

Risk as a Proxy for Race: The Dangers of Risk Assessment

Actuarial risk assessment in the implementation and administration of criminal sentencing has a long history in this country—a long and fraught history.¹ Today, many progressive advocates promote the use of actuarial risk assessment instruments as part of a strategy to reduce the problem of “mass incarceration.” Former Attorney General Eric Holder has called on the U.S. Sentencing Commission to hold hearings to further consider the matter of risk assessment and prediction tools in sentencing and parole.

The objective—to reduce our massive over-incarceration in this country—is critical and noble. But risk assessment tools are simply the wrong way forward. I argue here that we should resist the political temptation to embrace the progressive argument for risk-prediction instruments because their use will unquestionably aggravate the already intolerable racial imbalance in our prison populations.

The fact is, risk today has collapsed into prior criminal history, and prior criminal history has become a proxy for race. The combination of these two trends means that using risk-assessment tools is going to significantly exacerbate the unacceptable racial disparities in our criminal justice system. More generally, the use of actuarial tools is likely to produce a “ratchet effect” on all members of the higher-risk categories—whether along racial or other lines—with highly detrimental consequences on their employment, educational, familial, and social outcomes.² For these simple reasons, we should avoid embracing actuarial risk prediction and instead turn to race-neutral solutions to mass incarceration.

There are, to be sure, political and strategic advantages to using “technological” instruments, such as actuarial tools, to justify prison releases. Risk assessment tools protect political actors and serve to de-responsibilize decision makers. Given that we still today “govern through crime,”³ these strategic considerations are undoubtedly important. But I think that this advantage is outweighed by the cost to racial justice. In the end, we need to find better solutions to reduce mass incarceration. Before making the argument, though, let me start here with a few cautionary tales about progressive arguments for prediction.

I. Cautionary Tales about Prediction

This is not the first time we have been tempted to use a metric of dangerousness as a way to empty “total institutions.” We did the same thing with our asylums and mental hospitals in the 1950s, '60s, and '70s. That experiment revealed a number of things, including one dramatic

consequence: the turn to dangerousness had a distinctly disproportionate effect on African American populations.

The proportion of minorities in mental hospitals increased significantly during the process of deinstitutionalization. From 1968 to 1978, for instance, there was a significant demographic shift among persons admitted to mental hospitals. In a 1984 study, Henry Steadman, John Monahan, and their colleagues tested the degree of reciprocity between the mental health and prison systems in the wake of state mental hospital deinstitutionalization, using a randomly selected sample of 3,897 male prisoners and 2,376 adult male admittees to state mental hospitals from six different states.⁴ What their research revealed is that the proportion of nonwhites admitted to mental facilities increased from 18.3 percent in 1968 to 31.7 percent in 1978: “Across the six states studied, the . . . percentage of whites among admitted patients also decreased, from 81.7% in 1968 to 68.3% in 1978.”⁵ As evidenced by Figure 1, the track record is damning: mental hospitals were deinstitutionalized by focusing on dangerousness, and the result was a sharp increase in the black representation in asylums and mental institutions.

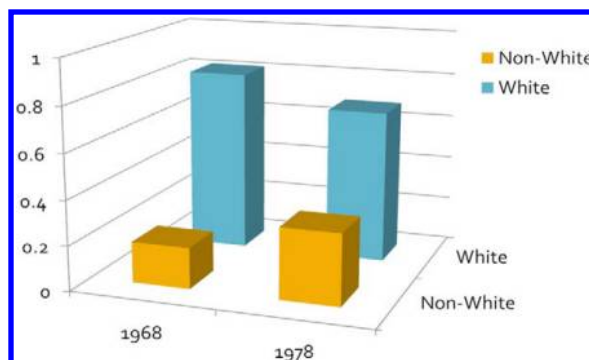
A second cautionary tale: selective incapacitation. Here, it is important to recall that the development of selective incapacitation in the 1970s had, as its explicit goal, the objective of *reducing* prison populations. One of the leading arguments for selective incapacitation, especially in California, was precisely the progressive case that it would *lower* overall prison populations while reducing crime. As we know, the theory of selective incapacitation, which traced to the seminal research of Marvin Wolfgang, Robert Figlio,



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Figure 1
Racial Breakdown of Mental Hospital Admissions
from Steadman et al. 1984 Study (note 4)



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and Thorsten Sellin, rested on the idea that only a small subset of youths—in their study, 627 youths or 6.3 percent of the cohort—was responsible for over 50 percent of the total crimes committed by that cohort.⁶ The modern idea of selective incapacitation, which was grounded on prediction and risk assessment, grew from this insight: predict, identify, and lock up those 6 percent—and only those 6 percent—and society could cut crime in half, while at the same time reducing prison populations and correctional costs. The only problem was how to identify the 6 percent who are chronic offenders; and the solution, naturally, was to turn to actuarial methods.

When Peter Greenwood and Allan Abrahamse issued their RAND report in 1982—the report that set forth the most fully articulated plan for implementing a strategy of selective incapacitation using actuarial methods—they made clear that the benefit of selective incapacitation was that it saved money by reducing prison populations. Their seven-factor prediction instrument⁷ was attractive, they argued, because it had the advantage of reducing the prison population. Greenwood and his colleagues concluded their study precisely on that note: “Increasing the accuracy with which we can identify high-rate offenders or increasing the selectivity of sentencing policies can lead to a decrease in crime, a decrease in the prison population, or both. Selective incapacitation is a way of increasing the amount of crime prevented by a given level of incarceration.”⁸

Now, it turned out that their prediction instrument identified low- and medium-rate offenders, but was highly inaccurate regarding high-rate offenders: 91 to 92 percent of those scoring 0 or 1—the lowest possible scores—turned out to be low- or medium-rate offenders; by contrast, only 50 percent of those scoring 5, 6, or 7 turned out to be high-rate burglars or robbers.⁹ The authors nevertheless concluded their study on an unwarranted optimistic note—and Greenwood and Turner issued a follow-up revised report, five years later, with a slightly different and more honest title: *Selective Incapacitation Revisited: Why the High-Rate Offenders are Hard to Predict*.¹⁰

It is worth emphasizing that the advent of “selective” incapacitation and the deployment of these purportedly refined actuarial tools anticipated the largest single increase in prison populations in history.

With these cautionary tales in mind, let me turn then to the central issue: the relationship between risk and race.

II. From Race to Risk: Prior Criminal History as a Proxy for Skin Color

Risk, today, is predominantly tied to prior criminal history, and prior criminality has become a proxy for race. The result is that decarcerating by means of risk instruments is likely to aggravate the racial disparities in our already overly racialized prisons.

Suprisingly, but tellingly, it was not always this way. Throughout most of the twentieth century, race was used *explicitly* and *directly* as a predictor of dangerousness. From

their inception in the 1920s to at least the 1970s, many of the prediction tools expressly used the nationality and race of the parents of the inmate as one of the central factors to predict future dangerousness. This practice ebbed in the 1970s as a result of the Civil Rights movement and constitutional developments in Equal Protection, but was nevertheless replaced with two other trends—the narrowing of the prediction instruments and the focusing of those tools on prior criminal history.

The combined effect of these various trends has been to turn risk into a proxy for race. The intermediation through criminal history took several decades, but its origins provide the best clue to decipher the problems of our present condition—and the dangers of risk assessment. The evolution from race to risk can be traced neatly by examining the factors used in risk assessment tools during the early to mid-twentieth century. I will turn to that here.

A. Race as an Early Predictor of Parole Failure

The first parole prediction instrument that was ever used in the parole decision-making process—the Burgess method developed in 1927 and 1928 by Professor Ernest Burgess at the University of Chicago—included the nationality or race of the father as one of 21 factors that predicted success or failure on parole.¹¹ Burgess was particularly interested in the question of national origin. In his study of 3,000 Illinois inmates released on parole, he discovered that “the smallest ratio of violations [are] among more recent immigrants like the Italian, Polish and Lithuanian,” and “the highest rates of violation [are] among the older immigrants like the Irish, British and German.”¹² Burgess also observed, referring to parole violators, that “[t]he group second in size was the Negro with 152 at Pontiac, 216 at Chester, and 201 at [Joliet].”¹³ Burgess’ model was implemented by the Illinois Board of Paroles in 1933, and as a result, nationality and race were used expressly as a factor in the *prognosis* that served as the basis for the decision whether or not to parole an inmate. Race and nationality, it was believed, predicted parole violation.¹⁴

The use of parent nationality, race, color, and other ethnic identifiers, such as religious belief and church attendance, was a continuous thread that wove through the evolution of the parole prediction studies and instruments at least into the 1970s. In 1931, Clark Tibbitts, the former assistant to Ernest Burgess on the Illinois parole study, replicated the Burgess method (using a sample of 3,000 youths paroled from the Illinois reformatory at Pontiac over a seven-year period from 1921 to 1927) and included “nationality of his father” as one of his 23 factors.¹⁵ Not surprisingly, being “American (Colored)” was a predictor of parole violation, and being “American (White)” was a marker of success.¹⁶ The very next year, in 1932, Elio Monachesi published his Ph.D. dissertation on predicting probation violations and, like the others, included the nativity of the probationer, the nativity of his parents, the religion of the mother and father and probationer, and church attendance as predictors.

Nationality, race, and religion became staples of the prediction research. Courtlandt Churchill Van Vetchen included nationality and family religion in his 1935 study, Walter Argow included race and church attendance in his model the same year, Elizabeth Redden used color and nativity in 1939, and Bernard Kirby and F.J. Carney included race in their studies in 1954 and 1967, respectively. U.S. Attorney General Homer Cummings commissioned a large survey of parole practices in 1936, reviewing over 90,000 federal parole cases, and specifically found that “whites had better records on parole than Negroes.”¹⁷

In terms of actuarial instruments that would actually be implemented, Burgess, Tibbitts and Hakeem all included race and nationality of the father in the prediction instrument. I discuss many of these tools in *Against Prediction*,¹⁸ but failed there to mention whether the prediction instruments included race. I remedy that in the Appendix table here, which lists the major prediction studies and tools, discussed herein, that were developed in the early to mid-twentieth century in the United States. The table discloses the use of race, nationality, or religion—and whether the tools were actually implemented. The table reveals a continued use of race until at least the late 1960s. In fact, when California began using a parole prediction instrument in the 1970s, it used an actuarial device that relied on race. The first California “Base/Expectancy Score” narrowed in on race and only three other factors—prior commitments, offense type, and number of escapes.¹⁹

It is also interesting to note that the link to race was not only always direct, it was also at times metaphorical. Clark Tibbitts, for instance, in his 1931 replication of the Burgess method, referred to “white marks” and “black marks.” So, he wrote, “A record of no work . . . which shows a violation rate of 38.5 percent would be an unfavorable sign or what we have chosen to call ‘a black mark,’ while a good work record with only 5.6 percent failure would be favorable or ‘a white mark.’ The rates of violation either above or below the average permit the factors to be listed . . . according to whether they are favorable or unfavorable, ‘white’ or ‘black’.”²⁰ Not surprisingly—though one has to wonder whether Tibbitts caught the lack of irony—being “American (Colored)” was a “black mark” and being “American (White)” was a “white mark.”²¹

B. Narrowing on Prior Criminal History

The actuarial instruments ultimately evolved away from race as an explicit predictor, but that trend was accompanied by two others—and these too would have significant race effects: first, a general reduction in the number of predictive factors used and, second, an increased focus on prior criminal history.

The first trend was fueled by Sheldon and Eleanor Glueck. They developed the principal competitor to the Burgess method in their 1930 book, *Five Hundred Criminal Careers*. The Gluecks conducted extensive investigation into the lives of 510 inmates whose criminal sentences expired

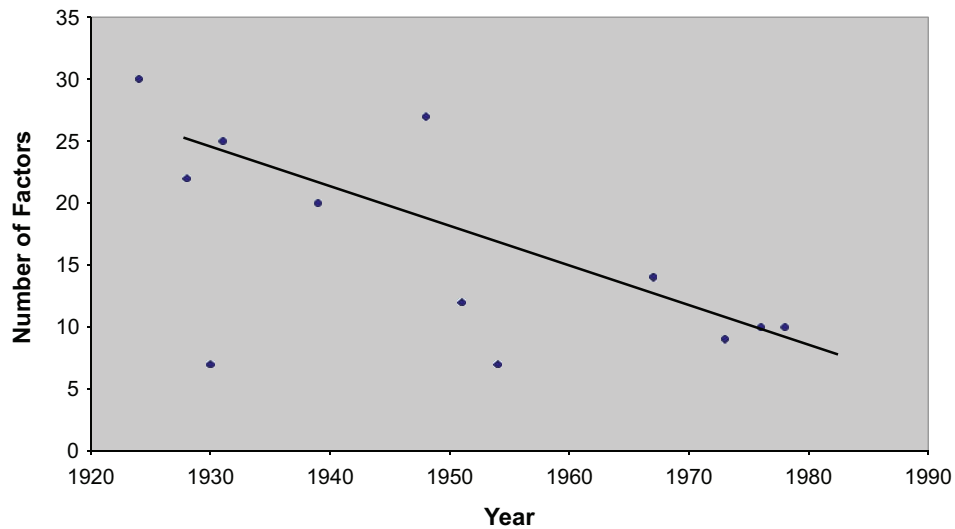
in 1921 and 1922, and became strong advocates of reducing prediction tools to a narrower set of factors. Theirs ultimately focused on only seven factors.²² The competition between the Burgess and Glueck methods generated a tremendous amount of research from the 1930s through the 1950s, and much of it was focused on narrowing the number of factors in the models.²³ University of Chicago sociologist and heir to Burgess, Albert J. Reiss Jr., strenuously advocated limiting the number of factors in prediction instruments,²⁴ as did Lloyd E. Ohlin, another prominent sociologist who taught at Harvard, and Daniel Glaser, who worked on the prediction tables used at the penitentiary at Pontiac, Illinois, in 1954 and 1955. Beginning in the 1970s, the federal government adopted more narrowly focused parole guidelines. The U.S. Parole Commission relied on the Salient Factor Score that used only seven predictive factors (and the majority of those seven factors related to prior delinquency). California adopted an actuarial model, the Base/Expectancy Score, that narrowed in on four factors.²⁵ The narrowing of the prediction instruments can be visualized by plotting the number of factors used in parole prediction models over time and drawing a regression line through the plot, shown in Figure 2.

The second trend focused the predictors on prior criminal history as a proxy for future dangerousness. Practically all of the prediction studies converged on prior correctional contacts (arrests, convictions, and incarcerations) as one of the stronger predictors of recidivism. What developed, as a result, were more simplistic but easier to administer sentencing schemes that relied predominantly on prior criminal history.²⁶ This new emphasis on criminal history shaped not only actuarial prediction, but also sentencing guidelines schemes. The federal sentencing guidelines, in fact, turned to criminal history as a more effective and simple way to predict future dangerousness after giving up on more complicated prediction instruments.²⁷ Like the actuarial instruments, state and federal sentencing guidelines reflected the view that criminal history predicts recidivism risk. This is reflected well in the views of Paul Robinson, former member of the U.S. Sentencing Commission and a professor of law at the University of Pennsylvania:

The rationale for heavy reliance upon criminal history in sentencing guidelines is its effectiveness in incapacitating dangerous offenders. As the Guidelines Manual of the United States Sentencing Commission explains, “the specific factors included in [the calculation of the Criminal History Category] are consistent with the extant empirical research assessing correlates of recidivism and patterns of career criminal behavior.”²⁸

Most sentencing guidelines ensure that criminal history as a proxy for risk plays a troublingly large role at sentencing already. The expanding use of actuarial instruments in sentencing, as well as the increased importance of criminal

Figure 2
Number of Factors in Risk Assessment Tools
Number of Factors in Prediction Models



history in the instruments used in parole, will only compound that role.

Whether prior criminal justice contact actually works to predict high- or low-risk offenders remains unclear, especially given the failure of most research to account for the nonrandom assignment to penal treatments.²⁹ But what is clear is that prior criminality has become the predictor of choice in sentencing. If anything, it has increased in importance relative to other factors.

Current actuarial instruments vary widely in the number and type of risk factors that they include, but all place heavy weight on criminal history. Unfortunately, reliance on criminal history has proven devastating to African American communities and can only continue to have disproportionate impacts in the future. The reason is that the continuously increasing racial disproportionality in the prison population necessarily entails that the prediction instruments, focused as they are on prior criminality, are going to hit hardest the African American communities. The trend in incarceration over the twentieth century has been one of increasing disproportionality, as evidenced by the graphic representation of the proportion of the carceral system that is nonwhite (Figure 3).

In the end, the use of risk instruments focused on prior criminal history is toxic. The consequence is unacceptable: relying on prediction instruments to reduce mass incarceration will surely aggravate what is already an unacceptable racial disproportionality in our prisons.

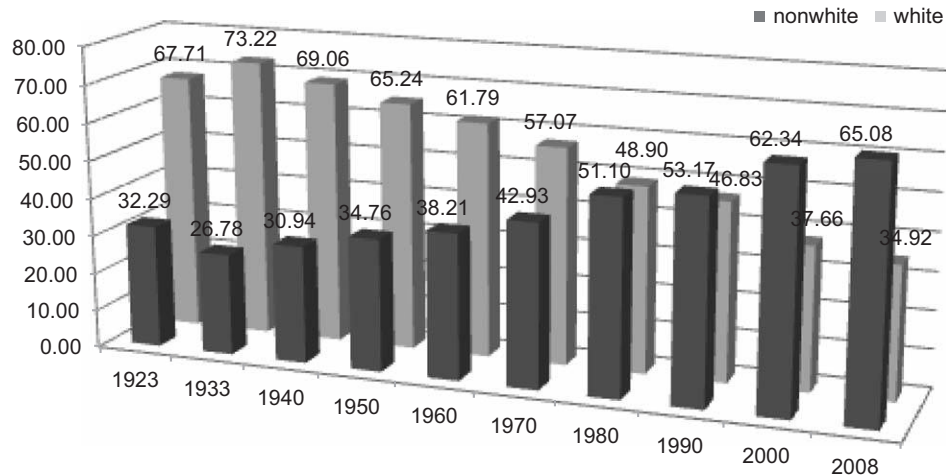
More generally, as I have demonstrated elsewhere,³⁰ using risk assessment tools produces a “ratchet effect” on the profiled populations—whether along racial or along other lines. Putting into effect actuarial prediction is effectively like sampling more—or over-sampling, in social scientific terms—from the higher-risk group. The resulting

sample set will contain a disproportionate number of those higher-risk individuals—disproportionate, that is, as compared to their representation in the offending population. This imbalance will get incrementally worse each year if law enforcement departments rely on the evidence of last year’s correctional traces—arrest or conviction rates—when setting next year’s profiling targets. The resulting ratchet effect will have significant detrimental consequences on the employment, educational, familial, and social outcomes of the profiled populations—including, in the case of racial profiling, the devastating effects associated with the notion of black criminality that pervades the public imagination and, in the case of recidivists, the extreme difficulties of prisoner reentry. These high costs associated with any ratchet effect should temper our embrace of the actuarial. Assuming that people are only marginally responsive to greater punishment, the use of actuarial methods would impose excessive and counterproductive costs on all high-risk populations and, overall, worsen the outcomes for society.

III. Back to Square One

This leaves me, once again, *against prediction*. But that may not be such a bad thing. What fueled mass incarceration, research shows, was a combination of increased prison admissions and lengthier sentences. John Pfaff’s research, for example, highlights the importance of increased admissions in the prison build-up.³¹ Derek Neal and Armin Rick have shown that increases in prison sentence length, largely due to changes in sentencing law, are also important reasons for the growth in incarceration.³² Bill Sabol’s careful analysis of the carceral build-up from 1994 to 2006 corroborates many of these findings.³³ Although Sabol identifies different mechanisms for violent versus drug

Figure 3
State and Federal Prisons and Jail Population Ratios by Race



offenses—the first associated more with increased prosecutions, and the second with increased arrests—the bottom line is essentially the same: increased admissions, as well as length of stay, account for sharp increases in imprisonment. All of these factors disparately affect people of color. For example, Sonja Starr and Marit Rehavi’s research highlights the role of mandatory minimum sentences, and prosecutors’ disparate use of them in black men’s cases, as drivers of racial disparity in incarceration.³⁴

Rather than release through prediction, then, we need to be less punitive at the front end, reduce sentence

lengths, and eliminate mandatory minimums—while remaining extremely attentive to the racial imbalances in our sentencing laws. Further reducing the crack-cocaine disparity would be a step in the right direction; however, other immediate steps should include eliminating mandatory prison terms, reducing drug sentencing laws, creating additional diversion and alternative supervision programs, and decreasing the imposition of hard time. The real solution, then, is not to turn to the actuarial, but to reduce prison admissions and sentences.

Appendix. Major Prediction Studies and Tools Developed in the United States, 1923–1978

Year	Name of researcher	Number of factors investigated	Factor involving race, ethnicity, national origin, or religion	Derived workable instrument?	Publication citation
1923	Warner	66	Color; nativity of parents; religion of parents; religion of prisoner	No	Sam B. Warner, <i>Factors Determining Parole From the Massachusetts Reformatory</i> , 14 J. Crim. L. & Criminology 172–207 (1923).
1924	Hart	66	Religion of prisoner being “other”; claim to attend church regularly	Yes	Hornell Hart, <i>Predicting Parole Success</i> , 41(3) J. Am. Inst. Crim. L. & Criminology 405–13 (1923).
1927	Witmer	15	[none]	No	Helen Leland Witmer, <i>Some Factors in Success or Failure on Parole</i> , 17 J. Crim. L. & Criminology 384–403 (Nov. 1927).
1928	Borden	26	Nationality; race	No	Howard G. Borden, <i>Factors for Predicting Parole Success</i> , 19 J. Crim. L. & Criminology 328–36 (Nov. 1928).
1928	Burgess	22	Nationality of father	Yes	Ernest W. Burgess, <i>The Workings of the Indeterminate Sentence Law and the Parole System</i> (1928).
1930	Glueck	52	Nativity of parents and prisoner; religion; church attendance	Yes	S. Glueck & E.T. Glueck, <i>Five Hundred Criminal Careers</i> (1930).
1931	Vold	34	[none]	Yes	George B. Vold, <i>Prediction Methods and Parole</i> (1931).
1931	Tibbitts	25	Nationality of father	Yes	Clark Tibbitts, <i>Success and Failure on Parole Can Be Predicted</i> , 22 J. Crim. L. & Criminology 11–50 (1931).
1932	Monachesi	54	Nativity of prisoner; nativity of parents; No religion of mother; religion of father; religion of prisoner; church attendance	No	Elio D. Monachesi, <i>Prediction Factors in Probation</i> (1932).

(continued)

Appendix. (continued)

Year	Name of researcher	Number of factors investigated	Factor involving race, ethnicity, national origin, or religion	Derived workable instrument?	Publication citation
1935	Van Vechten	225	Nationality; family religion	No	Courtlandt Churchill Van Vechten Jr., <i>A Study of Success and Failure of One Thousand Delinquents Committed to a Boy's Republic</i> (1935) (unpublished Ph.D. dissertation, Department of Sociology, University of Chicago) (on file with author).
1935	Argow	37	Race; church attendance	No	Walter Webster Argow, <i>A Criminal Liability Index for Predicting Possibility of Rehabilitation</i> , 26 J. Crim. L. & Criminology 561–571 (1935).
1935	Laune	54	[none]	No	Ferris F. Laune, <i>Predicting Criminality: Forecasting Behavior on Parole</i> , 1 Nw. U. Stud. Soc. Sci. (1936).
1939	Redden	22	Color; nativity	No	Elizabeth Redden, <i>Embezzlement: A Study of One Kind of Criminal Behavior with Prediction Tables Based on Fidelity Insurance Records</i> (1942) (unpublished Ph.D. thesis, University of Chicago) (on file with author).
1939	Survey of Release Procedures	82	Race of father; citizenship of father; religion of father	No	U.S. Dep't of Justice, the Attorney General's Survey of Release Procedures, vol. 4, Parole (1939).
1942	Jenkins et al.	95	[none]	No	R.L. Jenkins, Henry Harper Hart, Phillip I. Sperling, and Sidney Axelrod, <i>Prediction of Parole Success: Inclusion of Psychiatric Criteria</i> , 33 J. Crim. L. & Criminology 38–46 (1942).
1943	Weeks	14	Nativity of mother; religion of mother; nativity of father	No	H. Ashley Weeks, <i>Predicting Juvenile Delinquency</i> , 8 Am. Soc. Rev. 40–46 (1943).
1948	Hakeem	27	Nationality of father	Yes	Michael Hakeem, <i>The Validity of the Burgess Method of Parole Prediction</i> , 53 Am. J. Soc. 376–86 (1948).
1951	Ohlin	27	[none]	Yes	Lloyd E. Ohlin, <i>Selection For Parole: A Manual of Parole Prediction</i> (1951).
1954	Glaser	27+	[none]	Yes	D. Glaser, <i>A Reconsideration of Some Parole Prediction Factors</i> , 20 Am. Soc. Rev. 335–41 (1954).
1954	Kirby	33	Race	No	Bernard C. Kirby, <i>Parole Prediction using Multiple Correlation</i> , 6 Am. Soc. Rev. 539–50 (1954).
1967	Carney	14	Race	No	F.J. Carney, <i>Predicting Recidivism in a Medium Security Correctional Institution</i> , 58 J. Crim. L., Criminology, & Police Sci. 338–48 (1967).
1973	Hoffman & Beck	66	[none]	Yes	P.B. Hoffman & J.L. Beck, <i>Parole Decision Making: A Salient Factor Score</i> , 2 J. Crim. Just. 195–206 (1974).
1976	Heilbrun, Knopf & Bruner	10	[none]	No	A.B. Heilbrun, I.J. Knopf & P. Bruner, <i>Criminal Impulsivity and Violence and Subsequent Parole Outcome</i> , 16 Brit. J. Criminology 367–77 (1976).
1978	Brown	10	[none]	Yes	Lawrence D. Brown, <i>The Development of a Parolee Classification System Using Discriminant Analysis</i> , 15 J. Res. Crime & Delinq. 92–108 (1978).

Notes

- * Special thanks to Sonja Starr for organizing this symposium and for helpful comments on this article; and to Shawn Bushway, Kelly Hannah-Moffat, and John Pfaff for comments, criticisms, and guidance on a prior draft.
- ¹ I trace the history of actuarial risk assessment in criminal justice in the United States in a previous book: Bernard E. Harcourt, *Against Prediction: Profiling, Policing, and Punishing in An Actuarial Age* (2007).
- ² See, generally, Bernard E. Harcourt, “A Reader’s Companion to ‘Against Prediction’: A Reply to Ariela Gross, Yoram Margalioth, and Yoav Sapir on Economic Modeling, Selective

Incapacitation, Governmentality, and Race,” 33(1) Law & Soc. Inquiry, 265–83, 270–73 (Winter 2008).

³ Jonathan Simon, *Governing Through Crime* (2007).

⁴ Henry J. Steadman, John Monahan, Barbara Duffee, Elliott Hartstone & Pamela Clark Robbins, *The Impact of State Mental Hospital Deinstitutionalization on United States Prison Populations, 1968–1978*, 75 J. Crim. L. & Criminology 474–90, 478 (1984).

⁵ *Id.* at 479. Note that there was a similar, though less stark shift in prison admissions: “Across the six states, the . . . percentage of whites among prison admittees was also relatively stable, decreasing only from 57.6% in 1968 to 52.3% in 1978.” *Id.*

- ⁶ Marvin E. Wolfgang, Robert M. Figlio & Thorsten Sellin, *Delinquency in A Birth Cohort* 248 (1972).
- ⁷ Peter W. Greenwood & Allan Abrahamse, *Selective Incapacitation* (Rand Corporation, 1982). The seven factors relied on three primary categories: prior criminal record, history of drug abuse, and employment history. (Notice, for later discussion, that the first four of the seven factors focus on prior criminal history and dominate the prediction instrument.) Greenwood and his colleagues based their study on self-report surveys from 2100 male prison and jail inmates from California, Michigan, and Texas in 1977. *Id.* at xii. The study focused on robbery and burglary offenses, and excluded more serious crimes such as murder or rape because these low-rate crimes are harder to predict.
- ⁸ *Id.* at xiii (emphasis added).
- ⁹ *Id.*, at 53.
- ¹⁰ Peter W. Greenwood & Susan Turner, *Selective Incapacitation Revisited: Why the High-Rate Offenders are Hard to Predict*, National Institute of Justice, R-3397-NIJ (March 1987), available at <https://www.ncjrs.gov/pdffiles1/Digitization/109924NCJRS.pdf>.
- ¹¹ Harcourt, *supra* note 1, at 57.
- ¹² Andrew A. Bruce, Ernest W. Burgess & Albert M. Harno, *A Study of the Indeterminate Sentence and Parole in the State of Illinois*, 19 J. Crim. L. & Criminology, Part II, 1, 259 (1928).
- ¹³ *Id.*
- ¹⁴ See Harcourt, *supra* note 1.
- ¹⁵ Clark Tibbitts, *Success and Failure on Parole Can Be Predicted*, 22 J. Crim. L. & Criminology 11, 11 (1931).
- ¹⁶ *Id.* at 43.
- ¹⁷ U.S. Dep't of Justice, the Attorney General's Survey of Release Procedures, vol. 4, Parole, 541 (1939).
- ¹⁸ Harcourt, *supra* note 1.
- ¹⁹ Jonathan Simon, *Poor Discipline: Parole and the Social Control of the Underclass* 173 (1993).
- ²⁰ Tibbitts, *supra* note 15, at 40.
- ²¹ *Id.* at 43.
- ²² Sheldon Glueck & Eleanor Glueck, *Five Hundred Criminal Careers* (1930). The seven factors were: (1) industrial habits, (2) seriousness and frequency of prereformatory crime, (3) arrests for crimes preceding, (4) penal experience preceding, (5) economic responsibility preceding, (6) mental abnormality on entrance, and (7) frequency of offences in the reformatory. Incidentally, they included the nativity of the parents and of the exinmates, as well as their religion and church attendance, in their study.
- ²³ See, e.g., Elio D. Monachesi, *Prediction Factors in Probation* (1932); Michael Hakeem, *The Validity of the Burgess Method of Parole Prediction*, 53 Am. J. Soc. 376 (1948); Albert J. Reiss, *The Accuracy, Efficiency, and Validity of a Prediction Instrument*, 56 Am. J. Soc. 552-61 (1951); Daniel Glaser, *A Reconsideration of Some Parole Prediction Factors*, 20 Am. Soc. Rev. 335 (1954).
- ²⁴ Reiss, *supra* note 23, at 561.
- ²⁵ See Simon, *supra* note 19, at 173. One of the four factors was prior commitments, another was race, and the other two were offense type and number of escapes.
- ²⁶ See generally Paul Gendreau, Tracy Little, & Claire Goggin, *A meta-analysis of the predictors of adult offender recidivism: What works!*, 34 Criminology 575-607 (1996).
- ²⁷ See Harcourt, *supra* note 1, at 96-98.
- ²⁸ Paul H. Robinson, *Punishing Dangerousness: Cloaking Preventive Detention as Criminal Justice*, 114 Harv. L. Rev. 1429, 1431 n.7 (2001).
- ²⁹ Shawn Bushway & Jeffrey Smith, *Sentencing Using Statistical Treatment Rules: What We Don't Know Can Hurt Us*, 23 J. Quantitative Criminology 377-87 (2007).
- ³⁰ Harcourt, *supra* note 1; and Harcourt, *supra* note 2.
- ³¹ See John Pfaff, *A Plea for More Aggregation: The Looming Threat to Empirical Legal Scholarship* (July 16, 2010), available at SSRN: <http://ssrn.com/abstract=1641435>; John Pfaff, *The Durability of Prison Populations*, U. Chi. Legal F. 73 (2010).
- ³² Derek Neal and Armin Rick, *The Prison Boom and the Lack of Black Progress After Smith and Welch* (working paper, November 2013), available at http://home.uchicago.edu/~arick/prs_boom_201309.pdf.
- ³³ William J. Sabol, "Implications of Criminal Justice System Adaptation for Prison Population Growth and Corrections Policy," (working paper, July 2010), available at http://www.albany.edu/scj/documents/Sabol_ManagingPopulations.pdf.
- ³⁴ Sonja B. Starr & M. Marit Rehavi, *Mandatory Sentencing and Racial Disparity: Assessing the Role of Prosecutors and the Effects of Booker*, 123 Yale L.J. 2 (2013); M. Marit Rehavi & Sonja B. Starr, *Racial Disparity in Federal Criminal Sentences*, 122 J. Pol. Economy 1320 (2014).