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# Predictions of Dangerousness in Sentencing: Déjà Vu All Over Again

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ABSTRACT

Predictions of dangerousness are more often wrong than right, use information they shouldn't, and disproportionately damage minority offenders. Forty years ago, two-thirds of people predicted to be violent were not. For every two "true positives," there were four "false positives." Contemporary technology is little better: at best, three false positives for every two true positives. The best-informed specialists say that accuracy topped out a decade ago; further improvement is unlikely. All prediction instruments use ethically unjustifiable information. Most include variables such as youth and gender that are as unjust as race or eye color would be. No one can justly be blamed for being blue-eyed, young, male, or dark-skinned. All prediction instruments incorporate socioeconomic status variables that cause black, other minority, and disadvantaged offenders to be treated more harshly than white and privileged offenders. All use criminal history variables that are inflated for black and other minority offenders by deliberate and implicit bias, racially disparate practices, profiling, and drug law enforcement that targets minority individuals and neighborhoods.

Were the American philosopher Yogi Berra a social scientist, and alive, he would likely describe his reaction to recent debates about predictions of dangerousness in sentencing as déjà vu all over again. Except concerning technical statistical issues, all the major critiques offered in recent years

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were offered in the 1970s and 1980s. Predictions of future violence by individuals are substantially more often wrong than right. Check. Minority offenders are more often incorrectly predicted to be violent than are white offenders. Check. Use of socioeconomic status variables in prediction instruments is per se unjust and disproportionately affects minority offenders. Check. Use of criminal history variables exaggerates differences between minority and white offenders and increases racial disparities. Check. It is unjust ever to punish someone more severely than he or she deserves because of a prediction of dangerousness (or for any other reason). Check. Increasing the severity of a sentence on the basis of risk prediction in effect punishes many offenders for crimes that would not have happened. Check.[1]

Those issues were on research and policy agendas four decades ago for several reasons.[2] Support for indeterminate sentencing and the rehabilitative aims said to underlie it had collapsed. Efforts were afoot to figure out what should come next. Retributivism was the leading candidate: punishment should be based mostly or entirely on offenders' blameworthiness, on what they "deserved." Among politicians—much less among scholars—an approach based on instrumental goals of deterrence and incapacitation was a leading candidate and had very different implications. Comparably blameworthy offenders could and should be treated differently if punishing one more severely than another would prevent crime more effectively.

Neither approach entirely won out. Retributivism was more influential in some times and places, consequentialism in others.[3] In practice, both approaches were influential and had to be reconciled. The normative literature on prediction of dangerousness considered how that might be done. Agreement quickly emerged among most legal scholars and philosophers, and many practitioners, that the offender's blameworthiness

[1] These issues were widely discussed (e.g., Morris 1974; Hoffman 1983, 1995; Monahan 1983; Morris and Miller 1985; von Hirsch 1985; Tonry 1987).

[2] Sources concerning intellectual and policy developments discussed in this introduction are well known. Tonry (2016, chap. 1) provides them.

[3] This is the term most often used in contemporary writing by philosophers and legal theorists to describe teleological punishment theories. Until a few decades ago, utilitarianism was in common use. Instrumentalism is a third, less commonly used alternative. The key point is that, whatever the term used, punishment is seen as a means, not an end, and must find justification in its beneficial effects. Deontological retributivism, by contrast, treats punishment as an end in itself. The only just punishment is a deserved punishment. Effects do not matter.

TABLE 1
US Parole Board, Salient Factors

| | 1973 Version | 1976 Version | 1991 Version |
|---|---|---|---|
| Convictions | Yes | Yes | Yes |
| Incarcerations | Yes | Yes | Yes |
| Age at first commitment | Yes | Yes | No |
| Age at current commitment | No | No | Yes |
| Recent commitment-free period | No | No | Yes |
| Not auto theft | Yes | Yes | No |
| Not check fraud | No | Yes | No |
| No parole revoke, offense on parole | Yes | Yes | Yes |
| Custody status | | | Yes |
| No drug dependence | Yes | Yes | Yes |
| Education | Yes | No | No |
| Employment | Yes | Yes | No |
| Family | Yes | No | No |

SOURCE.—Hoffman (1976, 1983, 1995).

should set an absolute upper limit on punishment's severity; some argued that consequentialist considerations were irrelevant and others that they might be relevant but only if proportionate retributive upper limits were respected. Conservative social scientists and many policy makers were primarily interested in effective crime prevention.

Gradually, through the mid-1980s, something close to a consensus view emerged of how retributive and consequentialist views of the role of prediction could be reconciled. The evolution of the US Parole Commission's "Salient Factor Score," used in its release guidelines, is illustrative (see table 1).

1. *Only violence matters*. The initial scoring system included a record of auto theft convictions as an aggravating factor that, if present, would delay release. This made sense if the goal was to predict any future offense, including minor ones, since low-level property offenders often accumulate lengthy records. The commission decided that only risks of future violence could justify lengthier prison sentences. The auto theft factor was dropped. The addition and removal of a check fraud factor illustrate the same point.
2. *Racial disparities matter*. The initial system included "age at first commitment" as a factor because it is a predictor of later offending. The commission soon recognized, however, that ages at first com-

mitment were typically younger for blacks than for whites, partly because of racial differences in how police respond to young people's behavior. Use of age at first commitment as an aggravating factor meant that black offenders were held longer in prison than whites. The factor was dropped. The discussion below of social disadvantage factors illustrates the same point.

3. *Social disadvantage matters*. The initial system included education, employment, and family stability as factors because weak educational and employment records and unstable residential and family circumstances are predictors of later offending. The commission gradually recognized that use of these factors meant that more privileged people would be held in prison for shorter periods than disadvantaged people, who seldom in any meaningful sense choose to be poor, badly educated, or erratically employed or to live chaotic lives. Larger percentages of minority than white people live deeply disadvantaged lives; the socioeconomic factors increased racial disparities. They were all dropped.

The literature on ethical and legal issues in prediction dried up after the 1980s and has revived only in the 2010s. It dried up because the "tough on crime" movement matured in the mid-1980s. Mandatory minimum sentence, three-strikes, truth in sentencing, life without parole, and similar laws shifted the crime prevention focus from decisions by judges and parole boards in individual cases to extended confinement of whole categories of offenders defined only by the offenses of which they were convicted. Parole release was abandoned in a third of the states, made available only to people convicted of minor crimes in the 26 states that enacted truth in sentencing laws, fundamentally compromised by mandatory minimum, three-strikes, and life without parole laws, and where it remained available was granted much less often by politically risk-averse parole boards.

Explanations of why a literature on prediction of dangerousness has reemerged are more speculative. Correctional managers for three decades have been developing prediction instruments for use in classifying offenders for treatment and transferring offenders between programs. A private-sector industry has developed that long made its money by selling prediction instruments to correctional managers and, in recent years, has begun selling its products to courts for use in pretrial detention, sentencing, and probation revocation proceedings. Companies found new markets partly because of mass incarceration and efforts to diminish it. Starting

with the reentry movement of the late 1990s, reformers emphasized the need to reduce recidivism rates, divert low-level and low-risk offenders from imprisonment, and reserve imprisonment for serious and violent offenders. Partly as a result, legislatures increasingly direct judges to take reoffending predictions into account in making sentencing decisions, sentencing commissions are building risk predictions into their guidelines, and courts are buying and using prediction instruments.

Predictions of dangerousness in our time present the same challenges and raise the same normative and policy issues as they did three decades ago. Eric Holder (2014) warned the US Sentencing Commission against using dangerousness predictions when he was attorney general and has repeatedly decried their use since.[4] Increased use of prediction instruments has attracted the attention of legal scholars and social scientists. The development of "big data" approaches to prediction has attracted the interest of statisticians who have extensively debated trade-offs between technical and ethical issues. Social scientists have been patiently working on development, refinement, and evaluation of correctional prediction instruments since the 1980s.

The normative and policy issues raised by use in sentencing of predictions of dangerousness are back on the table. The 1970s and 1980s debates about the same issues have largely been forgotten. In this essay I examine the fundamental issues. Following the lead of the US Parole Commission in the 1970s and 1980s, I focus on predictions of violent and otherwise serious crime. Reoffending is so common among chronic property, drug, prostitution, and public disorder offenders that use of predictive incapacitation strategies would generate palpably unjust punishments.[5] Blumstein,

[4] Holder's critique identifies many of the problems discussed in this essay: "By basing sentencing decisions on static factors and immutable characteristics—like the defendant's education level, socioeconomic background, or neighborhood—[risk assessments] may exacerbate unwarranted and unjust disparities that are already far too common in our criminal justice system and in our society. Criminal sentences must be based on the facts, the law, the actual crimes committed, the circumstances surrounding each individual case, and the defendant's history of criminal conduct. They should not be based on unchangeable factors that a person cannot control, or on the possibility of a future crime that has not taken place." He communicated his views to the US Sentencing Commission (letter, Jonathan J. Wroblewski, Director, Office of Policy and Legislation, US Department of Justice, to the Honorable Patti Saris, Chair, US Sentencing Commission, July 29, 2014).

[5] Andrew Ashworth and Martin Wasik (2017), both former chairs of England's Sentencing Advisory Panel, argue that chronic minor offenders should normally receive reduced sentences because their offending patterns signal the presence of fundamental social maladjustment, mental health problems, or serious personality disorders.

Farrington, and Moitra (1985) long ago showed that the probability of a subsequent arrest exceeds 90 percent for anyone who has been arrested eight or more times. Section I provides an overview of the current debates. To a large extent they consist of people talking past each other. Section II canvasses familiar objections to use of predictions of dangerousness in sentencing, including their inaccuracy; their reliance on ascribed characteristics such as age and gender;[6] their use of status characteristics such as education, marital status, and employment; and their reliance on criminal history indicators that are based in large part on discriminatory police practices. All of these characteristics of contemporary prediction methods systematically disadvantage poor and minority offenders relative to more privileged and white offenders.

Section III addresses justifications offered for predictive sentencing. One is that normative considerations related to punishment are too contested, unrealistic, or indeterminate to guide real-world decisions. Another is that racial, ethnic, age, and gender disparities caused by predictions are not troubling because they reflect real differences between groups. A third is that predictive sentencing raises issues indistinguishable from public health quarantines and use of actuarial predictions in medicine, public health, credit scoring, and insurance. A fourth is that predictive sentencing is an essential tool for minimization of crime.

In the final section, I show diverse ways competing claims and aspirations can be reconciled. The realpolitik claim is that predictions will be used one way or another, that crime is too emotional a topic for rational argument and analyses to be relevant, and, accordingly, that there is no point in explaining why predictive sentencing is unjust. I disagree with all those propositions. Better that officials treating other human beings unjustly be reminded again and again that that is what they are doing. Someday they may want and decide to do better.

That is not an unworldly aspiration. Conventional beliefs change. Some American southerners before the Civil War and during the Jim Crow period opposed racial discrimination on moral grounds. Theirs eventually became the prevailing view. Early feminists and sympathizers, notably in-

[6] Changes in gender self-identification are more common or more often declared in our time than in earlier times. They remain relatively rare, however. In the text, I use "gender" in its traditional bimodal sense. Inevitably, however, the issue will be raised in individual cases in which gender attributions matter whether individuals may or must be categorized according to birth-identified or self-identified gender (including none).

cluding Mary Wollstonecraft ([1792] 2009) and John Stuart Mill ([1869] 1997), argued, again against the odds, that subordination of women is wrong. That became the prevailing view. Consensual homosexual behavior remained a criminal offense in England until 1967 and in some American states until 2003. That is unimaginable now. Other countries' criminal law systems are committed to ideas of proportionality and equal treatment that leave little room for predictive sentencing (e.g., in Scandinavia; Lappi-Seppälä 2016). That may someday happen in the United States.

A critic might accuse me of being insensitive to the suffering of victims of crimes that would be avoided if their assailants had been incapacitated. I am not. Prevention of foreseeable harms, however, requires trade-offs between interests and costs. There is no cost-free way entirely to prevent many bad things—including crimes, automobile injuries and fatalities, occupational injuries, environmental degradation, and slips in bathtubs—from happening. No one is prepared to forbid use of automobiles, industrial production, or bathing. Instead we try to make activities as safe as they affordably can be while acknowledging their importance.

Crime is no different. There would be little violent crime in the community if all males between ages 16 and 30 were locked up; that is not going to happen. Human beings value their liberty and autonomy too much. Incapacitation resulting from predictions of dangerousness diminishes the liberty and autonomy of knowable individual people, disproportionately poor and disadvantaged ones, in exchange for predicted prevention of crimes to hypothetical future victims. Because the world changes, many predicted crimes may never have happened. Rates of violent crime, for example, declined by two-thirds in the past quarter century. Two-thirds of the crimes that were predicted as grounds for locking people up in 1995 did not happen, but those locked up lost much of their lives as free citizens. The trade-off is thus between punishing specific people much more than they deserve in order, on the basis of predictions that are much more often than not incorrect, to prevent an unknowable number of future crimes. That price, like the costs associated with banning private use of automobiles, is too high. Violent crimes are as much an inevitable fact of life as auto accidents. They are prices we pay for personal freedom.

## I. The State of the Debates

People's views about use of predictions of dangerousness in sentencing sometimes appear to be irreconcilable, as two high-profile exchanges

demonstrate. Hart, Michie, and Cooke (2007) evaluated use of several well-known instruments and concluded that the "group and individual risk estimates" they produce are too wide to be useful. The predictions are too often wrong, they said; using them does serious unjustifiable harm to individuals who would not have been violent. Statisticians Peter Imrey and Philip Dawid (2015) responded, insisting that the best-known instruments, their results, and their applications are based on sound statistical practice.

Imrey and Dawid did not understand, or pretended not to understand, the critics' objection. Individuals are not treated unjustly, they wrote: decisions are "individualized." A judge saying that would mean that he or she took into account all available information concerning a particular individual and thought carefully about what to do. What Imrey and Dawid meant was different: "individualized risk [is] derived from an external group and projected onto the subject" (2015, p. 39). That is, the riskiness attributed to an individual is not his or her own, but the average of a group in which he or she is included for purposes of statistical analyses. They distinguished this from "latent individual risk intrinsic to the subject herself." This, though obscurely phrased, is what most people mean when they say that a decision about a specific person is individualized.

The second exchange began when Angwin et al. (2016) analyzed Broward County, Florida, data on use of COMPAS, a proprietary prediction instrument licensed by a for-profit company.[7] Their title tells their conclusion: "There's Software Used across the Country to Predict Future Criminals. And It's Biased Against Blacks." Their three key findings: blacks had higher average risk scores than whites, relatively more blacks than whites were wrongly predicted to be violent (exposing relatively more

[7] Dressel and Farid (2018) report on a stunning analysis of 462 laypeople's predictions of dangerousness, using the Broward County, Florida, data set used by Flores, Bechtel, and Lowenkamp (2016), and find that laypeople's predictions of reoffending were as accurate as COMPAS's. Dressel and Farid presented short descriptions of the crimes with which 1,000 defendants were charged and (only) the defendant's sex, age, and previous criminal history. COMPAS, by contrast, uses 137 variables. In order to prevent participant exhaustion, defendants were divided into 20 sets of 50 cases. Each participant was asked for one defendant set to predict reoffending within 2 years of the defendant's most recent crime. In one round of questioning, participants were not given the defendant's race. In a second round, they were (for a different set of offenders than in the first round). The participants were recruited through Amazon's Mechanical Turk, an online crowd-sourcing marketplace in which people are paid to perform a wide variety of tasks. The participants' predictions in both rounds were as accurate as COMPAS's. Racial differences in false positive rates were lower than in Flores, Bechtel, and Lowenkamp's analysis.

black people to harsher treatment), and relatively fewer blacks than whites were wrongly predicted to be nonviolent (making fewer eligible for milder treatment). Those foreseeable racial disparities—crucially important to people they affect—are what the critics meant by "bias."

Flores, Bechtel, and Lowenkamp (2016) did not refute the racial disparity findings but insisted that the critics had not shown statistical bias. Blacks have higher crime rates than whites, they explained, and more often have socioeconomic and other characteristics correlated with offending: no bias, just sound statistical practice. They sidestepped the critics' objections.

Talented, passionate people were on both sides of those exchanges but could not find common ground. The prediction defenders viewed the issues as primarily technical: let the chips fall where they may. The critics viewed the issues as primarily substantive: knowingly treating blacks more harshly than whites is wrong.

Many fault lines permeate prediction debates. Some consider it irresponsible not to use state-of-the-art prediction methods. Others believe that punishments should be closely proportioned to offenders' blameworthiness and that it is unjust to punish some offenders more severely than others only because of predictions. Still others believe that reducing use of imprisonment depends on identifying offenders likeliest to reoffend, and locking them up, so that others need not be. Some people believe that racial, ethnic, and class disparities caused and exacerbated by prediction instruments are morally wrong and want them to end.

In writing the preceding paragraphs, I tried to avoid polemic. The facts, ma'am, just the facts, as Sergeant Joe Friday used to say. I did not mention assertions that political and ideological agendas and racial, ethnic, and class biases, conscious and implicit, underlay adoption in the United States of broad-based incapacitative crime control policies in the 1980s and 1990s, including increased use of prediction. Those allegations may be true, but here I set them aside. My interest is in the intellectual challenge posed by widely different, good-faith, views about prediction, and whether and how they can be reconciled.

The difficulty, as Isaiah Berlin (2002) long ago explained, is that the implications of equally valid first principles often conflict. Few would disagree that maintenance of public order and security is a Good Thing. Were that the only relevant consideration, it would be self-evident that efforts to diminish crime's effects on victims should be maximized.

Other no less important values, however, are at stake. If assuring that offenders be punished precisely as much as they deserve were all that

mattered, predictions about future offending would be irrelevant. If only equal treatment mattered, people convicted of equally serious crimes should be punished equally severely; predictions would again be irrelevant. If avoidance of policies that cause or aggravate racial and ethnic disparities, or that rely on factors tinged with invidious bias, was overridingly important, all existing prediction systems would have to be abandoned.

The values underlying all of those things matter, and they conflict. People resolve the conflicts in different ways. Some allow one goal to trump others (e.g., reducing mass incarceration by using imprisonment only for "dangerous" people: Flores, Bechtel, and Lowenkamp 2016; reducing social and racial injustice: Harcourt 2008; preventing crime: Slobogin 2019). Imrey and Dawid (2015, p. 40), in an article sometimes described as the leading statistical work on actuarial risk assessment, observe, "If groups of individuals with high and low propensities for violence recidivism can be distinguished, and courts act upon such distinctions, recidivism will decline to the extent that groups most prone to violence are incapacitated. . . . And both society and offenders will be better served even if we cannot be sure . . . from precisely which individual offenders this betterment derives." Offenders who are imprisoned, or held longer, because they were mistakenly predicted to be violent, however, are seldom likely to agree that they have been "better served."

Some writers acknowledge the problem but take no position. When writing about punishment theory generally, American philosopher Douglas Husak (2019*a*) observes, "Sentencing according to the principle of proportionality is crucial if the state is to treat offenders as they deserve." However, concerning risk prediction, he adopts a "pluralist" stance and writes, "Retributivists should preserve the role of desert while weakening its strength. . . . We can preserve proportionality but allow exceptions when we have a good rationale for them. . . . If we have good reason to inflict different amounts of punishment on two offenders who have committed equally serious crimes, we should not be worried that our decision does not preserve proportionality. Admittedly, the results produced [may be] messy; sentencing, like morality more generally, is not governed by an algorithm" (Husak 2019*b*).[8] English philosopher Matt Matravers (2019, p. 205) offers an account of punishment in which

[8] The newest and purportedly most accurate prediction devices employing big data and machine learning are algorithms (Berk et al. 2018; Berk 2019).

censure of blameworthy behavior and crime prevention are independent governing principles: "The results may well be counter-intuitive," he writes, to punish people convicted of less serious crimes more severely than people convicted of more serious ones, but "it is not inconsistent" so long as retributive and consequentialist goals are independent. The problem, which he does not explore, is in deciding what to do when the implications of the independent principles conflict.

Not everyone sidesteps. Psychologists John Monahan and Jennifer Skeem (2016) survey the literature, work through all the major problems, and propose ways to limit unwanted effects of prediction (notably by allowing them to be used to reduce but not to increase sentence severity).[9] Berk et al. (2018, p. 1) in one of a series of increasingly subtle analyses of trade-offs between ethical issues and predictive accuracy, observe, "Except in trivial cases, it is impossible to maximize accuracy and fairness at the same time, and impossible simultaneously to satisfy all kinds of fairness." However, they too throw up their hands: "In the end, it will fall to stakeholders—not criminologists, not statisticians, and not computer scientists—to determine the tradeoffs. . . . These are matters of values and law, and ultimately, the political process" (p. 33). Not terribly helpful or reassuring to anyone concerned about unjust treatment of individuals. The political process produced mass incarceration and three-strikes, life without parole, and similar laws.

## II. The Indictment

Three sets of problems bedevil use of predictions in sentencing. The first is that they are seldom very accurate. When the aim is to predict serious sexual or other violence, more predictions are wrong ("false positives") than are right ("true positives"). If used to determine prison sentence lengths, many people who would not have committed serious violence will be held longer. The second set of problems concerns the variables used in nearly all prediction instruments: some over which individuals have no control, such as age and gender, are fundamentally unjust; some concern inherently personal matters such as marriage, work, and education; some relate to aspects of criminal records that are contaminated by

[9] This does not, however, reduce racial and class disparities. Minority and lower–social class offenders systematically score worse on risk prediction instruments and are thus less likely to benefit from mitigated sentences predicated on "good" risk scores.

conscious and implicit bias and discriminatory practices. The third set concerns racial and ethnic disparities; almost all variables used in prediction instruments correlate with race and ethnicity and inexorably make punishments of minority group members harsher than those of whites.

*A. Accuracy*

Violence is rare, even among known offenders. Predicting rare events accurately is inherently difficult. As a result, the technology of violence prediction is not very good. The predictions are more often inaccurate than accurate. I was astonished to learn, when reviewing the contemporary literature as background for writing this essay, that accuracy is little better now than it was four decades ago.

Norval Morris (1974), in an influential early synthesis, concluded that predictions of future violence were wrong two-thirds of the time. The most exhaustive contemporaneous analysis by John Monahan (1981) reached the same conclusion. Predictions that people will not be violent were overwhelmingly correct, but that is trivial: if only 10 percent are violent, a prediction that no one will commit a violent crime will be correct 90 percent of the time. Morris argued that then-current knowledge did not justify imposing longer prison terms on people predicted to be violent: "'Dangerousness' must be rejected for this purpose, since it presupposes a capacity to predict future criminal behavior quite beyond our present technical ability" (1974, p. 62). Locking up three people predicted to be violent when only one will be, he said, is deeply unjust. Two would be wrongfully deprived of extended periods of liberty.

Analyses of prediction studies conventionally distinguish, as Morris did, between true and false positives. True positives are predicted to reoffend, and do. False positives are predicted to reoffend, but do not. True and false negatives are defined similarly. In Morris's time, the state of the predictive art, as table 2 shows using Morris's example, was that two-thirds of individuals predicted to be violent were false positives.

The technology of violence prediction is vastly more sophisticated than it was four decades ago. The early studies were based on clinical predictions by doctors, mental health specialists, judges, and correctional personnel. The contemporary literature is actuarial and is based on mathematical models, sophisticated statistical analyses, machine learning, and "big data." One might expect that violence predictions today would be vastly more accurate than in the 1970s. They aren't.

TABLE 2
Violence Prediction, True and False Positives and Negatives: An Illustration

| Crime Type | Prediction | Result—No Violence | Result—Violence |
|---|---|---|---|
| No violence | 70 | 65 (true negatives) | 5 (false negatives) |
| Violence | 30 | 20 (false positives) | 10 (true positives) |
| Total | 100 | 85 | 15 |

SOURCE.—Adapted from Morris (1974, table 1).

One leading meta-analysis of the accuracy of prediction instruments concludes that further improvements are unlikely: "After almost five decades of developing risk prediction tools, the evidence increasingly suggests that the ceiling of predictive efficacy may have been reached with the available technology" (Yang, Wong, and Coid 2010, p. 759). Consistently with this caution, two major meta-analyses conclude that the most commonly used violence prediction instruments are indistinguishable in their accuracy.[10]

The most influential meta-analysis, analyzing research on the nine most commonly used instruments, concluded that positive violence predictions are, on average, correct 42 percent of the time (Fazel et al. 2012; Fazel 2019). Morris, recall, was troubled that only one-third of positive predictions (two of six) were correct. Forty-two percent accuracy, put differently, means that two of five positive predictions are correct. As in Morris's time, substantially more than half of people predicted to be violent will not be.

Two of the leading meta-analyses conclude that positive predictions of future violence are too inaccurate to be used in sentencing:

> Because of their moderate level of predictive efficacy, they should not be used as the sole or primary means for clinical or criminal justice

[10] Yang, Wong, and Coid (2010, p. 759): "If prediction of violence is the only criterion for the selection of a risk assessment tool, then the tools included in the present study are essentially interchangeable." Campbell, French, and Gendreau (2009, p. 253): "This analysis found little difference among the predictive validities of actuarial and structured instruments for violent reoffending." Meta-analyses of research on instruments used to predict any, as opposed to only violent, reoffending reach the same conclusion: "Overall, no one instrument stood out as producing more accurate assessments than the others, with validity varying with the indicator reported" (Desmarais, Johnson, and Singh 2016, p. 213).

> decision making that is contingent on a high level of predictive accuracy, such as preventive detention. (Yang, Wong, and Coid 2010, p. 761)

> These tools are not sufficient on their own for the purposes of risk assessment. . . . The current level of evidence is not sufficiently strong for definitive decisions on sentencing, parole, and release or discharge to be made solely using these tools. (Fazel et al. 2012, pp. 5, 6)

Even outspoken defenders of risk prediction agree. Flores, Bechtel, and Lowenkamp (2016, p. 39), whom I discussed above concerning disagreements about racial bias, emphasized that "we want to make it clear that we are not supporting or endorsing the idea of using risk assessment at sentencing."

There is thus no credible scientific case to be made in favor of use in sentencing of predictions of future violence.

*B. Unjust Variables*

Except for race and, though they are seldom explicitly discussed, presumably also ethnicity, nationality, and religion, developers of prediction instruments include as variables any offense and offender characteristics on which they can obtain data. In other public policy settings, for example, education, public health, and medical research, equivalent strategies including use even of racial and other usually verboten data make sense. The aims are to improve public services generally, to understand and address problems affecting subpopulations, or to diagnose and treat individual health problems.

Violence prediction in courts is different.[11] The aim is usually to identify high-risk individuals for pretrial or postconviction preventive detention (though as Monahan [2017] argues, it could in theory be used to identify low-risk individuals for more humane treatment; I discuss this below). Public health and educational research and related policies seldom target individuals. Medical decision making does, but the aim is to

[11] Different considerations may be pertinent concerning some uses of prediction instruments in correctional settings. Some "culturally appropriate" treatment programs, e.g., target special needs of women or members of specific minority groups. Other treatment programs target "higher-risk" offenders on the efficiency rationale that low-risk offenders will usually not reoffend whether or not they participate. Prediction instruments are used to match offenders to treatment programs generally, to set or vary treatment or supervision intensity, and to measure changes relative to program goals. They are also used in institutional custody-level decisions, which may raise issues similar to those concerning sentencing.

attempt to prevent or minimize human suffering. Sentencing decisions are intended to cause human suffering. That is why Jeremy Bentham called all punishment, even when warranted, "evil."

Suspect variables fall into three categories. Race, gender, and age ought to be off-limits because they are basic human characteristics for which individuals bear no causal, personal, or moral responsibility. Increased punishments for any of these reasons are per se unjust. A host of socioeconomic characteristics including employment, education, marital status, living arrangements, and parental responsibilities are correlated with offending but are not the criminal law's business. These are matters of individual choice in a free society. Punishing people for making the "wrong" choices is also per se unjust. Socioeconomic and other personal characteristics including many related to criminal history are highly correlated with race and ethnicity; many are shaped by invidious discrimination. Their use causes and exacerbates adverse racial and ethnic disparities.

### *C. Immutable Characteristics*

No one would think people should be punished more severely because of their eye or hair color or adult height, characteristics over which they have no control. Gender, race and ethnicity, and age raise the same issue. So, despite their greater mutability, would religion and nationality most of the time.

1. *Age.* Individuals have no more control of their age than of their eye color. Mentally responsible individuals do have control over their behavior. All else being equal, the age of an offender should not matter, except to mitigate the severity of punishments imposed on young and elderly offenders.[12] Young offenders in all Western countries, including the United States, have traditionally been punished less severely than adults and usually in specialized courts using specialized procedures and imposing less severe punishments.[13]

[12] Many European countries have created strong legal presumptions against imprisonment of the elderly (typically, 70 or older). That is why former Italian Prime Minister Silvio Berlusconi was sentenced to community service as a hospital orderly rather than to the multiyear prison sentence he would otherwise have received following conviction for public corruption offenses. As the Madoff Ponzi scheme and Bill Cosby cases and the reluctance of most American prisons to release terminally ill and elderly prisoners demonstrate, the United States, as in many penal policy matters, is an outlier.

[13] In western European countries, e.g., the age of criminal responsibility is typically 14 or 15 years (in Belgium 18 for most offenses). In most, waiver of young offenders to adult courts is not legally possible; nor is direct prosecution in adult courts. In German courts,

The reasons are self-evident. Most young offenders are less experienced and mature than most adults, are at a developmental stage during which risk taking, thrill seeking, and experimentation are common, and are more malleable. Research on "age/crime curves" and desistance has long shown that many adolescents commit crimes as teenagers, but most soon desist (Farrington [1986] and Laub and Sampson [2001] are the classic sources). Neurological and developmental research of the last two decades has documented details of adolescent brain development and behavioral controls that strengthen the rationale for more forgiving handling of young offenders (Monahan, Steinberg, and Piquero 2015). Even the conservative US Supreme Court is convinced. Banning mandatory life sentences without parole for juveniles, it emphasized that "children are constitutionally different from adults for purposes of sentencing" and that "mandatory penalties, by their nature, preclude a sentence from taking account of an offender's age and the wealth of characteristics and circumstances attendant to it" (*Miller v. Alabama*, 132 S. Ct. 2455, 2467 [2012]).

Nonetheless, youth is widely used as a variable in prediction instruments and as an aggravating factor in sentencing. I discuss Virginia's notorious sentencing guidelines, in use for more than 25 years, because they are premised on prediction-based incapacitation. They call for, all else being equal, harsher punishments for younger than for older offenders. This is wrong in principle and, in light of a growing body of research showing that imprisonment is criminogenic, perverse (e.g., Nagin, Cullen, and Lero Jonson 2009).

The Virginia guidelines set out criteria that identify nonviolent offenders for whom prison sentences are specified but whom judges are encouraged to divert to community-based punishments. In fraud guidelines, 22 "points" are given for being aged 20 or younger (Virginia Criminal Sentencing Commission 2014).[14] Being male adds 10 more points, for a total of 32. Only offenders who receive 31 or fewer points qualify for diversion; thus no matter how minor the offense or the criminal record, all males under 21 fail to satisfy the diversion criteria.

Virginia's remarkable treatment of young people becomes starker when compared with provisions for offenders 30 and over; they receive 7 "age

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the vast majority of 18- and 19-year-olds convicted of serious crimes are sentenced as if they were juveniles (Tonry and Chambers 2012).

[14] The details are slightly different for larceny. Being male adds 9, not 10, points. The system is otherwise similar.

points." Five points are given for having one or two prior felony convictions and 4 points for having been incarcerated as an adult one to nine times. Put it together: A 30-year-old (7 points) male (10) with two prior felony convictions (5) and two prior adult incarcerations (4) totals 26 points and falls below the 31-point diversion threshold. An 18-year-old with no past criminal record does not.

There are three explanations for this strange policy. First, Virginia's guidelines were developed at the height of the "tough-on-crime" period under the administration of Republican Governor George Allen, who ran for office on a "parole abolition" platform (Tonry 2016). They were developed under the leadership of former US Attorney General William Barr, author while in office of the 1992 tract *The Case for More Incarceration* (1992). Second, selective incapacitation long before had been repudiated as a crime control strategy by the National Academy of Sciences (Blumstein et al. 1986), but Barr nonetheless made incapacitation the premise for the Virginia guidelines. Third, because of the age/crime curve, age is a powerful predictor of future offending (though most offenses involve property or drugs and most young offenders soon desist).

The more general question is whether youth should be included in any prediction instrument meant to be used, or that might be used, in deciding whom to imprison or for how long. The trade-off is between predictive accuracy and punishing people because they are young. If the trade-off concerned eye color, race, or religion, few people would consider it. Even if any of them predicted reoffending, basic requirements of justice forbid their use. Age is equally inappropriate.

2. *Gender.* Gender cuts in different directions in different contexts. Assiduous efforts are made in education, employment, and public health to prevent or minimize differential treatment of women. This is so even when actuarial rationales exist. Because they typically live longer than men, women traditionally paid lower life insurance premiums but also received lower monthly pension benefits. Those practices have been attacked as unjust, increasingly successfully, despite their actuarial justifications. So have higher automobile insurance premiums paid by men.

The early American sentencing commissions undertook research on past sentencing patterns and invariably found that women typically received less severe punishments than men. No commission, however, chose to promulgate separate, less severe guidelines for women or to make gender a mitigating factor. Gender-blind guidelines were expected to increase sentence severity for women, but everyone involved agreed

that was required by respect for gender equality (e.g., Knapp 1984; Tonry 1996).

Gender blindness is a powerful idea. Treating people differently because they are male or female is wrong in the same way that treating people differently because they are of a particular race or religion is wrong. Gender blindness is sometimes set aside for sympathetic policy reasons. Examples targeting women include health care, maternity leaves, flexible work schedules, and help with child care. Even with such policies, movements are afoot as a matter of fairness to make comparable provision for men. What distinguishes these gender-conscious policies is that they aim to do something for women, not to them. They do not aim to treat men worse but to meet gender-specific needs of women.

That has not stopped developers of prediction instruments from incorporating maleness as a factor. Nor has it stopped policy makers from using maleness, all else being equal, to increase punishment severity. The 10 points given under the Virginia fraud guidelines for being male (compared with 1 point for being female) is an example. Theft and drug sale guidelines vary in detail, but all treat men and women differently.

The rationale is actuarial. Across crime, time, and country, men's offending rates are higher than women's. Locking up more otherwise comparable men than women will predictably prevent more future offenses. Just as with eye color, race, ethnicity, and age, however, that cannot justify punishing some equally culpable offenders more severely than others.

3. *Race and Ethnicity.* No American jurisdiction explicitly authorizes use of race or ethnicity (or religion or nationality) as criteria for making sentencing or parole release decisions. Doing so would violate long-settled constitutional equal protection doctrines (e.g., Starr 2014). Indirectly, however, race and ethnicity creep in when decisions are based in part on socioeconomic and criminal history variables that are correlated with them. On average, black and Hispanic Americans compared with whites have lower incomes, weaker employment records, less extensive educations, less residential stability, and more extensive criminal records. All are correlated with higher offending risks. This is one major reason why prediction instruments produce higher false positive rates for blacks than for whites and higher false negative rates for whites than for blacks.

A strong argument can be made, persuasive to many, that there is no moral difference between making invidious decisions on the basis of race and knowing that making decisions based on other considerations will affect members of different racial groups differently. If a law specifying

5-year prison sentences for black offenders and 2-year sentences for whites is wrong, why isn't it equally wrong to use prediction instruments that foreseeably produce the same result? This argument is why criminal law *mens rea* doctrine usually treats intention to cause a harm, knowledge that the harm will almost certainly result, and reckless disregard of a substantial and justifiable risk that it will occur as morally equivalent. Doing something knowing it will cause harm is little different from doing something intending to cause harm.

The legal and moral issues this argument raises are complex, but that does not weaken its force in relation to sentencing and punishment. There are other circumstances in which knowingly causing harm is justified. Criminal law defenses of self-defense, duress, and necessity provide examples. So does the Roman Catholic moral doctrine of double effect, which justifies harms that are side effects of actions taken to accomplish a good result (McIntyre 2014; an example: acting to save a pregnant woman's life though a fetus will likely die). Other times harms occur for which there is no remedy. The US Supreme Court famously decided that public authorities may not operate segregated schools on purpose (de jure discrimination) but segregated schools that are the outgrowth of residential patterns (de facto discrimination) are okay.

Criminal punishment is different from the harms involved in those other contexts. Sentences imposed by courts are state actions that are indisputably meant to cause pain to offenders. No decent person would say that black people convicted of a particular offense deserve to suffer greater pain than do white offenders convicted of the same offense. We know, judges know, designers of instruments know that use of predictions of dangerousness in sentencing causes black offenders to be punished more severely than white offenders convicted of the same offenses. We also know, though less confidently, that decision makers more often override risk predictions of black than white offenders and punish them even more severely than their individual risk classification would justify (Green and Chen 2019). Thus, a double whammy: black offenders are overpredicted to be violent and are then punished more severely than the prediction, even if correct, would call for.

Table 3, showing false positive and false negative rates calculated by Flores, Bechtel, and Lowenkamp (2016) in their reanalysis of COMPAS data, illustrates this. Half of whites predicted not to reoffend were rearrested, compared with only 28 percent of blacks predicted not to reoffend. The false negative rate for whites was nearly double that for blacks.

TABLE 3
Prediction Errors, Any Arrest within 2 Years, by Race: An Illustration

| | False Positive Rates (%) | False Negative Rates (%) |
|---|---|---|
| Whites | 22 | 50 |
| Blacks | 42 | 28 |

SOURCE.—Flores, Bechtel, and Lowenkamp (2016, table 3).

Conversely, only 22 percent of whites who were predicted to reoffend did not, compared with 42 percent of blacks. The false positive rate for blacks was nearly twice that for whites. These are extraordinary differences. Blacks are much more likely than whites to be mislabeled as dangerous and, if this is reflected in sentencing, to be punished more severely than they otherwise would be. Conversely, whites are much more likely than blacks to be mislabeled as "not dangerous" and, if this is reflected in sentencing, to benefit from a mistaken prediction that they would not reoffend.

Harcourt (2008) showed that predictive sentencing has a ratchet effect that worsens racial and socioeconomic disparities. When risk predictions are used, minority and disadvantaged defendants are treated more severely, on average, than others the first time they are convicted. Each subsequent conviction has compounding effects and further increases increments of additional severity they suffer. Racial differences in criminal history are a primary cause of racial disparities in imprisonment (Hester et al. 2018).

Correlations between offending and race are not random. Both official police data and victim survey data show that black people commit some crimes at higher rates than whites. That is not surprising. In every country, members of some socially and economically disadvantaged groups commit crimes at higher rates than the majority population (Tonry 1997). In the United States, the social and economic disadvantages that disproportionately afflict black and Hispanic people, and are correlated with offending, are partly products of historical and ongoing discrimination and of diminished life chances at birth. Mentally responsible minority offenders, like other offenders, should be punished as they deserve for the offenses they commit; few people disagree.[15] It should be at least discomforting, however, that the use of prediction instruments in sentencing exacerbates the effects of disadvantage and causes many minority offenders to be punished more harshly than they deserve or would be if they were white.

[15] Minority and deeply disadvantaged offenders may, however, often deserve less severe punishments than do others (Tonry 2014).

*D. Socioeconomic Characteristics*

All of the early sentencing commissions rejected use of socioeconomic variables in their sentencing guidelines systems. The first principle set out in the "Statement of Purpose and Principles" of the Minnesota Sentencing Guidelines Commission (1980) provided, and still does, "Sentencing should be neutral with respect to the race, gender, social, or economic status of convicted offenders." Section 994(d) of the Sentencing Reform Act of 1984 directs the federal sentencing commission to "assure that the guidelines and policy statements are entirely neutral as to the race, sex, national origin, creed, and socioeconomic status of offenders." Section 994(e) elaborates: "The Commission shall assure that the guidelines and policy statements, in recommending a term of imprisonment or length of a term of imprisonment, reflect the general inappropriateness of considering the education, vocational skills, employment record, family ties and responsibilities, and community ties of the defendant."

The US Congress and Minnesota's sentencing commission rejected use of socioeconomic characteristics in sentencing because using them is unjust. It feels platitudinous to write this, but it is unchallengeably true: No one should be punished more severely than he would otherwise be because he is rich or poor, well or inadequately educated, married or single, working or unemployed. None of that has anything to do with an individual human being's blameworthiness. Even the Virginia Sentencing Commission, not renowned for its sensitivity to moral and ethical issues, removed the socioeconomic factors—employment and marital status—initially included in its diversion guidelines (Ostrom and Kauder 2012). The correlation of many socioeconomic characteristics with race makes their use doubly unjust.[16]

There is another fundamental reason why socioeconomic characteristics should not be cause for harsher punishment. Many result from legitimate lifestyle choices that are not the state's business. People living in free societies are entitled to decide whether to marry, to work a steady job, or to become well educated, even if being unmarried, lacking a stable work record, and being poorly educated are correlated with higher offending rates. Free citizens are entitled to decide to seek university degrees, join apprenticeship programs, or live lawfully hand to mouth, as street people and many artists, musicians, and writers do by some combination of choice and necessity.

[16] The US Parole Commission was concerned for decades that use of socioeconomic variables in its Salient Factor Score exacerbated racial injustices and, partly for that reason, removed them (Hoffman 1976, 1983, 1995).

Citizens are entitled to choose not to work at all and to live hand to mouth or on income from trust funds or indulgent parents.

Committing violent and property crimes, selling illicit drugs, and actively participating in criminal gangs also reflect personal choices, but they are choices of a different kind. So are choices by sentenced offenders to violate lawful conditions imposed on community punishments, such as compliance with curfews, desistance from crime, and not associating with former criminal associates. Those behaviors are unlawful; people who engage in them assume risks of arrest, prosecution, conviction, and punishment. They choose to live dangerous lives.

Prediction instruments and sentencing policies that take account of socioeconomic characteristics generally do so because research shows them to be correlated with offending. A cynic might say that anyone who chooses to live a vagabond life assumes the risk that he will be punished for it, so what's the problem? Many offenders, however, do not—in any fundamental sense—choose to be poorly housed, poorly employed or unemployed, poorly educated, or unmarried. Even if poor people's choices are more constrained than more privileged people's, they are lawful choices all the same. Punishing people because of their lawful lifestyle choices raises the same ethical issues for a disadvantaged inner-city resident as it would for a privileged trust fund beneficiary.

Anyone who believes in equal justice should oppose use in sentencing of race-skewing socioeconomic variables in sentencing generally, including in prediction instruments. That is why, more than 30 years ago, as table 1 shows, the US Parole Commission removed them from its prediction instrument even though that weakened the Salient Factor Score's accuracy (Hoffman 1983).

### *E. Criminal History*

Criminal history raises more complex issues than is usually recognized, despite widely held intuitions that prior convictions justify harsher punishments for subsequent offenses (Roberts 2008; Roberts and von Hirsch 2010). Although it appears self-evident to Americans that people who have previously been convicted of crimes should be punished more severely for a new offense, all else being equal, it is not self-evident to people in other countries. In the Scandinavian countries, for example, the general assumption is that punishments should not be increased because of prior convictions (Asp 2010; Lappi-Seppälä 2011). The reasoning is that the offender has already been punished as much as he or she deserved for the former offense and should now be punished as much as is deserved

for the new one. Prior convictions are often taken into account as aggravating factors in other common-law countries, but usually subject to sharp limits (Baker and Ashworth 2010; Freiberg 2014).

American policy makers and practitioners are unlikely soon to adopt or endorse the Scandinavian point of view and decide to take account of prior records not at all or only a little. Criminal history does, however, have dramatic aggravating effects in American sentencing. Under three-strikes, habitual offender, and career criminal laws, prior convictions make a huge difference. Under state sentencing guidelines systems, criminal history can result in sentences four to 15 times longer than are received by first offenders (Hester et al. 2018). Any searching inquiry into ethical issues in American sentencing would have to explore the rationales and justifications of those differences.

Criminal history variables are the primary drivers of risk predictions. It is difficult, however, to find a principled justification for increasing the severity of punishment because of an individual's criminal history. Even if one could be found, criminal history is entangled with racial bias and foreseeable disparate racial effects.

1. *Punishment Theories.* Retributivists believe that any punishment more severe than an offender deserves is per se unjust. Immanuel Kant, the archetypal retributivist, averred that punishment should be precisely calibrated to the seriousness of the offense: "But what kind and what amount of punishment is it that public justice makes its principle and measure? None other than the principle of equality (in the position of the needle on the scale of justice), to incline no more to one side than to the other. Accordingly, whatever undeserved evil you inflict on another among the people, that you [deserve]. . . . Only the law of retribution ( *jus talionis*) . . . can specify definitely the quality and the quantity of punishment" ([1797] 2017, p. 115). This requires strict proportionality so that equally serious crimes are punished equally severely, and more and less serious crimes are punished appropriately differently. Almost all retributive philosophers and criminal law theorists who have considered the matter conclude that there is no convincing moral justification for treating people with prior convictions more severely than first-timers (e.g., Fletcher 1978; Lippke 2016).

Utilitarians and contemporary consequentialists should in principle permit harsher punishments for recidivists, but only if the reductions in suffering attributable to crimes thereby prevented are greater than the additional suffering imposed on offenders. Utilitarianism also has a strong proportionality principle, based on a deterrence logic: punishments should be scaled to offense seriousness to encourage offenders always to commit

the less serious of alternative possible crimes. However, unlike retributive proportionality, utilitarian proportionality can be trumped by a frugality principle (Bentham's term; in our time, we say parsimony) that forbids unnecessary punishment. Bentham condemned and would forbid punishments that cause more suffering to offenders than their punishment prevents and punishments whose aims can more effectively be obtained by means of other preventive measures (Frase 2009*a*). For Bentham, the archetypal utilitarian, any punishments more severe than concerns for utilitarian proportionality otherwise permit are per se wrong: "All punishment is mischief: all punishment in itself is evil. . . . If it ought at all to be admitted, it ought *only* to be admitted in as far as it promises to exclude some greater evil" ([1789] 1970, p. 158; my emphasis).

The problem in our time for consequentialist supporters of predictive sentencing is that contemporary knowledge of deterrence, incapacitation (the rationale for prediction), and rehabilitation cannot "promise to exclude some greater evil." I have several times recently surveyed the relevant literature (Tonry 2016, 2018*a*), as have many others (e.g., Chalfin and McCrary 2017), including most notably the National Academy of Sciences Committee on the Causes and Consequences of High Rates of Incarceration (Travis, Western, and Redburn 2014, chap. 5). That august body concluded that deterrent and incapacitative effects of punishment are modest at best and that imprisonment is on balance criminogenic, making ex-prisoners more rather than less likely to reoffend. The evidence on rehabilitation is stronger. Well-designed, well-targeted, well-managed, and well-funded programs can reduce reoffending (MacKenzie 2006). Assignment to diagnostically appropriate treatment programs does not, however, require that individuals receive longer prison sentences.

2. *Racial Bias and Disparate Effects.* Even if punishment theories are set aside, difficult ethical issues relating to race and ethnicity remain. Blacks more often commit and are more often arrested for violent crimes than whites. In a system in which criminal history makes a big difference in sentencing, even that facially plausible explanation for differences in conviction rates means that criminal history factors disproportionately affect blacks. Use of criminal history factors systematically disadvantages members of minority groups. Frase (2009*b*), in the most comprehensive study ever published on racial disparities in a state sentencing system, found that two-thirds of racial disparities in Minnesota imprisonment result from use of criminal history factors in sentencing.

Aspects of criminal history that are commonly included as variables in prediction instruments—age at first arrest or commitment, custody sta-

tus, and numbers of prior arrests, convictions, and punishments—result in substantial part from explicit and implicit racial bias and from conscious police targeting of poor and minority neighborhoods and individuals. Black and Hispanic people are arrested at younger ages and more often than white people for reasons that have as much to do with racially differentiated exercises of police discretion as with racial differences in offending behavior.[17]

Police sometimes arrest more young black people for invidious reasons but often would prefer to avoid arrests if they can. White and middle-class young people, however, can be returned to stable homes or referred to private treatment and mental health facilities more frequently than disadvantaged minority offenders. Schools refer more minority than white students to the police for conduct problems. Racial profiling by the police by definition mostly affects members of minority groups. Drug enforcement policies disproportionately target substances sold by minority drug dealers and the places where they sell them (Fellner 2013). All of these practices exaggerate the criminal records of members of minority groups compared with other people.

3. *Other Criminal History Issues.* Use of criminal history variables in sentencing, or in prediction instruments, raises other issues. When the sentencing provisions of the *Model Penal Code* were being developed in the 1950s, there was vigorous debate over whether criminal history should ever be taken into account. Paul Tappan (1947), chairman of the US Parole Board, and primary draftsman of the code's sentencing and corrections provisions, argued that with liberty at stake, only prior convictions should count. Arrests or prosecutions not resulting in a conviction should not. On the same logic, age at first arrest or commitment, custody status, prison commitments, all—along with arrests—commonly used as variables in prediction instruments, should not. Tappan's view is the contemporary norm in other Western countries: Only convictions count (Roberts and von Hirsch 2010). Here I only flag these issues. However, since predictions of dangerousness are often cited as reason to deprive "dangerous" offenders of more liberty than they otherwise would lose, they are as pertinent to the ethics of prediction as they are to sentencing.

[17] The classic Philadelphia birth cohort studies, e.g., found that 48.7 percent of nonwhite offenders in the 1945 cohort had their first police contact before age 14, compared with 30.8 percent for whites. The corresponding figures for the 1958 cohort were 41 and 27 percent (Tracey, Wolfgang, and Figlio 1990, chap. 10).

## III. The Defenses

The indictment is pretty formidable. Predictions of future violence are more often wrong than right (Fazel et al. 2012): Of five positive predictions, three will be mistakes (false positives). The false positives are disproportionately black and other minority offenders (Angwin et al. 2016; Flores, Bechtel, and Lowenkamp 2016). Many prediction instruments incorporate variables such as youth and gender that are per se unjust. All prediction instruments incorporate socioeconomic status variables that produce systematically harsher dispositions of black, other minority, and disadvantaged offenders. All prediction instruments incorporate criminal history variables that are inflated for black and other minority offenders by racially biased and disparate practices, racial profiling, and street-level drug enforcement that targets minority individuals and neighborhoods.

The defenses are less weighty. One is that normative punishment theories provide no meaningful bar to reliance on predictions (Husak 2019*b*). A second is that prevention of predicted harms to victims is so overwhelmingly important that it trumps concerns about proportionality and equal treatment (Ryberg [2019], as devil's advocate). A third is that there is nothing special about subordinating individuals to collective or organizational interests on the basis of predictions. Happens all the time: actuarial statistics are used in credit scoring and setting insurance premiums; statistical analyses underlie public health policies and medical practices; quarantines confine individuals (Imrey and Dawid 2015; Douglas 2019). A fourth is that concerns about racial and other disparities in punishment are misplaced: people who score badly on predictive variables commit disproportionate numbers of crimes and should bear disproportionate preventive burdens (Slobogin 2019).

### *A. Punishment Theory*

If everyone agreed that punishment policies and practices should be assessed only in relation to their crime-reductive effects, the elements of the indictment would be immaterial. As far as I can tell, no one believes that concerning themselves and people they care about.[18] The Christian

[18] As a matter of political self-interest, American politicians often support policies such as life without parole for minors, three-strikes sentences of 25 years to life for minor property offenders, and decades-long prison sentences for street-level drug sellers that cannot be justified by any principled theory of punishment. In the 1970s and 1980s, conservative politicians deplored US Supreme Court decisions that strengthened defendants' procedural protections. Throughout a long life of observing the criminal law, however, my experience has been that politicians and other powerful people charged with crimes believe

New Testament and Kant's categorical imperative agree that we should want and do for others what we want done for ourselves. Everyone believes that crime seriousness matters. Probably no one disagrees that lengthy imprisonment for routine traffic or parking offenses would be unjustly severe, even if an effective deterrent, and that probation for stranger rapes would be unduly lenient, even if harsher punishments had no preventive effects.

The likeliest theoretical justifications for predictive sentencing are utilitarian, trading justice to individual offenders for greater crime prevention. Bentham, however, did not believe that prevention of crime justifies injustice to individuals. He endorsed strong criminal law defenses—including insanity, intoxication, and ignorance of law—so that only blameworthy people are convicted. He argued that punishment is evil and—his frugality principle—should be imposed only when the offender's suffering would be outweighed by greater suffering averted for others. He insisted that punishments be proportioned to the seriousness of offenses—for deterrent, not retributive, reasons—and that sentencing decisions take sympathetic account of myriad personal characteristics of individual offenders (Bentham 1970, pp. 52, 158, 169). The only contemporary mainstream consequentialist theory, Braithwaite and Pettit's "Republican Theory of Criminal Justice" (1990, 2001), recognizes proportionate retributive upper limits on punishment. It otherwise rejects retributive values and calls in every case for the least punitive disposition on which the victim, the offender, and others close to them agree. Bentham's utilitarianism would not accommodate use of predictions of dangerousness in sentencing. The frugality principle forbids imposition in any individual case of punishments more severe than deterrent considerations justify. The false positive problem puts the kibosh on predictive sentencing; how for this defendant could a prediction that we know is probably wrong justify a harsher punishment?

Retributive theories vary. Kant's foundational account insists that offenders receive "definitely the quality and quantity of punishment" they deserve, no more, no less (2017, p. 115). That leaves no role for predictions, although it may permit them to be taken into account in

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as to themselves, their families, and close colleagues that justice requires the full panoply of procedural protections, compassionate consideration of personal circumstances, and observance of general principles of justice in punishment including imposition of the least severe possible sentence.

choosing between punishments of equal severity (e.g., Ryberg 2019).[19] This was Andreas von Hirsch's view three decades ago (von Hirsch, Wasik, and Green 1989). In practice, however, it could apply to only a small minority of crimes. Few minor ones would warrant imprisonment in place of a community punishment, and there is no case to be made that a longer preventive prison term is punitively equivalent to a shorter one. For serious crimes, no sanction other than capital punishment has the same or greater incapacitative effect than imprisonment.

Kant and von Hirsch are "positive" retributivists who argue that offenders not only may but must be punished as much as they deserve. However, there are also "negative" retributivists who argue that blameworthiness sets only upper limits on severity; offenders may be punished as much as they deserve, but they need not be. This may be what Husak (2019*b*) had in mind when he wrote, "If we have good reason to inflict different amounts of punishment on two offenders who have committed equally serious crimes, we should not be worried that our decision does not preserve proportionality." The consensus view noted above among authors of leading meta-analyses that violence predictions should not be used in sentencing, however, casts serious doubt whether current knowledge provides "good reason" to allow pursuit of predictive goals to trump proportionality.

Husak's position rejects Kantian retributive and Benthamite utilitarian insistence on comparable treatment of people who committed comparable crimes.[20] It also abandons the almost ubiquitous belief among retributivists of all stripes that proportionality between offense seriousness and maximum punishment severity is a fundamental requirement of justice.

Although it can never be self-evident in a given case precisely what punishment is required, that problem was solved as a practical matter long ago. Wide agreement exists on the relative seriousness of different crimes. Uncontroversial scales of relative offense seriousness can be devised for particular places and times. So can parallel scales of punishment severity (Duus-Otterström 2019). The two can then be linked. Compa-

[19] Kant (2017, p. 115) wrote explicitly of substitution of punishments so they would be subjectively comparably burdensome. One example is that "someone of high standing given to violence could be condemned not only to apologize for striking an innocent citizen inferior to himself but also to undergo a solitary confinement involving hardship; in addition to the discomfort he undergoes, the offender's vanity would be painfully affected, so that through his shame like would be fittingly repaid with like" for an offense for which a "social inferior" would be called on only to apologize.

[20] But with major differences. Both want sanctions—for Kant, calculated on the gravity of wrongdoing, and for Bentham on deterrence calculations—to be adjusted to take account of differences (which Bentham called sensibilities) between offenders.

rably severe punishments can be specified for comparably serious crimes and proportionately different ones for diversely serious ones. There is no room for prediction; the overarching goals are to assure equal treatment by linking blameworthiness to punishment.

The alternative to Kant's view is negative retributivism. Monahan (2017), for example, has argued that predictions can be properly used as long as upper limits based on offense seriousness are respected and predictions are used to mitigate sentences for low-risk offenders but not to increase them for high-risk offenders. He refers to Virginia's approach that incorporates predictions into guidelines for diversion to alternative punishments of offenders otherwise bound for imprisonment.[21]

Morris's (1974) version of negative retributivism, "limiting retributivism," provided a more fully developed proposal. For every crime there is a maximum punishment that may justly be imposed. This varies with offense seriousness and thus provides proportionate limits. For some crimes—I used stranger rape earlier as an example—there may be minimums that must ordinarily be observed. The default is always the minimum; like Bentham, Morris urged recognition of a principle of parsimony that forbade imposition of unnecessary suffering. The minimum, however, can be exceeded for good reason.

From a predictive sentencing perspective, so far so good. Morris insisted that there be good evidence-based reasons to justify harsher-than-minimum punishment. Concerning predictions of dangerousness, he was emphatic: four false positives for every two true positives is not good enough. That would cause too much undeserved suffering. It is unlikely that improvements in accuracy over four decades—three false positives for every two true positives—would have changed his view. The general case to be made is weaker now than in 1974. Morris wrote before much evidence had accumulated on the racial disparities inexorably produced by predictive sentencing and without considering the implications of use of youth, gender, race-correlated socioeconomic status, and bias-contaminated criminal history variables. Morris's limiting retributivism does not provide the license prediction proponents might wish for.

Predictive sentencing is thus incompatible with mainstream retributive punishment theories. This is confirmed by the theoretical literature

[21] This does not really work at least in Virginia because the main guidelines are only advisory and judges may depart both downward and upward. Negative retributivist theories envision an unbreachable upper limit. The "normal" Virginia guideline recommendation is only that, not an upper limit. I discuss other problems below.

on the role of prior criminal history in sentencing new crimes. It is a cliché but true that past crimes are the best predictor of future crimes, which is why criminal history variables are the most predictively powerful (Hoffman 1983; Monahan 2017). Empirical evidence and common experience document that there is a "recidivist premium"; all else being equal, most judges impose harsher punishments on repeat offenders than on first offenders (Reitz 2010). There is solid evidence that most people think they should (e.g., Roberts 2008, 2011).

Nonetheless, nearly every retributivist philosopher who has considered the matter has concluded that it cannot be justified (e.g., among many more, Fletcher 1978; Ryberg 2001; Bagaric 2010; Lippke 2016): "did the crime, did the time"; "paid his or her debt to society." More punishment now for this crime for predictive reasons, because there was an earlier crime, is double counting, in effect attaching an increment of additional punishment to this crime to punish the earlier one more fully.

Several efforts have been made to argue that committing an earlier crime somehow increases an offender's culpability in relation to the new one. One argument is that recidivists deserve additional punishment because their behavior demonstrates defiance of the judge or the state or is evidence of bad character (e.g., Lee 2010). Those claims have no place in a free society: citizens are entitled to be defiant, eccentric, and difficult. "Bad character" is in the eyes of the beholder and in any case is nowhere a criminal offense. The other argument is that recidivists have a greater obligation than others to be law-abiding (Bennett 2010). The law, however, makes the same demands of all citizens. No one except possibly the arguments' proponents has been persuaded by either of these analyses.

If punishments may not justly be increased to take account of earlier convictions, it is difficult to imagine principled arguments for why punishments may be increased on the basis of predictions of future offending that are in turn substantially based on criminal history variables. Ryberg (2019) intensively mines retributive theories looking for an overlooked nugget that can justify predictive sentencing. No such luck. He concludes thusly: "Though there is some appeal in pursuing justice and in preventing future crimes, you cannot to a full extent get both."

### *B. Public Safety*

Everyone is in favor of public safety, but that is not the only fundamental value involved. Sentencing also implicates fairness, proportionality, equal treatment, and parsimony (Tonry 2018*b*). Any rational person

would want these additional values to be honored if he or she or a loved one was charged with a crime. It is difficult to develop a morally persuasive explanation for why we as individuals deserve those things but other people whom we do not know or care about do not. Unless someone can develop a fully elaborated consequentialist theory of punishment that does not incorporate those values and justifies predictive sentencing, a principled case for predictive sentencing cannot be made.

This does not mean that pursuit of crime prevention and public safety need be abandoned. Systems such as those in Scandinavian countries, Germany, and the Netherlands in which punishment is based primarily on blameworthiness and which allow only minor increases for criminal history do not have higher crime rates than the United States. Insofar as the operation of the criminal justice system deters wrongful behavior, systems of proportionate punishment will continue to do so. They will contribute to moral education by reinforcing basic social norms of right and wrong. Deserved terms of imprisonment will continue to incapacitate inmates from committing new offenses in the community. Other demonstratively effective strategies of community, developmental, and situational crime prevention, if pursued, will continue to do their work.

Expecting more than that from predictive sentencing is in any event unrealistic. The best available evidence cautions against believing that changes in sanctions policies have significant crime reduction effects (Travis, Western, and Redburn 2014, chap. 5; Tonry 2016).

### *C. Actuarial and Quarantine Analogies*

Two arguments are made. The first is that, ho hum, there is nothing special about predictive sentencing: actuarial risk calculations affect private lives throughout modern society. There has been a "proliferation of statistical and other algorithmic prediction tools in banking, insurance, marketing, medicine, and other fields. . . . Prediction need not be highly accurate at the individual level for major collective benefit to accrue" (Imrey and Dawid 2015, pp. 25, 30).

So what's the problem? There are several. The most important is that the application of predictions in sentencing causes undeserved suffering to individuals whose punishments are increased, usually through lengthening of prison terms. Most other uses of actuarial prediction affect people's lives as private citizens. It may be disappointing to be denied a loan, insurance policy, or apartment lease, or be asked to pay higher rates, or not be offered a marketing opportunity. Those burdens, however, are not

comparable to being imprisoned when otherwise a community punishment would be imposed or receiving a longer prison term. Actuarial predictions in medicine are used to benefit individuals by means of improved diagnostic capacities, not to cause suffering.

A criminal conviction is an authoritative declaration by the state that an individual engaged in morally blameworthy behavior. Punishment is meant to cause suffering—some philosophers approvingly refer to "hard treatment"—and is inherently stigmatizing in the eyes of the general public. Other uses of actuarial prediction are private and are neither intended to cause suffering nor handled in ways that expose individuals to public stigma. People who are denied loans or insurance policies may feel regretful, humiliated, even stigmatized, but only in private. No one else need know.

Arguments have been offered that predictive sentencing can be justified by analogy to public health quarantines. People carrying or exposed to contagious diseases are sometimes confined to eliminate or minimize the spread of contagion. However, except for rare circumstances such as the early periods of awareness of HIV when drug users and homosexuals were "blamed" for their afflictions, having a contagious disease (e.g., measles, typhoid, malaria, Ebola) is seldom personally stigmatizing. In rare circumstances when stigma attaches, decent people regard it as unjust and morally wrong. In any case, quarantines are not for lengthy fixed terms; they end when the risk passes or reaches acceptable levels. People subject to quarantines are not held in prisons and in a decent society receive sympathy and compassion. They are afforded the greatest material comfort that conditions allow, with as few limitations as possible on the freedoms enjoyed by other citizens. Preventive confinement based on risk predictions is not like that.

The arguments that preventive detention is morally equivalent to quarantine are unconvincing. Thomas Douglas (2019) tries mightily to demonstrate that quarantine is, or under some circumstances could be, indistinguishable. He assumes both sets of restrictions are morally undeserved (for offenders, because in excess of what could otherwise be justified). He sets aside the question of "soft moral difference," whether preventive detention is typically more morally suspect than quarantine, and considers only the narrower question of "hard moral difference," whether preventive detention is always in at least one respect more morally suspect.

Douglas concludes that preventive detention is not always worse in at least one respect. He may or may not be right, but in the real world, as he acknowledges, that is not important: "Whether preventive detention is *typically* more problematic than quarantine will depend heavily on the

facts about how these two practices are typically imposed and what effects they normally have, on those subject to them, on those whom they are intended to protect, and on those required to fund them" (2019; emphasis in original).

Other arguments that quarantine offers a valid analogy to preventive detention are no more convincing. Gregg Caruso (2016) and Derk Pereboom (2014) argue that quarantine and preventive detention are indistinguishable to adherents of free will skepticism: "What we do, and the way we are, is ultimately the result of factors beyond our control and because of this we are never morally responsible for our actions in the basic desert sense—the sense that would make us truly deserving of blame or praise" (Caruso 2016, p. 26).

Caruso and Pereboom agree that neither "dangerous" offenders nor carriers of serious contagious diseases are morally responsible for the risks they pose and may be subjected to state controls to minimize risk. They posit reciprocal state obligations to offer minimal intrusions, humane conditions, and serious treatment efforts. Given their premise of free will skepticism, those are plausible and necessary ethical propositions.

Arguments about free will, hard determinism, and compatibilism are intellectually interesting and conceptually important. However, accepting the validity of Caruso's and Pereboom's analyses requires first accepting the validity of free will skepticism. That is unlikely on a widespread basis any time soon.

### *D. Group Differences in Offending*

The argument is that the aim of prediction instruments is to predict crimes, that some instruments (e.g., COMPAS) predict future offending by black and white people with comparable accuracy, and accordingly that the instruments are not statistically biased (Flores, Bechtel, and Lowenkamp 2016). It may be regrettable, but if black, other minority, and disadvantaged offenders generally disproportionately have characteristics that predict future offending, so be it:

> COMPAS is based on an actuary designed to inform the probability of recidivism across its three stated risk categories. To expect the COMPAS to do otherwise would be analogous to expecting an insurance agent to make absolute determinations of who will be involved in an accident and who won't. Actuaries just don't work that way. This error discredits their [Angwin et al. 2016] main finding that Black defendants were more likely to be incorrectly identified as

> recidivists (false positives) while white defendants were more likely to be misclassified as nonrecidivists (false negatives). (Flores, Bechtel, and Lowenkamp 2016, p. 45)

Two things about this quotation warrant mention. First, the quotation acknowledges no reason for concern about suspect variables: COMPAS uses every variable discussed in this essay except race.[22] Second, the claim that their analysis "discredits" Angwin et al.'s conclusions about racial distributions of false positives and false negatives is refuted by their own findings (see table 3 above presenting their findings on true and false positive rates for black and white offenders concerning general recidivism). What they presumably meant is that racial disparities do exist but are not important because they are simply by-products of an algorithm that is not statistically biased.

Flores, Bechtel, and Lowenkamp (2016) are interested only in predictive accuracy. This is made explicit when they offer two prediction models with very different false positive and negative rates but reject out of hand the model that makes fewer mistakes, as if any reasonable person would agree: "The [second model's effects]—a decrease in false positive rates and an increase in false negative rates—might be preferred by some, as it limits the number of individuals that are identified as 'high-risk.' For others with a low tolerance for recidivism and victimization, the [first model] would be preferred" (p. 42). Use of socioeconomic status and criminal history variables that differentially affect blacks and whites does not to them, as Lady Catherine de Bourgh would put it, signify. To people concerned about racial injustice, it does.

## IV. The Summation

Predictive sentencing cannot thus be justified either empirically or morally. To many people, however, predictive sentencing, especially concerning violence, is intuitively plausible. It provides supporters opportunity to express sympathy toward hypothetical future victims and to express

[22] They note that when they added an interaction term between race and COMPAS into their analyses, it did not improve predictive accuracy (Flores, Bechtel, and Lowenkamp 2016, p. 43). This is irrelevant, as modelers have recognized for four decades (Fisher and Kadane 1983; Berk et al. 2018). Because race and other variables covary, most or all of any race effect is carried by the other variables. They most likely found no separate race effect because it was already present.

disdain for people believed likely to be violent. Probably in realpolitik terms, predictive sentencing will continue to command support from elected politicians and many criminal justice officials. What to do? A number of options are available.

*A. Abandon Predictive Sentencing*

This would be the correct approach. Prevention of crime is an important public policy goal, but so are justice, fairness, equal treatment, and parsimony. They importantly differ from crime prevention. Each derives from fundamental ideas about human dignity and limits state power over individual lives (Dan-Cohen 2002; Luban 2007; Waldron 2014). Predictive sentencing, by contrast, focuses only on hypothetical victims.

The way forward concerning punishment becomes clear when we recognize that punishment implicates multiple, competing values, including not only deserved punishment and crime prevention but also fairness and equal treatment. A comprehensive jurisprudence of just punishment would incorporate four propositions (Tonry 2018*b*):

- *Justice as Proportionality*: Offenders should never be punished more severely than can be justified by their blameworthiness in relation to the severity of punishments justly imposed on others for the same and different offenses (von Hirsch 1985).
- *Justice as Fairness*: Processes for responding to crimes should be publicly known, implemented in good faith, and applied even-handedly (Rawls 1958).
- *Justice as Equal Treatment*: Defendants and offenders should be treated as equals; their interests should be accorded concern and respect when decisions affecting them are made (Dworkin 1977).
- *Justice as Parsimony*: Offenders should never be punished more severely than can be justified by appropriate, valid, normative purposes (Tonry 1994).

Preventive sentencing cannot be justified if those values are respected. The arguments concerning proportionality, equality, and parsimony are self-evident; predictive sentencing in its own terms violates them. It also violates the fairness requirement though possibly less self-evidently. Few prediction instruments have been validated using data for the populations affected and are thus arbitrary in their application to individuals. The bases

for prediction instruments sold by private companies are not disclosed; this is deemed "proprietary information," akin to trade secrets. Thus judges and corrections officials who use them do not know on what basis they make decisions about individuals' liberty. Defendants, of course, cannot therefore challenge the basis of their sentences.

No country's legal system perfectly observes those values, but many in western and northern Europe try. In the United States, the case against predictive sentencing is likely to fall on deaf ears. Less bold options that would do less injustice are available.

*B. Constrained Predictive Sentencing*

Prevention concerns and prevailing emotionalism may make elimination of preventive sentencing unachievable. An unprincipled but more saleable option might be to establish limits on increments of additional punishment that can be imposed. Roberts and Frase (2019) propose maximum sentence increases of no more than 100 percent of the deserved sentence as a limit. I have proposed 50 percent (Tonry 2016).

A more discriminant proposal needs working out. Under Roberts and Frase's proposal, for example, predictions could justify a 2-month sentence if the starting point was 1 month, or a 40-year sentence if the starting point was 20 years, as in the United States it often could be. Under my 50 percent cap, a 20-year sentence could be increased to 30 years. All of these numbers are unjustly severe. A more constrained approach might allow increments ranging from the greater of 100 percent or 1 year for less serious offenses to the lesser of 100 percent or 3 years for more serious ones.

Those proposals, however, make pretty heroic assumptions about the willingness of American policy makers to constrain judges' authority and limit sentencing severity.

*C. Predictive Mitigation*

This is what Monahan (2017) proposes. It has the great defect that it will usually worsen racial and class disparities, all else being equal, because predictions of lower risk usually result from the absence of socioeconomic, criminal history, and other characteristics disproportionately associated with minority and disadvantaged offenders. The end result will be the diversion of more white and advantaged offenders. Norval Morris and I (1990) long ago argued that there may be something perverse about the argument that if some offenders will be treated unduly se-

verely, concern for equal treatment requires that others also suffer unduly. Monahan's proposal might thus reduce severity for some offenders. Some people no doubt believe that is desirable, even if it exacerbates racial disparities (so Morris believed; I was doubtful). BUT—a big but—Monahan's proposal can work only if there are strong "normal" limits on sentencing severity, from which the mitigated sentence offers a reduction. Otherwise there will be nothing to stop judges and prosecutors from providing mitigated sentences to low-risk offenders and imposing aggravated sentences on high-risk offenders. This is what happens under Virginia's "advisory" guidelines.

*D. Limiting Retributivism*

A stronger version of Monahan's proposal is to allow mitigation for low-risk offenders but establish strong upper limits for all offenders based on offense seriousness. Only a handful of presumptive (Minnesota, Washington, Kansas) and mandatory (North Carolina) American guidelines systems establish meaningful upper limits. In such places, Morris's proposals could work. The presumptive normal sentence in every case would be set at the bottom of the guideline range. Low-risk offenders could receive sentences below the normal minimum, most offenders the normal minimum, and highest-risk offenders up to the maximum. This, however, could work only if guidelines systems were radically reformulated. Current approaches provide ranges for particular offenders that take account of both offense seriousness and criminal history. The limiting retributivism approach could work only if ranges were based solely on offense seriousness. Otherwise criminal history variables used in prediction instruments would be double counted.

*E. Sanctions and Measures*

Debates raged a century ago in the United States and Europe over the wisdom and justice of indeterminate sentencing (Pifferi 2012, 2016). Supporters argued that criminal behavior results primarily from environmental and psychological influences on individuals and that a rational sentencing system would reject retributive ideas and focus on rehabilitation and prompt release of the vast majority of corrigible offenders and the incapacitation of the rest. Opponents argued that moral blameworthiness should not be abandoned as an animating idea but should instead set limits on the state's punishment powers.

American jurisdictions—every one of them by the 1930s—adopted indeterminate sentencing. European countries including those in the United Kingdom rejected it as unjust. To deal, however, with the problem of seemingly incorrigible dangerous offenders, European countries created a distinction between sanctions, deserved punishments based on blameworthiness, and measures, crime prevention powers based on assessments of risk. In theory, measures are not punishments but extraordinary actions designed to deal with special problems. This is hypocritical, of course, since extended confinement will feel like additional punishment to any affected offender, but it has worked much as was intended (cf. de Keijser 2011). Measures targeting violence prevention are rarely used in any country (e.g., in Scandinavia, Lappi-Seppälä [2016]), but they are available for special cases. Anders Brejvik, the Norwegian mass murderer of 77 people in 2011, was sentenced to 21 years' imprisonment, the longest term possible, but was also made subject to a measure. If when his "sanction" expires he continues to be considered dangerous, the measure provides authority to continue to hold him.

The sanctions and measures distinction could in theory provide a mechanism for taming predictive sentencing in the United States. All offenders would receive proportionate sanctions based on the seriousness of their crimes and respecting concerns for fairness, equal treatment, and parsimony. A tiny number, a small fraction of 1 percent on the European pattern, might also be the objects of measures predicated on their dangerousness and permitting continued confinement after expiration of their prison sentences. Predictions could be used to identify cases in which a measure might be appropriate. For such a system to be a realistic option, however, there would need to be radical transformations in American popular, political, and legal cultures. That is unlikely in any foreseeable future.

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