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RACIAL DISPARITIES THAT SUPPOSEDLY DO NOT EXIST: SOME PITFALLS IN ANALYSIS OF COURT RECORDS

Stuart Nagel and Marian Neef***

I. Introduction

Numerous studies have been made to determine whether or not racial disparities exist at the judicial stage of the criminal justice system.¹ While some of these studies find differences in the treatment of blacks and whites,² others emphasize the lack of differences along racial or related lines.³ It is the purpose of this article not to say who is right, but rather to point out some of the pitfalls to watch for in analyzing the statistics about racial disparities of the judiciary that might lead one to conclude there are no important racial distinctions when there really are. There is also a related set of circumstances which may lead one to conclude there are important racial differences when in reality the differences are readily attributable to non-racial factors. Because these phenomena are more subtle in erring in the direction of finding no disparities when they do exist, these are the ones that will be emphasized. None of them, however, are so subtle as to be incomprehensible to one who lacks training in statistics. Thus, this article presupposes nothing more than common sense, an open mind, and a desire to avoid error, particularly in an area in which important principles of equality and justice may be at stake.

II. Illustrations of Hidden Disparities in Court Records

To illustrate each of the approximately ten phenomena to watch out for, one may examine a hypothetical problem. Using hypothetical data will simplify the presentation, place more emphasis on substance rather than on the data-gathering methodology, and focus more on the perspective of the research consumer rather than on the research producer.

Suppose a random sample of 100 convicted blacks received average sentences of two years for a felony of type-two severity (meaning the sentence

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1 For a description of about 20 studies dealing with sentencing disparities, see Hagan, *Extra-Legal Attributes and Criminal Sentencing: An Assessment of a Sociological Viewpoint*, 8 LAW & SOC. REV. 357 (1974).

2 See, e.g., Bullock, *Significance of the Racial Factor in the Length of Prison Sentences*, 52 J. CRIM. L.C. & P.S. 411 (1961); Thornberry, *Race, Socioeconomic Status and Sentencing in the Juvenile Justice System*, 64 J. CRIM. L. & CRIMINOLOGY 90 (1973); Wolfgang, Kelly & Nolde, *Comparison of Executed and Convicted among Admissions to Death Row*, 53 J. CRIM. L.C. & P.S. 301 (1962).

3 See, e.g., E. GREEN, *JUDICIAL ATTITUDES IN SENTENCING* (1961); J. HOGARTH, *SENTENCING AS A HUMAN PROCESS* (1971); Herbert Jacob, *Sentences and Other Sanctions Imposed on Felony Defendants in Baltimore, Chicago, and Detroit* (paper presented at the American Political Science Association annual meeting, 1974).

could range from probation to four years). Suppose further that a random sample of 100 convicted whites in the same city also received average sentences of two years for a type-two felony. How is it possible that both the black group and the white group could have received the same average sentence, according to accurately kept court statistics, and yet significant racial disparities may still be present in the judicial stage of the criminal justice process?

One immediate answer is that there may be great disparities in who is being arrested or in who is being released on parole. These disparities, however, if they do exist, do not occur at the judicial stage; they occur prior and subsequent to the judicial stage respectively.

Another immediate answer might be that one group has a worse previous criminal record than the other group. For example, the black defendants may have more serious prior convictions than the white defendants. If that were so, then the whites are being discriminated against, in spite of the sentencing equality, since the blacks should be receiving longer average sentences due to their past records.⁴

III. Illustrations of Offsetting Disparities in Statistics

An especially interesting explanation for the failure of statistics to uncover racial disparities is that there may be some accidental disparities or some deliberate discriminations that offset each other in such a way as to give the appearance of perfect or near-perfect equality. One example of this, mentioned in an unpublished paper based on data from Atlanta, Georgia, involved blacks and whites receiving about the same average two-year sentence for the same type of crime.⁵ However, white judges were giving black defendants average sentences of three years, while black judges were giving black defendants an average sentence of one year. Thus, the black defendants were averaging two-year sentences, like the white defendants, in spite of the racial discrimination in the judicial sentencing pattern. Likewise, white judges were giving white defendants an average sentence of one year, whereas black judges were giving white defendants average sentences of three years. Thus, while the overall averages indicate that whites and blacks are receiving equal treatment, in reality each defendant is either being oversentenced or undersentenced along racial lines. The data presented here to illustrate the presence of racial discrimination

4 For examples of sentencing studies which have included only persons who had no prior criminal record or otherwise controlled for prior record see E. GREEN, *supra* note 3; S. NAGEL, *THE LEGAL PROCESS FROM A BEHAVIORAL PERSPECTIVE* (1969), parts published in Nagel, *Disparities in Criminal Procedure*, 14 U.C.L.A. L. REV. 1272 (1967). Studies that find disparities present often do not control the prior records of the sample as is pointed out by Hagan, *supra* note 1.

5 James L. Gibson, *Racial Discrimination in Criminal Courts: Some Theoretical and Methodological Considerations* (mimeographed paper available on request from the author at the University of Wisconsin in Milwaukee).

Thomas Uhlman, in a study of black and white judges in "Metro City," finds smaller differences among black and white judges, and that black judges are often more severe in sentencing than white judges. This may especially be true of older black judges, or black judges on the bench prior to the civil rights movement of the late 60's, but Uhlman does not subdivide the black and white judges in his sample into older and younger judges. Thomas Uhlman, *Race, Recruitment, and Representation: Background Differences between Black and White Trial Court Judges* (mimeographed paper, 1976).

by the judges is hypothetical and oversimplified, yet the phenomenon in a closely related form is alleged to be present in sentencing patterns in Atlanta, Georgia, and may be present elsewhere.

Another kind of offsetting discrimination relates to the nature of the crime rather than the race of the judges. One may contend, however, that the hypothetical data controls the nature of the crime by only using blacks and whites who are convicted of a type-two felony.⁶ However, if one further divides the type-two felony category into aggravated assault and grand larceny, then the previous sentencing equality may substantially disappear. For example, the 100 blacks in our data may consist of 50 blacks convicted of aggravated assault who received one-year sentences, and 50 blacks convicted of grand larceny who received three-year sentences, even though both crimes might be classified as the same type of felony having the same degree of severity. The black defendants may thus have received relatively light sentences in assault cases which tend to be intraracial, and relatively harsh sentences in larceny cases which tend to be less intraracial and are more likely to involve a white victim. On the other hand, the 100 white defendants may have included 50 who were convicted of assault, which almost always involves whites against other whites, for which they received average sentences of about two years, and 50 convicted of larceny, also almost always against other whites, for which sentences also averaged about two years. Thus, both the blacks and the whites within this data would have received average sentences of two years, but only because blacks are possibly being undersentenced in black-on-black assaults and oversentenced in black-on-white larceny.⁷

Still another kind of offsetting discrimination may result from the failure to break sentencing down into two separate decisions. One decision involves determining whether or not to imprison the convicted defendant; the other involves determining the length of the sentence imposed. For example, in our hypothetical problem, the sentences given both blacks and whites may have averaged two years. However, the 100 blacks may have received two-year sentences but been denied probation. On the other hand, 50 of the white defendants may have received probation and 50 may have received a four-year sentence, resulting in an average sentence of two years if probation is

6 There are some sentencing studies which purport to control for the type of crime by dealing only with felonies or some other measure of crime severity. See, e.g., Jaros & Mendelsohn, *The Judicial Role and Sentencing Behavior*, 9 *MIDWEST J. P.S.* 471 (1967). See also E. GREEN, *supra* note 3; Herbert Jacob, *supra* note 3.

7 For a similar realistic example involving a 50-state survey see S. NAGEL, *supra* note 4, at 94, 106-107. In state felonious assault cases, 67 percent of the convicted black defendants received prison sentences rather than a suspended sentence or probation as compared to 62 percent of the whites, for only a relatively small difference. In state grand larceny cases, however, 74 percent of the convicted black defendants received prison sentences rather than a suspended sentence or probation as compared to only 49 percent of the whites. If both types of crimes were grouped together because of their similar severity, the differences in the handling assault and larceny cases would be lost and the overall differences in the treatment of black and white defendants would appear to be more moderate or middling than they really are. Dividing crimes into those against persons and property, however, does not always reveal new relations of differences. See Green, *Inter- and Intra-Racial Crime Relative to Sentencing*, 55 *J. CRIM. L.C. & P.S.* 348 (1964).

counted as 0 years, as it is in some sentencing studies.⁸ If one thinks in terms of two separate decisions, whites are strongly favored in the decision as to whether or not imprisonment is appropriate, but they appear to be disfavored when it comes to length of years. However, if we work only with grand larceny cases in order to hold the type of crime constant, the longer period of years for those relatively few whites who are imprisoned may possibly be due to the fact that when they steal, they tend to steal on a larger scale than the average black defendant does. Thus, the longer sentences given to whites may be related to crime severity. But the greater likelihood of whites being given probation or a suspended sentence may relate to differences in the relative perceived danger or recidivism of the two groups even though they all have no prior records.⁹

Another kind of offsetting discrimination that may produce a seeming equality involves an overemphasis on the racial characteristics of the defendants. Assume, for example, that a group of 100 black defendants and a group of 100 white defendants each received average sentences of two years, but the 50 middle-class black defendants received average sentences of only one year, while the 50 indigent black defendants were sentenced to an average of three years in prison. Likewise, if the middle-class white defendants receive an average sentence of one year, while the indigent white defendants were also sentenced to an average of three years in prison, then the sentencing disparity exists not because of the race of the defendants but because of their economic class. To the extent that the poor population of this country is comprised of a disproportionately large number of blacks, what may appear as racial discrimination may actually be economic class discrimination. This conclusion was indicated in a study of 195 federal cases in which all the defendants had been convicted of interstate larceny and in which none of the defendants had a prior record. Sentencing disparities appeared to be somewhat greater along economic class lines than along racial lines.¹⁰

8 E. GREEN, *supra* note 3. The failure to distinguish the decision to incarcerate from the subsequent decision of how long to incarcerate may be especially present in Chiricos & Waldo, *Socioeconomic Status and Criminal Sentencing: An Empirical Assessment of a Conflict Proposition*, 40 AMER. SOC. REV. 753 (1975). Whites may be favored on the decision to incarcerate as a result of racial stereotypes about recidivism, but blacks who are incarcerated may receive shorter sentences than whites who are incarcerated since blacks may commit the same crime to a less successful extent, especially larcenous crimes. The failure to analyze separately those two sentencing decisions and the failure to treat each crime separately both occur in Tiffany, Avichai, & Peters, *A Statistical Analysis of Sentencing in Federal Courts: Defendants Convicted After Trial, 1967-1968*, 4 J. LEGAL STUD. 369 (1975).

9 For a realistic example which also involves a 50-state survey see S. NAGEL, *supra* note 4, at 94-95, 107. In state grand larceny cases, as previously mentioned, only 26 percent of the convicted black defendants received a suspended sentence or probation as compared to 51 percent of the convicted white defendants. Nevertheless, 53 percent of the whites who received prison sentences received sentences longer than one year, whereas a lesser 46 percent of the blacks who received prison sentences received sentences longer than one year. If both those sentencing decisions were lumped together, the greater leniency toward whites in the first decision concerning imprisonment would be offset by the lesser leniency toward whites in the second decision concerning length of imprisonment.

10 See S. NAGEL, *supra* note 4, at 93, 112. For example, 27 percent of the indigent defendants were recommended for a prison sentence rather than probation in spite of the lack of a prior record as compared to 16 percent of the non-indigent defendants. That spread is slightly greater than the fact that 22 percent of the black defendants were recommended for a prison sentence as compared to 18 percent of the white defendants. One would logically hypothesize that the biggest spread might be obtained from comparing black indigent defendants with white non-indigent defendants, but that was not explored with the data.

A further offsetting discrimination relates to the fact that there is usually more than one decision maker involved in the sentencing process. Specifically, the sentencing decision tends to represent a compromise between the judge's feelings concerning the case and the probation officer's recommendation. The judge and the probation officer may have reverse disparity patterns which offset each other, or, more likely, they may have different disparity patterns that modify each other. In the hypothetical situation where equal-sized groups of blacks and whites each received average sentences of two years, that equality could conceivably have reflected a sentencing pattern by probation officers which tends to favor white defendants, and a sentencing pattern by judges which tends to favor blacks. Such partially offsetting patterns did exist in the above-mentioned sample of federal criminal cases, where the probation officers had a greater tendency to discriminate on the basis of race or economic class than did the judges.¹¹

IV. Illustrations of Other Pitfalls in Analyzing Court Records

There are other factors one must take into account besides the possibilities of offsetting discrimination which relate to the types of judges, crimes, sentencing decisions and defendants. One problem involves the attempt to generalize from just one place. Hagan comments that capital punishment sentencing studies which report racial disparities tend to involve southern states.¹² The leading study which argues there are no racial disparities, however, is based on the northern city of Philadelphia.¹³ One can avoid a narrow data base by working with the nationwide sample of state and federal criminal cases which is available from the Inter-University Consortium for Political Research at Ann Arbor. With a nationwide sample, however, it is necessary to guard against allowing the southern sentencing patterns to offset the possibly opposite or at

The failure to control for characteristics of defendants other than race may particularly complicate some aspects of the Green study, *see* note 3 *supra*. He finds little difference between black defendants and white defendants in his Philadelphia study. One reason might be that women were so heavily represented among the black defendants, thereby lowering the sentences of the black defendants closer to the average sentence of the white defendants. It would have been more meaningful to compare black males with white males and black females with white females. He also finds little difference between his unsubdivided female defendants and male defendants, but that may be partly due to his female defendants being disproportionately black defendants whose sentences tend to raise the female average. On disparities across sex lines, *see* Nagel & Weitzman, *Women as Litigants*, 23 *HAST. L.J.* 171 (1971).

11 *See* S. NAGEL, *supra* note 4, at 94-95, 109. For example, in the federal assault cases, the probation officers recommended that 70 percent of the convicted blacks should be imprisoned, but only 55 percent of the convicted whites. In the same sample of cases, the judges, however, only imprisoned 62 percent of the convicted blacks and 56 percent of the convicted whites, for a substantially smaller disparity, and slightly in the reverse direction since 62 is lower than 70 and 56 is higher than 55. The reason racial disparities may appear less in the sentencing patterns of judges as compared to the sentencing recommendations of probation officers is because judges are more influenced by the law and the crime, and may have less race-conscious backgrounds; whereas probation officers are more influenced by the characteristics of the defendants and may have more race-conscious backgrounds.

12 *See* Hagan, *supra* note 1. That might reflect the fact that capital punishment disproportionately occurs in the south, especially for rape rather than murder.

13 E. GREEN, *supra* note 3.

least different northern sentencing patterns.¹⁴

One must also guard against overemphasis of the sentencing aspects of the judicial process. Sentencing has been emphasized because it is the easiest stage in the judicial process at which to obtain data and because it involves important decisions concerning life, liberty, and property. The sentencing stage in the judicial process may, however, involve smaller disparities than are present in earlier stages because the filtering out of many defendants before the sentencing stage leaves a fairly homogeneous residue of defendants. One might not expect to find disparities in treatment to be so great since there is such similarity among the defendants at the sentencing stage, as contrasted to the arraignment stage where the defendants are more diverse. This notion is supported by the fact that in both the nationwide state and federal data the black-white disparities tend to be much greater prior to sentencing. This is true even when the specific crime is held constant between blacks and whites with regard to the percentage being released on bail; having a hired lawyer; receiving a grand jury indictment; being subjected to only short delay while awaiting trial in jail; and receiving a jury trial.¹⁵

A major cause of error in statistical analysis is the tendency to treat the relation between race and degree of sentence, while controlling for crime and prior record, as if it were a statistical relationship similar to the relation between the religion of voters and whether they vote Democratic or Republican. In the latter statistical relation, political scientists are striving for a high degree of predictability. If being Protestant rather than Catholic does not substantially aid in predicting Democratic or Republican votes, then one would look elsewhere for a basis for prediction. In trying to predict criminal sentences, more precise predictability may be derived from an analysis which includes consideration of the type of crime committed and the defendant's prior record. If our sole interest lay in prediction, we would probably not be interested in the relation between race and sentencing. To be more specific, if 74 percent of convicted black grand larceny defendants receive prison terms rather than probation, and 49 percent of convicted white defendants serve prison terms, then that is "only" a difference of 25 percentage points.¹⁶ In statistical terms, that represents a correlation of approximately $+ .25$, which means that race only accounts for six percent of the variation in sentencing decisions versus probation since $.25$ squared equals $.0625$.

To those who are sensitive to racial disparities in sentencing, that six percent calculation might be considered as demeaning the value of what is at stake. Such people might emphasize that, given the above-mentioned figures of 74 percent and 49 percent, then with 100 blacks and 100 whites one could predict accurately 125 times (*i.e.*, 74 plus 51) out of 200 opportunities (approximately 62 percent of the time) that all blacks will be imprisoned and all whites will

14 The nationwide state data indicates greater disparities between blacks and whites in the south than in the north, at least as of the early 1960's. See S. NAGEL, *supra* note 4, at 95. The data, however, was analyzed by region, race, and criminal justice stage, but not by type of crime.

15 S. NAGEL, *supra* note 4, at 106-107, 109-110.

16 See note 7 *supra*.

receive probation.¹⁷ More importantly, a 25 percentage point difference, or even a 10 percentage point difference in this context, might be considered an important difference even though it does not have much statistical prediction power, provided that it is based on a large sample of cases where the specific crime and the prior records of the defendants are held constant.¹⁸

V. Conclusion

In general, if one finds that a random group of convicted blacks and convicted whites, having the same prior criminal records, has received the same average sentence of two years for the same crime, then one can feel reasonably confident that there is little if any racial disparity operating in that legal system, especially if the same pattern prevails for various crimes. Nevertheless, before

17 See Hagan, *supra* note 1; Herbert Jacob, *supra* note 3. Both use adjectives and other phrases like "contributes relatively little" (Hagan, 379) and "quite small" (Jacob, 7), which tend to belittle differences that others might consider substantial and disturbing. Both emphasize correlation measures as related to squaring the percentage differences. They thereby find the relations to be statistically trivial. Unsuspecting readers might interpret that as meaning normatively unimportant, just as unsuspecting readers may conclude that low chance probabilities (*i.e.*, high "statistical significance") means high theoretical or practical importance when they may merely reflect a large sample size. A difference of 25 percentage points in the percent of convicted blacks and whites imprisoned can be interpreted to mean: (1) that if whites are being properly sentenced, then 25 out of 100 blacks are being oversentenced (where crime and prior record are equal); or (2) that if blacks are being properly sentenced, then 25 out of 100 whites are being undersentenced; or (3) some combination in between.

A 10 percentage points difference between blacks and whites with regard to being imprisoned or placed on probation may be especially disturbing if nearly 100 percent of the blacks go to prison in the group sampled, and only 90 percent of the whites. Such a difference might indicate that being black is a sufficient condition for being imprisoned since all blacks were subject to imprisonment. Likewise, a 10 percentage points difference might be especially disturbing if about 10 percent of the blacks go to prison in the group sampled, and nearly zero percent of the whites. Such a difference might indicate that being white is a sufficient condition for receiving probation and avoiding prison since no whites were subject to imprisonment. On the other hand, a 10 percentage points difference with 55 percent of the blacks going to prison and only 45 percent of the whites going to prison is not so disturbing. In other words, the same 10 percentage points difference, or .10 slope or .10 correlation coefficient may have very different meanings depending on the full nature of the data which the .10 summarizes.

18 The large sample of cases is needed so that differences as small as about 10 percentage points are not readily attributable to chance. With the nationwide state data of over 11,000 cases and the nationwide federal data of over 30,000 cases, one can create a sample size for which truly small percentage differences of 1 or 2 percentage points will be unlikely to be attributable to chance. All one must do is compare blacks and whites convicted of felonies against property (rather than just grand larceny) and blacks and whites convicted of felonies against persons (rather than just aggravated assault). If one is hypothesizing that differences are unfavorable to blacks rather than merely present, it is also statistically reasonable to use what is known as a one-tailed or halved calculation of the chance probabilities. See S. SEGEL, *NONPARAMETRIC STATISTICS FOR THE BEHAVIORAL SCIENCES* 13-14 (1956).

Statisticians generally demand that before the null hypothesis of no discrimination can be rejected, the probability of the difference observed between blacks and whites must be less than a .05 probability. In doing so, one is in effect saying that it is about 19 times as bad to make the mistake of accepting the hypothesis that discrimination exists when the hypothesis is false (a type-1 error) than it is to make the mistake of rejecting the hypothesis that discrimination exists when the hypothesis is true (a type-2 error). Although the 19 to 1 error costs may be conventional, it would be difficult to justify that ratio with this subject matter since it seems to be at least as harmful to make the mistake of thinking there is no discrimination when there really is as it is to make the mistake of thinking there is discrimination when there really is not. By demanding that the disparities observed be almost totally unattributable to chance, one is in effect demanding that (1) the differences be proved beyond a reasonable doubt and that (2) a strong presumption prevail in favor of ignoring real disparities. See *THE SIGNIFICANCE TEST CONTROVERSY* (D. Morrison & Ramon Henkel, eds., 1970); Hagan, *supra* note 1, emphasizes the need to meet the .05 probability test as if that test were an objective value-free criterion.

this conclusion is reached, it is necessary to exercise caution in analyzing the statistics which are used. One should consider how the data breaks down with respect to different types of judges, victims, sentencing decisions, defendants, and decision makers. It is also necessary to carefully scrutinize the data for constraints with regard to place, time, the stage of the judicial process, and the statistical semantics of the analyst. Likewise, if someone contends that there is gross discrimination in the treatment of blacks and whites, he too may need to be subjected to a related set of questions, since what may appear as deliberate discrimination may be fully explained in terms of non-racial factors. Whatever the truth is about racial discrimination in the judicial process, that truth will be found more clearly by a skeptical, questioning analysis than by an eagerness to accept that which appears to be true, or that which one would like to think is true.