervision to an offender's level of risk, and (b) target robust risk factors for crime (e.g., procriminal attitudes) rather than variables that are less crime-relevant (e.g., low self esteem; see Andrews, in press). Increasingly, companies are marketing tools for corrections agencies ostensibly include changeable risk factors and inform risk reduction efforts.

The time is ripe for a critical review of this movement. In a thought-provoking review, Kelly Hannah-Moffat (2010) distills the promises and perils of using risk assessment technology in sentencing and corrections. On one hand, she believes that that "evidence-based penality" could reduce bloated prison populations by diverting lower risk offenders, and could lead to "different and more constructive interventions" (p. 38). These are open empirical questions. On the other hand, she raises pointed concerns that using this technology (1) may "punish individuals for crimes they have not committed" and "undercut proportionality" in sentencing (p. 38), and (2) will exacerbate existing bias against marginalized groups in the criminal justice system (e.g., racial minorities, the poor, the unmotivated). Because risk assessment technology merely 'individualizes social problems' like poverty and racial discrimination, she argues, the field should shift its focus to addressing "social contextual" causes of crime (p. 18).

In this commentary, I analyze these two concerns before adding one of my own. My comments are intended to stimulate discussion and research that sheds light on the actual good and ill effects of using risk assessment tools in sentencing and corrections. It is important to state the following two premises before I begin:

1. In many fields of risk assessment (from determining insurance premiums to forecasting the weather), group data can be and often are highly informative when making decisions about an individual case (Skeem & Monahan, in press). Even though validated risk assessment tools cannot predict an individual's violent or other criminal behavior with *certainty*, there is compelling evidence that structuring or even replacing professional judgment with these tools substantially improves predictive accuracy.
2. The value of using a risk assessment tool to inform sentencing depends on (a) the strength the tool's evidence base *and* implementation in a given setting, (b) whether it is appropriate to weigh crime control goals in reaching a given decision, and (c) how the process and outcome of decisions that are informed by the tool compare to traditional/unstructured decisions.

<u>Concern 1: Is it fair to use well-validated risk assessment tools to sentence offenders?</u>

Although traditional sentencing ostensibly is a backward-looking process that focuses on blameworthiness for past conduct, risk assessment tools necessarily look forward to the likelihood of a future crime, based on past conduct, personality traits, substance abuse, and/or other risk factors (Monahan, 2006). Science aside, it seems unjust to assign punishment based "not on what offenders did, but rather on how closely who they 'are' approximates subgroups of an offender population" (Hannah-Moffat, 2010, p. 11).

Given such concerns, Monahan (2006) argues that "the use of violence risk factors in sentencing is jurisprudentially constrained to those that index the extent or seriousness of the

defendant's prior criminal conduct." He reasons that concerns for just deserts are strong enough in sentencing that they should constrain the variables used in pursuit of crime control. In contrast, he argues that the use of violence risk factors to make decisions about civil commitment is unconstrained, with the exception of race (given equal protection concerns). This is because civil commitment is designed not for punishment, but for protection of public safety. Reasoning from Monahan's analysis, no well-validated risk assessment tool that I am aware of would qualify for use in sentencing, but virtually all of them would qualify for use in civil commitment.

Although this bright line analysis is extraordinarily helpful, it seems that further analysis and/or research is needed to speak to shades of gray that arise under the following conditions:

1. *When civil commitment pushes the limits of civility.* Some applications of civil commitment stray from detaining an offender to prevent further crime to detaining an offender as further punishment for past crime. Increasingly, countries are enacting preventive detention laws that allow for the indefinite commitment of certain classes of offenders who may remain dangerous after having served their period of punishment (e.g., psychopathic and/or sex offenders). By default, these offenders' criminal history will be weighed heavily by risk assessment tools, "time served" or not. Moreover, there is evidence that support for the civil commitment of sex offenders is driven more by just desserts concerns than crime control goals (Carlsmith, Monahan, & Evans, 2007). Given that punishment plays a role in these decisions, it is inappropriate to use risk assessment tools to inform them, according to Monahan's (2006) analysis.
2. *When sentencing cares about crime reduction.* As Monahan (2006) acknowledges, sentencing a convicted offender is not merely about just deserts, but also about crime control. An alternative to discarding risk assessment tools from sentencing altogether is to explicitly tether them to the crime control issue. For example, a two-stage sentencing process might be entertained. In Stage 1, a term of incarceration or community supervision would be imposed based on just deserts principles and past criminal conduct. In Stage 2, crime reduction principles and well-validated risk assessment tools would be used to mandate supervision and interventions that (a) are matched in their intensity to the offenders' level of risk (such that lower risk offenders have fewer requirements), and (b) are targeted to offenders' causal risk factors for crime. As an alternative example, risk assessment tools could be used at Stage 2 to divert low risk offenders from prison into alternative sanction programs (see Kleiman, Ostrom & Cheeseman, 2007). Restricting risk assessment technology to post-sentence release decision-making would address Hannah-Moffat's (2010) concern that using this technology may over-penalize offenders.
3. *When sentencing overlaps with corrections.* Sentencing sometimes seems to overlap with correctional programming. For example, (a) judges often leave some conditions of supervision to the discretion of a probation agency (e.g., participation in specific treatments or programs), (b) the conditions of supervision can be changed during the course of a sentence, (c) an offender can earn early release from a term of incarceration or community supervision, and (d) an offender's term of community supervision can be revoked and s/he can be incarcerated. If these decisions were construed as part of sentencing, then well-validated risk assessment tools could not be used. At the same time, it seems that the focus on backward-looking variables must be loosened at some point. A lifer with the possibility of parole can be told to develop and demonstrate more prosocial attitudes, but will never be able to reduce his or her criminal history.
4. *When the yardstick is not theory, but existing practice.* When then yardstick is not what *ought* to be considered in sentencing, but instead what actually *is,* the conclusion about the appropriateness of introducing risk-assessment technology to the process may be markedly different. From a practical point of view, the "compared to what?" question for risk-assessment based sentencing is existing practice. Typically, judge's sentencing decisions are driven by presentence investigation reports (PSIs) completed by probation agents. Some of these reports may focus

narrowly on the defendant's criminal record, but most will include information that goes well beyond that (e.g., age, living arrangement, family, employment, sophistication, remorse and related traits). Many reports will speculate about the offender's risk for recidivism before recommending a sentence. There is probably considerable variation across jurisdictions in the extent to which a probation officer (and, in turn, a judge) fits the sentence to the *crime* or to the *offender*. Thus, it is possible that standardizing the risk assessment portion of PSIs with a well-validated tool often improves the transparency, consistency, and fairness of decision-making. It is equally possible that doing so has no effect on sentences. Because criminal history variables are strongly correlated with other leading risk factors for crime (e.g., an irresponsible lifestyle, antagonistic or impulsive traits, substance abuse), there may be little difference between sentences based on criminal history alone vs. those that include other risk factors. For these reasons, rigorous experiments (with real or hypothetical cases) are needed to determine *whether* and *how* adding well-validated risk assessment tools to the sentencing process alters (a) the weighting of criminal history vs. other factors, and (b) the severity or nature of sentences.

Concern 2: To what extent does the use of well-validated risk assessment tools exacerbate existing biases in sentencing?

Hannah-Moffat's (2010) second major concern is that introducing risk assessment technology to sentencing will exacerbate existing bias against marginalized groups (e.g., racial minorities, the poor, the unmotivated). The simplest and most direct way to address this concern is by conducting the experiments recommended above. Indeed, group-based data are ideal for revealing bias that can lurk undetected within individual cases (see Baldus, Pulaski & Woodworth, 1990), whether they are- or are not informed by technology. In the remainder of this section, I address more specific aspects of this general concern.

Hannah-Moffat (2010) worries that risk assessment tools have been developed in a manner that predicts not crime *per se,* but biased criminal justice decisions. All too often, studies rely solely upon official records to measure the criterion of violence or other criminal behavior. However, several studies have relied upon different sources of information like victimization surveys (Hindelang, 1978) or a combination of self report, collateral informant report, and records (Monahan et al., 2001). These studies often converge on major risk factors for violence and crime, including such controversial variables as race (see Monahan, 2006). This mitigates concern that these variables predict biased arrest and prosecution practices rather than involvement in violence and crime *per se*. Well-validated risk assessment tools generally include well-validated predictors of criminal behavior (and exclude race). Thus, it seems that Hannah-Moffat's worry is narrowly applicable to poorly validated tools – particularly those developed by actuarially combining criminal justice variables of convenience to predict a potentially biased criterion.

Hannah-Moffat's (2010) broader worry is that risk assessment tools "individualize social problems" like racial discrimination and poverty. Similarly, Harcourt (2010) argues that the variable heavily emphasized in risk assessment tools - criminal history – is a proxy for being black. It is not clear that this is the case. For example, Andrews (in press) has demonstrated that well-validated risk assessment tools predict recidivism well above and beyond the effects of race, poverty, and gender. This casts doubt on the notion that robust individual variables (e.g., angry, impulsive traits; chronic antisocial behavior) are nothing more than masked indices of social disadvantage. Additional doubt is cast by research indicating that the predictive utility of well-validated risk assessment tools often generalizes across race, gender, and even age. Nevertheless, more research on the generalizability of these tools across advantaged and disadvantaged groups is needed (e.g., item response theory analyses; total score comparisons; see Skeem et al., 2004), as is research that compares the utility of race- or gender- specific risk assessment or reduction strategies to validated "generalist" strategies.

Given her comments, however, I suspect that Hannah-Moffat (2010) will be unimpressed by evidence that risk assessment *measures* generalize across disadvantaged groups. Instead, she seems interested in whether the *constructs* tapped by these measures – including their underlying mechanisms and causes – generalize across groups (see Skeem, Edens, et al., 2004). Because these tools were developed with a focus on predictive utility, the constructs, mechanisms, and causes they tap are poorly understood. There is preliminary evidence that well-validated tools assess constructs like chronic criminal behavior, an irresponsible lifestyle, psychopathy and criminal attitudes, and substance abuse-related problems (Kroner, Mills, and Reddon, 2005). It is likely that some of these constructs (e.g., variants of psychoapthy, see Skeem, Poythress et al., 2003) are ultimately caused by intricate interactions among many kinds of variables. Given how little is known about ultimate causes and how unlikely those causes are to sort neatly into "blameworthy" and "non-blameworthy" categories, I recommend that we first focus on the generalizeability of risk factors that are immediately relevant to risk assessment and risk reduction.

To shape a useful, policy-relevant research agenda, we must recognize that the factors that are central to risk assessment, risk reduction, and prevention are not necessarily equivalent. For example, mental illness is a risk factor for criminal behavior, but there is no compelling evidence that reducing symptoms will reduce recidivism (Skeem, Manchak, and Peterson, in press). It is helpful to distinguish among risk factors, causal risk factors, and ultimate causes (see Kraemer et al., 1997). We know a great deal about risk factors, i.e., variables that precede and increase the likelihood of crime. This puts us on relatively solid footing for risk assessment. We know less about *causal* risk factors, i.e., risk factors that reduce the likelihood of crime when successfully changed in treatment (see Douglas & Skeem, 2005). Even well-validated tools offer little direct validity data for risk factors that ostensibly are causal (see Skeem & Monahan, in press). To inform risk reduction efforts, we need to identify robust causal risk factors and assess their generalizability across race, gender, and age. Finally, because intervention at one level (individual) does not obviate the need for prevention at another (societal), we need to learn more about ultimate biological/contextual causes to inform prevention efforts.

<u>Concern 3: To what extent is risk assessment technology implemented rigorously enough in criminal justice agencies to be reliable and valid?</u>

Having addressed Hannah-Moffat's (2010) main concerns, I add an overlapping concern of my own. The most robust risk factors for repeated violent and other criminal behavior include a history of violent, criminal, and antisocial behavior and personality traits like impulsivity and anger/antagonism (e.g., Monahan, 2006; Skeem et al., 2005). These risk factors are common to virtually all well-validated risk assessment tools, even though the specific sets of risk factors and degree of structure with which they are assessed varies from tool to tool (see Monahan, 2006; Skeem & Monahan, in press). Perhaps for this reason, there is no compelling evidence that one *well-validated* instrument predicts violence significantly better than another (Yang, Wong, & Coid, 2010).

One might conclude that we have hit a ceiling with predictive accuracy and should shift attention to identifying causal risk factors that can be targeted in risk reduction efforts. After all, the goal of evidence-based sentencing and corrections is to reduce new crimes and new victims. However, the priorities for *scientific understanding* and *practice* may be quite different.

It could be that the risk assessment tools applied in "real" settings do not even improve our ability to predict violent and other criminal behavior. First, increasingly complex and poorly validated risk assessment tools are being sold to criminal justice agencies (see Baird, 2009; Skeem & Eno Louden, 2007). Second, even for well-validated tools, implementation efforts can fall breathtakingly short.

Descriptive research is needed to generate a national "lay of the land" for practices in risk assessment. What risk assessment tools are being applied by criminal justice agencies? How well-validated are they, in the abstract? What training does staff receive on instrument? Can the agency document that staff (a) attain and maintain interrater reliability with a scoring criterion (because a tool cannot be valid if it is not consistently scored), and (b) produce scores that correlate with theoretically related measures or predict violent or criminal behavior? My experiences are consistent with Hannah-Moffat's (2010) observations that staff can assign scores that are based on incomplete data or limited sources of information, that are deliberately "tinkered with" to manipulate programming, and that reflect individual biases. These observations resonate with direct evidence that even forensic experts "tinker with" scores on risk assessment tools (Murrie et al., 2009). More troubling is our overlapping observation that agencies pay lip service to using risk assessment to inform programming, but do not actually attach new or different services to the technology. Risk reduction will be achieved through risk assessment alone, even if a well-validated tool is successfully implemented. In short, we must know more about how the promise of risk assessment technology is being realized in practice before we determine whether it is appropriate to rely on this technology to inform sentencing.

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