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Electronically Transmitted

Aurora Lora, Superintendent
Members of the Board of Education
Oklahoma City Public Schools
900 North Klein Avenue
Oklahoma City, Oklahoma 73106

Re: Misunderstanding of Statistics Reflected in Department of Education Actions
Regarding Discipline Disparities in Oklahoma City Public Schools

Dear Superintendent Lora and Members of the Oklahoma City Public Schools Board of
Education:

The purpose of this letter is to explain certain failures of understanding of fundamental statistical patterns reflected in the Department of Education's recent actions regarding racial differences in discipline in Oklahoma City Public Schools including the April 7, 2016 [Resolution Agreement](#)¹ and the April 19, 2016 [letter](#) Office of Civil Rights Chief Attorney Joshua Douglass to Superintendent Robert Neu .

As with other actions taken by the Department of Education around the country, the agency's actions regarding Oklahoma City Public Schools reflect the belief that generally reducing discipline rates will tend to reduce relative racial differences in discipline rates and the proportion African Americans comprise up of persons disciplined. In fact, exactly the opposite is the case. Generally reducing discipline rates tends to increase relative differences in discipline rates and the proportions groups more susceptible to discipline comprise of persons disciplined. Thus, the Resolution Agreement, which requires that the school district substantially reduce overall discipline rates and closely monitor discipline disparities, puts the school district in a situation where modifications to practices pursuant to the agreement will tend to increase discipline disparities as they are measured by the Department of Education.

¹ To facilitate consideration of issues raised in letters such as this by the addressees and others, I include links to referenced materials in electronic copies of the letters. Such copies may be found by means of the [Measurement Letters](#) page of jpscanlan.com. I generally also post links to such letters on the ASA Connect portion of the website of the American Statistical Association.

I have recently explained this matter fairly succinctly with regard to relative differences in adverse outcome rates of advantaged and disadvantaged groups in [“Things government doesn’t know about racial disparities,”](#) *The Hill* (Jan. 28, 2014), [“The Paradox of Lowering Standards,”](#) *Baltimore Sun* (Aug. 5, 2013), and [“Misunderstanding of Statistics Leads to Misguided Law Enforcement Policies,”](#) *Amstat News* (Dec. 2012), and with regard to proportions disadvantaged groups make up of persons experiencing adverse outcomes in [“Things the President Doesn’t Know About Racial Disparities,”](#) *Federalist Society Blog* (Aug. 5, 2016), and [“Things DoJ doesn’t know about racial disparities in Ferguson,”](#) *The Hill* (Feb. 22, 2016). In explaining these issues, these items also describe the anomaly in federal civil rights law enforcement whereby, as a result of the government’s failure to understand fundamental statistical patterns, entities that comply with government encouragements to relax standards and otherwise reduce the frequency of adverse outcomes in various settings increase the chances that the government (or others) will sue the entities for discrimination.

I have recently explained the pertinent, and related, statistical principles more elaborately in [“The Mismeasure of Health Disparities,”](#) *Journal of Public Health Management and Practice* (July/Aug. 2016), [“Race and Mortality Revisited,”](#) *Society* (July/Aug. 2014), [“The Perverse Enforcement of Fair Lending Laws,”](#) *Mortgage Banking* (May 2014), [“Measuring Health and Healthcare Disparities,”](#) Proceedings of the Federal Committee on Statistical Methodology 2013 Research Conference (March 2014) (FCSM paper), [“The Mismeasure of Discrimination,”](#) Faculty Workshop, University of Kansas School of Law (Sept. 20, 2013) (Kansas Law paper), as well as in a letter to the [American Statistical Association](#) (Oct. 8, 2015)² and an amicus curiae [brief](#) in *Texas Department of Housing and Community Development, et al. v. The Inclusive Communities Project, Inc.*, Supreme Court No. 13-1731 (Nov. 18, 2016) (TDHCA brief).³

I have also recently explained the matter, by [letter](#) of September 12, 2016, to the Antioch (CA) Unified School District with regard to a lawsuit brought against it that reflects the mistaken belief the generally reducing discipline rates will tend to reduce the proportion African Americans comprises of students disciplined. See also the letter of by [letter](#) of July 3, 2016, to the University of Oregon’s Institute on Violence and Destructive Behavior and University of Oregon Law School Center for Alternative Dispute Resolution regarding a report that promotes

² The American Statistical Association letter urges the organization, among other things, to explain to arms of the federal government that generally reducing adverse outcome rates tends to increase, not decrease, relative differences in adverse outcome rates and the proportions disadvantaged groups comprise of persons experiencing the outcomes. The letter has been referred to a subcommittee of the association’s Scientific and Public Affairs Advisory Committee. A follow-up [letter](#) of July 25, 2016, urges the organization to explain the matter to President Barack Obama with regard to misunderstandings reflected in the President’s statements on racial/ethnic differences in criminal justice outcomes.

³ Older extended treatments of the issues may be found in [“Can We Actually Measure Health Disparities?,”](#) *Chance* (Spring 2006), [“Race and Mortality,”](#) *Society* (Jan./Feb. 2000), [“Divining Difference,”](#) *Chance* (Fall 1994), [“The Perils of Provocative Statistics,”](#) *Public Interest* (Winter 1991), and [“The ‘Feminization of Poverty’ is Misunderstood,”](#) *Plain Dealer* (Nov 11, 1987).

the mistaken belief that generally reducing suspensions will tend to reduce relative differences in discipline rates.⁴

Section A explains the pertinent statistical principles and why the modifications to practices required by the Resolution Agreement will tend to increase racial differences according to the way the Department of Education measures them. Section B explains certain particular matters the school district must understand in attempting to comply with the requirements of the Resolution Agreement in a rational manner, including with respect to retention of an expert to assist it in doing so.

A. Effects of Generally Reducing Discipline Rate on Relative Differences in Discipline Rates and the Proportions Groups More Susceptible to Discipline Comprise of Persons Disciplined

Inherent in other than highly irregular risk distributions is a pattern whereby the rarer an outcome the greater tends to be the relative difference in experiencing it and the smaller tends to be the relative difference in avoiding it. A corollary to this pattern is a pattern whereby the rarer an outcome the greater tend to be the proportions groups most susceptible to the outcome comprise of persons who experience the outcome and persons who avoid the outcome.

The patterns can be easily illustrated with normally distributed test score data. Table 1 below is based on a situation where an advantaged group (AG) and a disadvantaged group (DG) have mean test scores that differ by half a standard deviation (and where the two groups' distributions have the same standard deviation). At the higher cutoff the pass rates for AG and DG are 80% and 63% (with corresponding failure rates of 20% and 37%). Lowering the cutoff to the point where 95% of AG passes would cause the pass rate of DG to rise to 87% (while the corresponding failure rates would decrease to 5% and 13%). Column (5) shows that lowering the cutoff decreases the ratio of AG's pass rate to DG's pass rate from 1.27 to 1.09 (*i.e.*, reduces the relative difference in pass rates from 27% to 9%).⁵

⁴ The letter the University of Oregon entities was prompted by a report they issued in June 2015 titled "Eureka City Schools School-wide Positive and Restorative Discipline Assessment and Intervention Project Assessment Results and Programmatic Recommendations." The report, which was produced in connection with resolution of a suit regarding discipline issues against Eureka (CA) City Schools, reflected the mistaken view that the approaches to school discipline in the report's title, which tend generally to reduce overall discipline rates, will tend to reduce relative racial and other demographic differences in discipline rates.

⁵ While I commonly refer to patterns of relative differences in this letter, the table actually presents rate ratios (also termed risk ratios). The relative difference is the rate ratio minus 1 where the rate ratio is above 1 and 1 minus the rate ratio where the rate ratio is below one. One should be careful not to mistakenly refer to the rate ratio as the relative difference. But the distinction between the two terms is not pertinent to the discussion here of patterns by which relative differences tend to be affected by the frequency of an outcome. In recent years I commonly present the rate ratios for both outcomes with the larger figure in the numerator, in which case, as to both outcomes, the larger the rate ratio, the larger the relative difference. Choice of numerator in the rate ratio, however, has no bearing on the patterns by which the two relative differences tend to be affected by the frequency of the outcome.

That lowering cutoffs tends to reduce relative differences in pass rates is a reason that lowering test cutoffs is universally regarded as reducing the disparate impact of tests on which some demographic groups outperform others. It may also be a reason that stringent standards are generally regarded as having an especially severe impact on disadvantaged groups.

But, as shown in column (6), lowering the cutoff increases the ratio of DG's failure rate to AG's failure rate from 1.85 to 2.60 (*i.e.*, increases the relative difference in failure rates from 85% to 160%). Thus, lowering the cutoff reduced the relative difference in the outcome that increased in frequency (test passage) but increased the relative difference in the outcome that decreased in frequency (test failure).

Table 1. Illustration of effects on relative differences in pass and fail rates of lowering a cutoff from a point where 80% of AG passes to a point where 95% of AG passes, with proportions DG comprises of persons who pass and of persons who fail (when mean scores differ by approximately half a standard deviation and DG comprises 50% of test takers)

Cutoff	AG Pass (1)	DG Pass (2)	AG Fail (3)	DG Fail (4)	AG/DG Pass Ratio (5)	DG/AG Fail Ratio (6)	DG Prop of Test Takers (7)	DG Prop of Test Passers (8)	DG Prop of Test Failers (9)
High	80%	63%	20%	37%	1.27	1.85	50%	44%	65%
Low	95%	87%	5%	13%	1.09	2.60	50%	48%	72%

Columns 8 and 9 show how lowering the cutoff increases the proportion DG comprises of person who pass the test and the proportion DG comprises of persons who fail the test. In circumstances where DG comprises 50% of the test takers, the proportion DG comprises of persons who pass the test would rise from 44% to 48%, while the proportion DG comprises of persons who fail the test would increase from 65% to 72%.

While it is necessary to posit the proportion DG comprises of test takers to illustrate the above point, the patterns of directions of changes in these proportions would hold irrespective of the actual proportion DG comprises of persons taking the test. And, since lowering the cutoff does not change the proportion DG comprises of persons taking the test, lowering the cutoff will tend to reduce both the relative difference and the absolute difference between the proportion DG comprises of persons who take the test (the pool) and the proportion it comprises of persons who pass the test, while increasing both the relative difference and the absolute difference between the proportion DG comprises of the pool and the proportion it comprises of persons who fail the test.⁶

⁶ For simplicity, the illustration is based on the situation where the universe is comprised of two groups. An issue concerning the more complex situation in the Oklahoma City Public Schools is addressed in Section B.

Numerous tabular and graphical illustrations of the patterns, with actual or hypothetical data, may be found in the more extended references mentioned on page 2, in methods workshops I have given at American universities since 2012,⁷ in the various pages and subpages of jpscanlan.com related to measurement issues,⁸ and in many other letters to institutions or organization who activities, or whose members' activities, involve or are affected by analyses of demographic differences.^{9 10} Among letters of particular pertinence to the instant situation are

⁷ See "[The Mismeasure of Health Disparities in Massachusetts and Less Affluent Places](#)," Department of Quantitative Health Sciences, University of Massachusetts Medical School (Nov. 18, 2015); "[The Mismeasure of Discrimination](#)," Center for Demographic and Social Analysis, University of California, Irvine (Jan. 20, 2015); "[The Mismeasure of Demographic Differences in Outcome Rates](#)" Public Sociology Association of George Mason University (Oct. 18, 2014); "[Rethinking the Measurement of Demographic Differences in Outcome Rates](#)," Maryland Population Research Center of the University of Maryland (Oct. 10, 2014); "[The Mismeasure of Association: The Unsoundness of the Rate Ratio and Other Measures That Are Affected by the Prevalence of an Outcome](#)," Minnesota Population Center and Division of Epidemiology and Community Health of the School of Public Health of the University of Minnesota (Sept. 5, 2014); "[The Mismeasure of Group Differences in the Law and the Social and Medical Sciences](#)," Institute for Quantitative Social Science at Harvard University (Oct. 17, 2012); "[The Mismeasure of Group Differences in the Law and the Social and Medical Sciences](#)," Department of Mathematics and Statistics of American University (Sept. 25, 2012).

⁸ The principal measurement pages are: [Measuring Health Disparities](#), [Scanlan's Rule](#), [Mortality and Survival](#), [Statistical Reasoning](#), [Immunization Disparities](#), [Educational Disparities](#), [Disparate Impact](#), [Discipline Disparities](#), [Lending Disparities](#), [Employment Discrimination](#), [Feminization of Poverty](#), and [Vignettes](#). The pages have close to a hundred subpages.

⁹ Recipients of such letters include [American Statistical Association II](#) (July 25, 2016), [Federal Judicial Center](#) (July 7, 2016), [University of Oregon Institute on Violence and Destructive Behavior and University of Oregon Law School Center for Dispute Resolution II](#) (July 5, 2016), [University of Oregon Institute on Violence and Destructive Behavior and University of Oregon Law School Center for Dispute Resolution](#) (July 3, 2016), [New York City Center for Innovation through Data Intelligence](#) (June 6, 2016), [Consortium of Social Science Associations](#) (Apr. 6, 2016), [Population Association of America and Association of Population Centers](#) (Mar. 29, 2016), [Council of Economic Advisers](#) (Mar. 16, 2016), [City of Madison, Wisconsin](#) (Mar. 12, 2016), [Stanford Center on Poverty and Inequality](#) (Mar. 8, 2016), [City of Boulder, Colorado](#) (Mar. 5, 2016), [Houston Independent School District](#) (Jan. 5, 2016), [Boston Lawyers' Committee for Civil Rights and Economic Justice](#) (Nov. 12, 2015), [House Judiciary Committee](#) (Oct. 19, 2015), [American Statistical Association](#) (Oct. 8, 2015), [Chief Data Scientist of White House OSTP](#) (Sept. 8, 2015), [McKinney, Texas Independent School District](#) (Aug. 31, 2015), [Department of Health and Human Services and Department of Education](#) (Aug. 24, 2015), [Agency for Healthcare Research and Quality](#) (July 1, 2015), [City of Minneapolis, Minnesota](#) (June 8, 2015), [Texas Appleseed](#) (Apr. 7, 2015), [Senate Committee on Health, Education, Labor and Pensions](#) (Mar. 20, 2015), [United States Department of Justice and City of Ferguson, Missouri](#) (Mar. 9, 2015), [Vermont Senate Committee on Education](#) (Feb. 26, 2015), [Portland, Oregon Board of Education](#) (Feb. 25, 2015), [Wisconsin Council on Families and Children's Race to Equity Project](#) (Dec. 23, 2014), [Financial Markets and Community Investment Program, Government Accountability Office](#) (Sept. 9, 2014), [Education Law Center](#) (Aug. 14, 2014), [IDEA Data Center](#) (Aug. 11, 2014), [Institute of Medicine II](#) (May 28, 2014), [Annie E. Casey Foundation](#) (May 13, 2014), [Education Trust](#) (April 30, 2014), [Investigations and Oversight Subcommittee of House Finance Committee](#) (Dec. 4, 2013), [Mailman School of Public Health of Columbia University](#) (May 24, 2013), [Senate Committee on Health, Education, Labor and Pensions](#) (Apr. 1, 2013), [Federal Reserve Board](#) (March 4, 2013), [Harvard University et al.](#) (Oct. 26, 2012), [Harvard University](#) (Oct. 9, 2012), [United States Department of Justice](#) (Apr. 23, 2012), [United States Department of Education](#) (Apr. 18, 2012), [The Commonwealth Fund](#) (June 1, 2010), [Institute of Medicine](#) (June 1, 2010), [National Quality Forum](#) (Oct. 22, 2009), [Robert Wood Johnson Foundation](#) (Apr. 8, 2009).

each of those to individual school districts or boards of education, as well the above-mentioned September 12, 2016 letter to the Antioch Unified School District and July 3, 2016 letter to the University of Oregon Institute on Violence and Destructive Behavior and University of Oregon Law School Center for Dispute Resolution and letters to [Department of Health and Human Services and Department of Education](#) (Aug. 24, 2015), and [Texas Appleseed](#) (Apr. 7, 2015). All of the letters in note 9, however, illustrate how universally analyses of demographic differences involving favorable or adverse outcomes are undermined by failure to understand patterns by which measures tend to be affected by the frequency of an outcome.

Examples of these patterns based on actual data that are of particular pertinence to the instant situation may be found in the subpages of the [Discipline Disparities](#) page of [jpscanlan.com](#) discussing the way that recent reductions in discipline rates around the country have been accompanied by increased relative differences in discipline rates: [California Disparities](#), [Colorado Disparities](#), [Connecticut Disparities](#), [Maryland Disparities](#), [Minnesota Disparities](#), [Oregon Disparities](#), [Beaverton, OR Disparities](#), [Denver Disparities](#), [Henrico County, VA Disparities](#), [Los Angeles SWPBS](#), [Minneapolis Disparities](#), [Montgomery County, MD Disparities](#), [Portland, OR Disparities](#), [St. Paul Disparities](#).¹¹ While these pages discuss the matter in terms of relative differences in discipline rates, for reasons discussed above, increased relative differences in discipline rates correlate with increases in the proportions more susceptible groups comprise of persons disciplined. See also the [DOE Equity Report](#) subpage regarding a Department of Education report showing that relative racial differences in expulsions are larger in school districts without zero tolerance policies than school districts with such policies; the [Suburban Disparities](#) subpage regarding the greater relative racial differences in suspensions in suburban than central city schools; "Race and Mortality Revisited" (at 342) regarding the larger relative differences in suspension rates in pre-school than in K-12; and the Boston Lawyers' Committee letter mentioned in note 9 regarding larger relative differences in suspensions in Massachusetts (which has generally low suspension rates) than nationally.

The described patterns by which measures tend to be affected by the frequency of an outcome, of course, will not always be observed when there occur changes in the frequency of an

¹⁰ I have been led to understand that persons with formal statistical training may best understand the described pattern by which relative differences tend to be affected by the frequency of an outcome in terms of the density function. Such is the approach of the following recent papers: Lambert PJ, Subramanian S ([Disparities in Socio-Economic outcomes: Some positive propositions and their normative implications](#), Soc Choice Welf 2014;43:565-576), and Lambert PJ, Subramanian S ([Group inequalities and "Scanlan's Rule": Two apparent conundrums and how we might address them](#), Working Paper 84/2014, Madras School of Economics (2014)).

¹¹ Reportage of situations where general reductions in discipline rates have been accompanied by reduced racial differences in discipline have generally pertained to studies that measured disparities in terms of absolute differences between rates. As discussed in the letter to the Antioch Unified School District, absolute differences between rates tend to decline when outcomes in the rate ranges commonly observed for adverse school discipline outcomes generally decline.

outcome (or in comparisons of settings with different frequencies of an outcome.) For the strength of the forces causing the outcome rates to differ may change over time and otherwise vary from setting to setting (as shown in many example in materials referenced above and in Table 2 of the Antioch Unified School District letter with suspension data from that district). But data on demographic differences can only be soundly analyzed while understanding these patterns and their implications.

The most effective way to quantify the strength of the forces causing outcome rates to differ (which might also be characterized as the difference in the circumstances of two groups reflected by their outcome rates) is by deriving from the adverse (or corresponding favorable) outcome rates of the advantaged and disadvantaged groups the difference, in terms of percentage of a standard deviation, between means of the hypothesized underlying distributions. This method is commonly referred to as the probit and I generally describe the results as the “EES” for “estimated effect size.” The method is used with a wide variety of data in the most of the materials referenced in the text above (apart from the short items mentioned at the top of page 2 and in Table 2 of the Antioch Unified School District letter).^{12 13}

B. Matters Warranting Particular Attention in Complying with the Agreement

The above discussion should make clear that in endeavoring to comply with the terms of the Resolution Agreement, district officials must understand that generally reducing discipline rates will tend to increase relative racial differences in discipline rates and the proportion African Americans comprise of persons disciplined. But there also some additional matters that district officials must understand in order to comply with the Resolution Agreement in a rational manner.

Implicit or explicit in the above discussion and referenced materials are the following things that must be understood in interpreting data on demographic differences in discipline rates. First, to the extent that the forces causing the outcome rates of the advantaged and disadvantaged groups in Table 1 to differ (whether the rates involve test outcomes or anything else) can be measured, there is no basis to distinguish between those forces from row to row of the table.

Thus, for example, if the failure rates in the Table 1 reflect suspension rates at two points in time, there would be no basis for arguing that the strength of the forces causing the outcome

¹² An EES value of .5 (as in the specifications for Table 1) corresponds to a situation where approximately 31 percent of DG falls above the mean for AG. See Table 7 (slide 47) of the University of California, Irvine workshop mentioned in note 7 for illustrations of the meanings of various EES values in terms of the proportion of DG falling above the AG mean.

¹³ The method may have certain problems in the school discipline context. See the [Ferguson, Missouri Arrest Disparities](#) subpage of the Discipline Disparities page.

rates to differ (whatever those forces may be) had changed over time or any basis for drawing inferences about processes based on the changes over time. The same holds for comparisons of racial differences in outcome rates at different schools, by different decision-makers, or with respect to different types of behavior. By way of a simple example, other things being equal, the teacher or schools that have comparatively strict discipline policies (or comparatively poorly-behaved students) will tend to show patterns of outcome rates and measures thereof more like those in first row of the table while the teacher or schools with comparatively lenient discipline policies (or comparatively well-behaved students) will tend to show patterns more like those in the second row. And, of course, the more a decision-maker attempts to comply with the Resolution Agreement's intent to make suspension a last resort, the more the outcome rate patterns for the decision-maker will look like those in the second row than the first row of the table (*i.e.*, showing larger relative racial differences in suspensions and a higher proportions African Americans comprise of persons disciplined).

Understanding the point about particular teachers or schools is particularly important in light of the agreement's requirement (at page 18) that the district make comparisons among schools and teaches with regard to appraisals of disproportionality.¹⁴ See the discussion in "Race and Mortality Revisited" regarding its Table 5 and the Kansas Law paper regarding its Table 1 with respect to the way that situations where discrimination at issue best illustrate the failing of standard measures of differences between outcome rates and the absurdity that measures that yield opposite conclusions about the size of disparities might both be in some respect valid.

Second, as discussed above and in the longer references, in order to estimate the strength of the forces causing outcome rates to differ one must have the outcome rates themselves. Information on the proportion a group comprises of persons potentially experiencing an outcome and the proportion it comprises of persons actually experiencing an outcome does not enable one to derive these rates. Thus, such information can never be effectively analyzed even though one may be able to observe certain standard patterns in such data. See Section of TDHCA brief (at 23-27) and Section C the Kansas Law paper (at 23-26). Further, there are additional problems in analyses based on those proportions apart from that just mentioned, including, among others, that

¹⁴ The July 25, 2016 letter to the American Statistical Association, in note 8 at page 7, discusses the Oklahoma City Resolution Agreement and the fact that the required reductions in suspensions will tend to increase disparities according the way they are typically measured by the Department of Education. The note also states that the "agreement (at 18) also requires that Oklahoma City School District compare its data with that of other districts for purposes of identifying racial disparities" and suggests that such comparisons will likely be make without recognition that the Oklahoma City School District to show greater disparities, as they are commonly measured by Department of Education, than districts not under requirements to restrict exclusionary discipline to only the most extreme cases. The quoted statement is incorrect. The agreement does not require comparisons across districts. The error occurred as a result of my reading "compare to those at other District schools" in Section 16 to mean other districts rather than other schools within the Oklahoma City School District. District leadership should nevertheless keep in mind that the requirement of the agreement will cause the size of disparities in the Oklahoma City School District to become larger compared with districts within the state that are not under similar obligations to generally reduce discipline rates.

the same pair of outcome rates for an advantaged and disadvantaged group will yield different conclusions about the size of the disparities depending on the proportion the disadvantaged group makes up of the pool. See the [IDEA Data Center Disproportionality Guide](#) and subpage of the [Discipline Disparities](#) page of [jpscanlan.com](#) and [slides 98-108](#) of the University of Maryland workshop mentioned in note 7.¹⁵ Even apart from these additional problems, however, one should never attempt to appraise the size of demographic differences based on a measure of the difference between the proportion a group comprises of the pool and the proportion the group comprises of persons experiencing an outcome.

Third, the point about appraising differences based on the proportion a group comprises of the pool and the proportion the group comprises of persons experiencing an outcome apply to any situation, regardless of the how many groups there are. But there is an addition problem in the Oklahoma City situation given that there are substantial numbers of African American, Hispanic, and white students.

The April 19, 2016 [letter](#) from the Department of Education's Office of Civil Rights Chief Attorney Joshua Douglass to Superintendent Robert Neu, at page 12, discusses the situation of African American students both in terms of the proportion African Americans comprised of students and the ratio of the African American suspension rate to the white suspension rates. But the letter then discusses the situation of Hispanics solely by noting that Hispanics comprises a smaller proportion of persons suspended than they comprised of students. The Resolution Agreement, however, requires the monitoring of discipline disparities both as to African Americans and Hispanics.

A problem with appraising disparities in terms on a measure of the difference between the proportion a group comprises of the pool and the proportion the group comprises of persons experiencing an outcome in the Oklahoma City school situation involves the fact that the Hispanic suspension rate will often (though not always) be somewhat higher than the white rate, though almost invariably lower than the African American rate. In order for the Hispanic proportion of suspensions to be greater than the Hispanic proportion of students, the Hispanic rate must be higher than the suspension rate for all other student groups combined. Suppose, then, that at a particular school students are 50% African American, 25% Hispanic, and the 25% white, and the suspension rates are 20% for African Americans, 15% for Hispanics, and 10% for whites. The Hispanic rate would be lower than the combined rate for all other students (16.7%) and Hispanic students would comprise only 23.1% of suspended students.

Thus, the methodology according to which the Hispanic situation is appraised in the Douglass letter would find Hispanics to be underrepresented among persons suspended. But a

¹⁵ Here, too, focus on a situation where discrimination is at issue usefully illustrates the invalidity of certain measures. For appraisals of the likelihood of discrimination based on comparison of the proportion a group comprises of the pool and the proportion it comprises of persons experiencing an outcome involving any given pair of outcome rates for the advantaged and disadvantaged groups would vary depending on the proportion the disadvantaged group comprises of the pool.

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comparison of the Hispanic rate with the white rate would find that Hispanics are suspended at a greater rate than whites. Anything approaching a rational appraisal of the situation of Hispanics must be based on the Hispanic and white rates.

This is not to suggest that differences between the Hispanic and white rates should be regarded as indicating discrimination (any more than differences between the African American and white rates should be so regarded). But in monitoring differences as required by the Resolution Agreement, it is nevertheless essential that Oklahoma City school officials understand all anomalies arising from the measurement approaches of the Department of Education.

Fourth, the Resolution Agreement suggests in several places that the school district should be consulting with experts on school discipline in monitoring the agreement. Should the district decide to secure expert assistance, it should recognize that very few persons providing expert services in this area understand even that generally reducing discipline rates tends to increase, rather than reduce, relative differences in discipline rates and the proportions groups more susceptible to discipline comprise of persons disciplined. In fact, a great many persons providing such services believe the opposite. Similarly, few such persons understand, for example, that the likelihood of discrimination reflected by the patterns in the two rows of Table 1 is essentially the same.

Most persons with a statistical background, however, should be capable of understanding these issues. Thus, I encourage the school district to make sure that retained or consulting experts fully understand the issues discussed in this letter and the materials it references even if the experts have to be newly educated on these issues.

Sincerely,

/s/ James P. Scanlan

James P. Scanlan