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ELECTRONICALLY TRANSMITED

Naomi Smoot, Director
Members of the Executive Board
Coalition for Juvenile Justice
1319 F Street NW, Suite 402
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Subj: Coalition for Criminal Justice's Promotion of the Erroneous Belief That Generally Reducing Adverse Criminal Outcomes Tends to Reduce, Rather Than Increase, Relative Racial and Other Demographic Differences in Rates of Experiencing the Outcomes

Dear Director Smoot and Members of the Coalition for Juvenile Justice Executive Board:

One purpose of this letter is to explain to the Coalition for Juvenile Justice (CJJ) that, contrary to the belief promoted by CJJ activities, including through conferences like the [2018 CJJ National DMC Conference](#)¹ being held in Baltimore, Maryland on November 27-30, 2018, generally reducing adverse criminal justice outcomes tends to increase, not reduce, relative (percentage) racial and other demographic differences in rates of experiencing the outcomes. A second purpose is to advise CJJ of its obligation to take all necessary steps to correct the erroneous belief it has promoted.

Since email addresses for Board Members are not readily available, the letter is being transmitted directly only to CJJ staff. But I request that it be provided to all Members of the Executive Board prior to the November 27 Executive Board meeting. I also request that the letter be provided to all presenters and attendees at the conference in order to prevent presenters from further promoting an erroneous belief about the effects of policies on measures of racial disparity and attendees from being misled about those effects. Apart from ethical considerations regarding the promotion of erroneous beliefs among paying attendees and others (especially when those beliefs have the substantial adverse consequences described later in this letter), a failure of CJJ to bring this issue to the attention of presenters and attendees, after CJJ leadership

¹ To facilitate consideration of issues raised in documents such as this I include links to referenced materials in electronic copies of the documents, in some cases, for the reader's convenience, providing the links more than once. Such copies are available by means of the [Measurement Letters](#) page of jpscanlan.com. If the online version of the letter is amended, such fact will be noted on the first page of that version.

has been informed of the matter, will compromise subsequent activities of CJJ when the issues raised in this letter become widely known.²

This holds even if CJJ should disagree with any part of this letter. For, as explained or illustrated below, there exists a substantial body of material published in reputable places, including publications of the American Statistical Association, both explaining why reducing an outcome tends to increase relative demographic differences in rates of experiencing the outcome and discussing data showing this in fact occurs in a high proportion of cases. Such material includes unofficial and official publications by statisticians of the National Center for Health Statistics, as discussed, among other places, in my "[The Mismeasure of Health Disparities](#)," *Journal of Public Health Management and Practice* (July/Aug. 2016), and "[Race and Mortality Revisited](#)," *Society* (July/Aug. 2014). Failure of CJJ to advise attendees of the existence of such material, while allowing presentations to lead attendees to believe that generally reducing adverse criminal justice outcomes will tend to reduce relative racial differences in rates of experiencing the outcomes, could itself be regarded as affirmatively misleading attendees. Simply providing this letter to attendees may obviate these and other problems CJJ might face due to the promotion of an erroneous belief about the effects of policies on measures of racial disparity (though I do not suggest that such is the only way for CJJ to fulfill its obligations).

A. The Mistaken Belief That Generally Reducing Adverse Criminal Justice Outcomes Will Tend to Reduce, Rather Than Increase, Relative Racial Differences in Rates of Experiencing the Outcomes

This letter is prompted by a recent review of the [agenda](#) for the CJJ 2018 national conference on disproportionate minority contact (DMC) with the criminal justice system. Consistent with a substantial body of literature and the view that has been, and continues to be, affirmatively promoted by the United States Department of Justice, the agenda suggests that many presenters believe that generally reducing adverse criminal justice outcomes through diversion programs and other means will tend to reduce relative racial differences in rates of experiencing the outcomes. Exactly the opposite is the case.

That is, generally reducing an outcome by restricting it to those most susceptible to it, while tending to reduce relative differences in rates of experiencing the corresponding opposite outcome, will tend to increase relative differences in the outcome itself. By way of the simplest of examples (and as illustrates in Table 1 "Race and Mortality Revisited," a version of which will be presented as Table 1 in Section B of this letter), lowering a test cutoff and thereby restricting test failure to those most susceptible to test failure, while tending to reduce relative differences between the pass rates of higher- and lower-scoring groups, tends to increase relative differences between the groups' failure rates. By way of another simple example (and as illustrate in Table 2

² I have already brought this matter to the attention of some of the presenters, including the keynote speaker, and will further circulate this letter among presenters and others. I brought the issues to the attention of the CJJ 2018 DNC Conference sponsor Center for Juvenile Justice Reform at Georgetown University by email in November 2017 and February 2018.

of the aforementioned "Race and Mortality Revisited"), income data show that reducing poverty in a way that restricts it only those who are now in deep poverty, while tending to reduce relative racial differences in rates of avoiding poverty, tends to increase relative racial differences in poverty rates. Similarly, income and credit score data (such as that presented in Tables 2 and 3 of the April 13, 2017 letter to the Department of Justice discussed below) show that lowering an income or credit score requirement for experiencing some desired outcome, while tending to reduce relative racial differences in rates of meeting the requirement, tends to increase relative racial differences in rates of failing to meet the requirement.

By way of another simple illustration, the ratio of the black to white rate of having multiple offenses or convictions is usually larger than the ratio of the black to white rate of having one or more offenses or convictions (as discussed in a number of the references below and as is discussed with respect to public school suspensions in the June 26, 2018 letter to the Maryland State Department of Education discussed below). Thus, actions that eliminate sanctions for single offenders will tend to cause the ratio of the black to white rate of experiencing one or more sanctions to look more like what had been the ratio of the black to white rate of experiencing multiple sanctions (that is, to increase that ratio for one or more sanctions). Table 2 in the next section will illustrate this point with data on public school suspensions nationally and in Maryland.

I transmit with this letter (but do not attach) two items, both of which are available with their attachments online. The first is a November 19, 2018 letter to the [National Center for Juvenile Justice](#) (NCJJ), which developed, and maintains on the Department of Justice website, the [National Disproportionate Minority Contact Databook](#) providing guidance on the measurement of DMC. The letter explains that generally reducing adverse criminal justice outcomes tends to increase relative racial differences in rates of experiencing the outcomes and advises NCJJ of its obligation, as a recipient of federal funds for providing guidance on the measurement of DMC, to explain the issue to the Department of Justice. Though unstated in the letter, as an entity purporting to provide expert guidance on the measurement of DMC, NCJJ may have a similar obligation to entities like CJJ that rely on its guidance.

The second transmitted item is a June 26, 2018 letter to the [Maryland State Department of Education](#) (MSDE) explaining that, contrary to the belief promoted by MSDE, generally reducing adverse public school discipline outcomes tends to increase relative racial differences in rates of experiencing the outcomes. The letter also advises MSDE of its obligation to correct the erroneous belief it has promoted among school administrators and others.

Other letters advising governmental agencies, or government contractors and grantees, that contrary to the belief they have promoted, generally reducing adverse criminal justice, school discipline, or lending outcomes tends to increase relative racial differences in rates of experiencing the outcomes, and advising them of their responsibilities to take corrective action, include those to [Minnesota Department of Human Rights](#) (Aug. 27, 2018), [Minnesota Department of Human Rights](#) (May 14, 2018), [Minnesota Department of Human Rights](#) (May

14, 2018), [Comptroller General of the United States](#) (Apr. 17, 2018), [Comptroller General of the United States](#) (Apr. 12, 2018), [American Institutes for Research](#) (Aug. 25, 2017), [United States Departments of Education, Health and Human Services, and Justice](#) (July 17, 2017),*³ [Department of Justice](#) (Apr. 13, 2017),* and [Letter to the Pyramid Equity Project](#) (Nov. 28, 2016)

Also pertinent to DMC issues are letters to [Honorable James K. Bredar](#) (Feb. 14, 2017), the judge handling the Baltimore Police consent decree, and faculties of the [University of Maryland Department of Criminology and Criminal Justice](#) (June 13, 2018) and [Johns Hopkins University Departments of Sociology and Applied Mathematics & Statistics](#) (June 11, 2018). These letters explain that the premise of the decree as to the effects of policies on the measures of racial disparity employed by the Department of Justice is the opposite of reality, and, in the case of the two faculties, urge them to explain the matter to Judge Bredar.

Communications to entities whose missions involve the promotion of sound science or analysis of demographic differences and urging them to take a role in correcting the governments' mistaken belief about the effects of generally reducing adverse outcomes on measures of racial disparities or correcting broader misunderstandings regarding the measurement of demographic differences include my [testimony](#) to the U.S. Commission on Civil Rights (Dec. 8, 2017),* [Comments for the Commission on Evidence-Based Policymaking](#) (Nov. 28, 2016), [Comments for Commission on Evidence-Based Policymaking](#) (Nov. 14, 2016), and letters to [American Statistical Association](#) (July 25, 2016), [Population Association of America and Association of Population Centers](#) (Mar. 29, 2016), and [American Statistical Association](#) (Oct. 8, 2015). Many other letters to entities whose activities regarding the appraisal or monitoring of demographic differences are undermined by the failure to understand the ways measures of differences between outcome rates tend to be affected by the prevalence of an outcome are collected on the [Measurement Letters](#) page of [jpscanlan.com](#). There may be no entities in the United States or abroad whose activities involving the appraisal of monitoring of demographic differences are not subject to some points made in these letters, though not all entities engaged in such activities promote the erroneous belief that generally reducing an adverse outcome will tend to reduce relative differences in rates of experiencing the outcome.

Publications specifically addressing the belief that generally reducing adverse outcomes tends to reduce relative racial and other demographic differences in rates of experiencing the outcomes in the criminal justice context, and the closely-related school discipline context, include my "[Discipline disparities in Md. Schools](#)," *Daily Record* (June 21, 2018), "[The misunderstood effects of the Baltimore police consent decree](#)," *Daily Record* (Feb. 15, 2018), "[United States Exports Its Most Profound Ignorance About Racial Disparities to the United Kingdom](#)," Federalist Society Blog (Nov. 2, 2017), "[The Pernicious Misunderstanding of Effects or Policies on Racial Differences in Criminal Justice Outcomes](#)," Federalist Society Blog (Oct.

³ This and other items marked with an asterisk are among the attachments to the letters to NCJJ and MSDE that are transmitted with this letter.

12, 2017), "[The Government's Uncertain Path to Numeracy](#)," Federalist Society Blog (Aug. 24, 2017), "[Innumeracy at the Department of Education and the Congressional Committees Overseeing It](#)," Federalist Society Blog (July 21, 2017), "[Racial Impact Statement Laws in New Jersey and Elsewhere](#)," Federalist Society Blog (Mar. 20, 2017), "[Compliance Nightmare Looms for Baltimore Police Department](#)," Federalist Society Blog (Feb. 8, 2017), "[Will Trump Have the First Numerate Administration?](#)" Federalist Society Blog (Jan. 4, 2017), "[Misunderstanding of Statistics Confounds Analyses of Criminal Justice Issues in Baltimore and Voter ID Issues in Texas and North Carolina](#)," Federalist Society Blog (Oct. 3, 2016), "[Things the President Doesn't Know About Racial Disparities](#)," Federalist Society Blog (Aug. 5, 2016), "[Things DoJ doesn't know about racial disparities in Ferguson](#)," *The Hill* (Feb. 22, 2016), "[Things government doesn't know about racial disparities](#)," *The Hill* (Jan. 28, 2014), "[The Paradox of Lowering Standards](#)," *Baltimore Sun* (Aug. 5, 2013), "[Misunderstanding of Statistics Leads to Misguided Law Enforcement Policies](#)," *Amstat News* (Dec. 2012),. and "[Mired in Numbers](#)," *Legal Times* (Oct. 12, 1996).

I call your particular attention to the first item in the immediately preceding paragraph, which discusses some of the more compelling evidence that generally reducing public school suspensions will increase relative racial differences in suspension rates in the overwhelming majority of cases. The article discusses a 2015 study of the Maryland Equity Project of the College of Education of the University of Maryland showing that statewide in Maryland, and in 20 of the 23 Maryland school districts for which data were available, general reductions in public school suspensions between the 2008-09 and 2013-14 school years were accompanied by increased relative racial differences in suspensions rates. And because diversion programs are an important subject of the Baltimore DMC conference, I also call your particular attention to the second and third items in the paragraph. These discuss why diversion programs and programs that expunge records of offenders who do not reoffend will tend to increase relative racial differences in rates of having criminal convictions.

In addition to the aforementioned "The Mismeasure of Health Disparities" and "Race and Mortality Revisited" and the pair of comments for the Commission on Evidence-Based Policymaking, the following items discuss the pattern by which the two relative differences tend to be affected by the prevalence of an outcome in the context of the vast body of research and commentary on demographic differences, as well as law enforcement activities involving demographic differences, that are almost universally unsound as a result of the failure to recognize a range of patterns by which measures of differences regarding outcome rates tend to be affected by the prevalence of an outcome: [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. 17, 2014), "[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 (Mar. 2014), "[The Mismeasure of Discrimination](#)," Faculty Workshop, University of Kansas School of Law (Sept. 20, 2013), "[Can We Actually Measure Health Disparities?](#)," *Chance* (Spring 2006), "[Race and Mortality](#),"

Society (Jan./Feb. 2000) (reprinted in *Current*, Feb. 2000), "[When Statistics Lie](#)," *Legal Times* (Jan. 1 1996), "[Divining Difference](#)," *Chance* (Fall 1994), "[Getting it Straight When Statistics Can Lie](#)," *Legal Times* (June 23, 1993), "[Bias Data Can Make the Good Look Bad](#)," *American Banker* (Apr. 27, 1992), "[Comment on 'McLanahan, Sorensen, and Watson's 'Sex Differences in Poverty, 1950-1980''](#)," *Signs* (Winter 1991), "[The Perils of Provocative Statistics](#)," *Public Interest* (Winter 1991), "[An Issue of Numbers](#)," *National Law Journal* (Mar. 5, 1990),); "[The 'Feminization of Poverty' is Misunderstood](#)," (*Plain Dealer*, Nov 11, 1987) (reprinted in *Current*, May 1988, and *Annual Editions: Social Problems 1988/89*, Dushkin 1988).

Many of these publications contain graphical and tabular illustrations of the pertinent statistical patterns and discussions of data showing that in fact reductions in adverse outcomes have commonly been accompanied by increased relative differences in rates of experiencing the outcomes but reductions in relative differences in rates of experiencing the corresponding favorable outcomes. Many other graphical and tabular illustrations of the patterns may be found in workshops given at arms of American universities in recent years, such as the October 10, 2014 workshop at the University of Maryland's Maryland Population Research Center titled "[Rethinking the Measurement of Demographic Differences in Outcome Rates](#)" ([abstract](#)).⁴ Other illustrations, often focused on the situations of the particular countries where the presentations were delivered, may be found in the conference presentations collected on this [webpage](#).⁵

⁴ Similar workshops at arms of other universities include: "[The Mismeasure of Health Disparities in Massachusetts and Less Affluent Places](#)," Quantitative Methods Seminar, Department of Quantitative Health Sciences, University of Massachusetts Medical School (Nov. 18, 2015) ([abstract](#)); "[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); "[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).

⁵ Apart from the works by National Center for Health Statistics statisticians discussed in "The Mismeasure of Health Disparities," works by others in scholarly forums discussing my descriptions of the pattern by which the two relative differences tend to be affected by the prevalence of an outcome to my work may be found in Thomas H and Hettamsperger TP, "[Risk Ratios and Scanlan's HRX](#)," *Journal of Statistical Distributions and Applications* (Nov. 2017); Lambert PJ and 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); Lambert PJ and Subramanian S, "[Disparities in Socio-Economic outcomes: Some positive propositions and their normative implications](#)," *Social Choice and Welfare* (Oct. 2014), Eikemo TA, *et al.*, "[Variations in health inequalities: are they a mathematical artifact?](#)" *International Journal for Equity in Health* (2009); Bauld L, *et al.*, "[Off target: A critical review of setting goals for reducing health inequalities in the United Kingdom](#)," *International Journal of Health Services* (July 2008); Houweling TAJ, *et al.*, "[Using relative and absolute measures for monitoring health inequalities: experiences from cross-national analyses on maternal and child health](#)," *International Journal for Equity in Health* (2007). Some of these discuss that the patterns of relative differences I describe will not always be found or maintain that the patterns are not observed with the frequency with which the authors suggest I claim they

Notwithstanding this material, researchers and commentators commonly assume that generally reducing an adverse outcome will tend to reduce relative demographic differences in rates of experiencing the outcomes. The pervasiveness of this assumption, which lately is especially evident in discussions of racial differences in school discipline and criminal justice outcomes, but which has long been evident in discussions of racial and other demographic differences in mortality, is reflected in the results of a web search that includes the words “despite” and “disparities.” Such a search will yield extensive discussions of situation where in the face of substantial overall reductions in some adverse outcome relative demographic differences in rates of experiencing the outcome (or the difference between the proportion a more susceptible group made up of a population and the proportion it makes up of persons experiencing the outcome) “persist” or “have increased.” Commonly the situations where a variation on “persist” was used, the relative difference actually increased. A good example of such discussions, though one that would not be yielded by the referenced web search, is found in the following statement in the fourth abstract in the CJJ 2018 DMC Conference agenda: “Even as the overall number of incarcerated youth has dramatically declined, racial and ethnic disparities have persisted and even worsened, particularly at the front end of the juvenile justice system.”

Very likely no presenter or attendee will be aware of any literature explaining reasons why generally reducing an outcome tends to increase relative differences in rates of experiencing it. Very likely no presenter or attendee will be aware that it is even possible for relative differences in rates of experiencing an outcome and relative differences in rates of avoiding the outcome tend to change in opposite directions as the prevalence of an outcome changes, much less that the National Center for Health Statistics has recognized that this tends to occur systematically.

Thus, even if the leadership of CJJ should disagree with all or part of the referenced material, it would be inappropriate for CJJ to allow presenters to suggest or claim that generally reducing adverse criminal justice outcomes will tend to reduce relative racial differences in rates of experiencing the outcomes, or attendees to be exposed to such suggestions or claims, without bringing to the attention of both presenters and attendees that there exists a body of literature maintaining that the opposite is the case.

B. Tabular Illustrations of Pertinent Patterns and Implications of Those Patterns

Table 1 below is a simple illustration of why generally reducing an outcome, while tending to reduce relative differences in rates of experiencing the opposite outcome, tends to increase relative differences in rates of experiencing the outcomes itself. The table shows the pass and fail rates of higher-scoring (AG for advantaged group) and a lower-scoring group (DG

occur. None, however, suggests that there is any basis to believe that generally reducing an outcome will tend to reduce relative differences in rates of experiencing the outcome.

for disadvantaged group) at two cutoff points in a situation where the groups have normally distributed test scores with means that differ by half a standard deviation (a situation where approximately 31 percent of DG’s scores are above the AG mean) and both distributions have the same standard deviation.

Column 5, which presents the ratio of AG’s pass rate to DG’s pass rate,⁶ shows that at the higher cutoff, where pass rates are 80 percent for AG and 63 percent for DG, AG’s pass rate is 1.27 times (27 percent greater than) DG’s pass rate. If the cutoff is lowered to the point where AG’s pass rate is 95 percent, DG’s pass rate would be about 87 percent. At the lower cutoff, AG’s pass rate is only 1.09 times (9 percent greater than) DG’s pass rate.

Table 1. Illustration of effects of lowering a test cutoff on measures of differences in test outcomes

Row	(1) AG Pass Rate	(2) DG Pass Rate	(3) AG Fail Rate	(4) DG Fail Rate	(5) AG/DG Pass Ratio	(6) DG/AG Fail Ratio
1	80%	63%	20%	37%	1.27	1.85
2	95%	87%	5%	13%	1.09	2.60

That lowering a cutoff tends to reduce relative differences in pass rates is well understood and underlies the widespread view that lowering a cutoff tends to reduce the disparate impact of tests on which some groups outperform others.

But whereas lowering a cutoff tends to reduce relative differences in pass rates, lowering a cutoff tends to increase relative differences in failure rates. As shown in column 6, initially DG’s failure rate was 1.85 times (85 percent greater than) AG’s failure rate. With the lower cutoff, DG’s failure rate is 2.6 times (160 percent greater than) AG’s failure rate.

It is important to understand that government agencies like the Departments of Education, Health and Human Services, and Justice and the Government Accountability Office

⁶ While I commonly refer to patterns of relative differences in this letter, the table actually presents rate ratios (which are also termed “risk ratios,” “relative risks,” or, in the language of the aforementioned [National Disproportionate Minority Contact Databook](#), “relative risk indexes.” 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. In the former case, the larger the rate ratio, the larger the relative difference; in the latter case, the smaller the rate ratio, the larger the relative difference. It is more common to employ the disadvantaged group’s rate as the numerator for the favorable as well as the adverse outcome, which is the approach as to favorable outcomes of the “four-fifths” or “80 percent” rule for identifying disparate impact under the [Uniform Guideline for Employee Selection Procedures](#). I have sometimes employed this approach, as in “[Can We Actually Measure Health Disparities?](#),” *Chance* (Spring 2006). More recently, however, I have usually used the larger figure as the numerator for both rate ratios, in which case, as to both favorable and adverse outcomes, the larger the ratio, the larger the relative difference. Choice of numerator in the rate ratio, however, has no bearing on the patterns by which as the frequency of an outcome changes, the two relative differences tend to change in opposite directions.

have not reasoned as follows: It is true that lowering test cutoffs will tend to increase relative differences in test failure rates. But there are reasons why, in other settings, one will in fact find that relaxing standards and otherwise reducing the frequency of adverse outcomes will tend to reduce relative differences in adverse outcome rates. Rather, despite decades of dealing with racial or other differences in test outcomes, the government appears not yet even to have recognized that lowering a test cutoff tends to increase relative differences in failure rates.

The same points may be made with regard to the illustrations in Tables 2 and 3 of the April 13, 2017 letter to the Department of Justice (also in Tables 1 and 2 of the April 17, 2018 letter to the Government Accountability Office) that lowering an income or credit score requirement, while tending to reduce relative racial differences in meeting the requirement, will tend to increase relative differences in failure to meet the requirement. Rather than recognizing this pattern in income and credit score data but believing that for some reason it would not be observed in other contexts, all government agencies involved in the enforcement of fair lending laws (including entities that one would expect to be especially proficient in quantitative reasoning like the Federal Reserve Board and the Comptroller of the Currency) have for decades believed that lowering income and credit score requirements will tend to reduce relative racial differences in rates of failure to meet the requirements.

There are several other things that it is important to understand about the pattern reflected in Table 1. First, an increase in the relative racial or other demographic difference in rates of experiencing some adverse outcome accompanying a general decline in the outcome does not mean that the difference in the comparative circumstances of an advantaged and disadvantaged group has worsened in any meaningful sense, just as a decrease in relative difference in avoiding the outcome does not mean that the comparative situation of the disadvantaged group has improved in a meaningful sense. But that does not obviate the adverse consequences of leading observers to believe that actions will tend to reduce a measure of disparity when the actions actually will tend to increase the measure, as discussed below and in the next section.

Second, in circumstances where two rows of data reflect some favorable and corresponding adverse criminal justice or school discipline outcome, other things being equal, the more an entity or individual actor attempts generally to reduce the frequency of the adverse outcomes, the more the data on the entity or individual actor will look like that in Row 2 rather than that in Row 1 – that is, most crucially regarding the instant discussion, the larger will tend to be the relative difference in adverse outcome rates. Thus, by generally reducing adverse outcomes, either in response to pressures to do so or because of a belief that it is a desirable thing to do, an entity or individual actor will increase the chances that it will be accused of discrimination.

Third, in situations where the two rows of data reflect decisions of different entities or individual actors, there is no rational basis for maintaining, either on the basis of the larger relative difference in the favorable outcome in the first row or the larger relative difference in the

adverse outcome in the second row, that one entity or individual actor is more likely to have made biased decisions than that other.

Fourth, in circumstances where the data in Rows 1 and 2 reflect patterns of favorable and adverse outcomes for different situations (*e.g.*, for objectively-identified or more serious offenses versus subjectively-identified or less serious offense) there would no rational basis for drawing inferences about processes on the basis of either the larger relative difference in the favorable outcome in the first row or the larger relative difference in the adverse outcome in the second row. See the [Offense Type Issues](#) subpage of the Discipline Disparities page of [jpscanlan.com](#).

Fifth, the absolute (percentage point) difference between rates, which is the same regardless of which outcome is examined, is not specifically presented in Table 1. But it should be evident that the absolute difference between rates is larger in the first row (17 percentage points) than the second row (8 percentage points). As explained in "Race and Mortality Revisited" and many other places, the pattern by which absolute differences between rates tend to be affected by the prevalence of an outcome is more complicated than the pattern by which the two relative differences tend to be affected by the prevalence of an outcome. It suffices here to note that adverse criminal justice and school discipline outcomes are commonly in ranges where general reductions in the outcomes tend to reduce absolute differences between rates of experiencing (or avoiding) the outcomes. I assume that in all or in the great majority of cases identified in the Maryland Equity Project study and in the MSDE letter and its attachments where general reductions in public school discipline rates were accompanied by increased relative racial differences in discipline rates, the absolute difference between rates decreased. But, as with the two relative differences, it not possible to draw inferences about processes on the basis of changes in, or the comparative size, of absolute differences between rates without consideration of the way the measure tends to be affected by the prevalence of an outcome.

Sixth, to the extent that bias plays a role in demographic differences in outcome rates, reducing bias will tend to reduce all measures of differences between rates. But it still is not possible to determine whether bias has been reduced or increased (and even whether it exists) without understanding the ways measures tend to be affected by the prevalence of an outcome. See especially the discussion of Table 5 in "Race and Mortality Revisited" and the discussion throughout the University of Kansas School of Law paper "The Mismeasure of Discrimination."

Seventh, whatever the natures of the forces causing favorable and adverse outcomes of advantaged and disadvantaged groups to differ, it is not possible to determine whether those forces have increased or decreased, or are greater in one setting than another or with respect to one outcome than another, without understanding the ways the measures employed to quantify those forces tend to be affected by the prevalence of an outcome.

The pattern reflected in Table 1 and in many other illustrations I have used will not always be observed. For many factors other than the prevalence of an outcome are also at work. It is possible that one will observe more departures from the patterns in the criminal justice

context than in other contexts. One reason for that is that the nature of racial differences may vary as to different types of offenses and as to different locations. Thus, policies that reduce overall adverse outcomes rates may sometimes have effects regarding different types of conduct or with regard to location of police presence in ways that may in fact lead to an overall decrease in relative racial difference in such outcomes. Nevertheless, it remains impossible to soundly interpret data on racial differences regarding such outcomes without consideration of patterns such as that shown in Table 1.

And, given how common it is for African Americans who are arrested to more often have prior arrests or convictions or more prior arrests or convictions than whites who are arrested, the tendency for diversion programs to increase relative racial differences convictions will commonly be quite strong.

Table 2 presents data regarding public school suspensions that is pertinent to the last point, while also directly demonstrating why policies that generally reduce public school suspensions, will tend to increase relative differences in suspensions rates. The data in the table are from the same Department of Education data discussed at page 3-4 of the MSDE letter. As discussed there, these data show that nationally and in 45 of 50 states the ratio of the black multiple suspension rate to the white multiple suspension rate is larger than the ratio of the black rate of one or more suspensions to the white rate of one or more suspensions. The data in the table are limited to the United States and the state of Maryland.

For consistency with Table 1, Table 2 presents the data on whites (the advantaged group) first. Also for consistency with the earlier table, Table 2 presents favorable outcomes rates (i.e., rate of avoiding suspension) and the relative difference for such outcomes first, even though observers typically discuss suspension rate issues solely in terms of the adverse outcome rates.

Table 2. Illustration of effects of eliminating first suspensions on racial differences in experiencing and avoiding have one or more suspensions

Area	Suspension Frequency	(1) Wh Fav Rate	(2) Bl Fav Rate	(3) Wh Adv Rate	(4) Bl Adv Rate	(5) Wh/Bl Fav Ratio	(6) Bl/Wh Adv Ratio
United States	One or More	96.6%	86.5%	3.4%	13.5%	1.12	4.02
United States	Multiple	98.8%	93.7%	1.2%	6.3%	1.05	5.18
Maryland	One or More	97.2%	90.9%	2.8%	9.1%	1.07	3.26
Maryland	Multiple	99.1%	95.9%	0.9%	4.1%	1.03	4.49

Columns 5 and 6 show that both nationally and in Maryland, the relative difference in favorable outcomes is smaller, while the relative difference for the adverse outcomes is larger, for multiple suspensions than for one or more suspensions. The reader may divine easily enough from the table that both nationally and in Maryland, the absolute difference is smaller for multiple suspensions than for one or more suspensions.

If, at the end of a school year, all first suspensions were expunged, both nationally and in Maryland, the figures in the second of each pair of rows would now become precisely the figures for one-or-more suspensions in student records. If schools in fact had declined to suspend students where they would otherwise have suspended the students for the first time, the data could differ to some degree from those in the table. For some students whose first suspension would otherwise have been followed by a subsequent suspension might end up not being suspended at all. But the patterns of directions of changes in measures – as to both of the two relative difference and the absolute difference – nevertheless would tend to be very like those in the table.

The considerations made with respect to drawing inferences on the basis of the patterns reflected in Table 1 apply to those in Table 2, with the following qualifications. Table 1 reflected a hypothetical situation where there was no basis for distinguishing between the two rows with respect to the strength of the forces causing the outcome rates of the advantaged and disadvantaged groups to differ. Table 2 is based on actual data where there could be such a basis.

According to the method described in "Race and Mortality Revisited" for quantifying differences between rates in a way that is not affected by the prevalence of an outcome, nationally the estimate effect size is .74 for the first row and .71 for the second row; in Maryland, the estimated effect size is .57 for the first row and .62 for the second row. Thus, the difference reflected by the second row of each pair of rows is very similar to that reflected by the first row of the same pair of rows. And any inference drawn on the basis of a comparison of the first row of either pair of rows with the second of that pair of rows would have to be drawn with great caution.

But, as with the data in Table 1, it is not possible to draw inference about processes based on a comparison between the two rows either nationally or for Maryland (or for any other entity) without understanding the ways measures tend to be affected by the prevalence of an outcome. And certainly, there is no basis for believing, in any context, that diversion programs or other programs that provide offenders second chances to avoid an adverse outcome are going to reduce relative racial differences in rates of experiencing the outcome.

C. Adverse Consequences of the Belief That Generally Reducing Adverse Outcomes Will Tend to Reduce Relative Racial Differences in Rates of Experiencing the Outcomes and Culpability of the Coalition for Juvenile Justice and Other Entities for Promoting or Sustaining That Belief

The adverse consequences of the belief that generally reducing adverse criminal justice or other outcomes will tend to reduce relative differences in rates of experiencing the outcomes are substantial. As suggested above, actors that follow guidance encouraging them to reduce adverse outcomes increase the chances that they will be accused of discriminations, as has been a common problem with regard to enforcement of fair lending laws. See especially [The Perverse](#)

[Enforcement of Fair Lending Laws](#) (Mortgage Banking, May 2014), "[Misunderstanding of Statistics Leads to Misguided Law Enforcement Policies](#)," *Amstat News* (Dec. 2012), "[When Statistics Lie](#)" (*Legal Times*, Jan. 1, 1996), and "[Bias Data Can Make the Good Look Bad](#)," *American Banker* (Apr. 27, 1992);

Regardless of misperceptions regarding bias, entities covered by decrees or agreement regarding criminal justice or school discipline outcomes, as in the case of the police departments in Baltimore, Maryland and Ferguson, Missouri, and school districts in Oklahoma City, Oklahoma and Oakland, California, face difficult compliance problems when the covered entities are required to take actions that will tend to increase measures of racial difference when those monitoring the conduct of the entities expect the actions to reduce such measures.

But one of the most serious adverse consequences of the incorrect belief about effects of policies on measures of racial disparity is that when actions that are supposed to reduce such measures in fact increase the measures, observers who believe that racial bias plays a large role in such disparities will tend to believe that bias must be increasing. And those who are uncertain as to reasons for such disparities will tend to believe that, whatever the factors causing the differences, the factors must be growing stronger. It is likely that some number of school officials have been removed from their positions after implementing policies to generally reduce suspension rates while mistakenly believing that doing so would reduce, rather than increase, relative racial differences in suspension rates.

Increases in measures of racial disparity in circumstances where observers expect them to be reduced presumably have substantial effects on the attitudes of members of disadvantaged minority groups, as in the case of the African American citizens of Baltimore and Ferguson and African American students (and parents) in Oklahoma City and Oakland. My "[United States Exports Its Most Profound Ignorance About Racial Disparities to the United Kingdom](#)," *Federalist Society Blog* (Nov. 2, 2017), discusses the mistaken belief in a 2017 UK government report on racial disparities in criminal justice outcomes that general reductions in adverse criminal justice outcomes in the UK will tend to reduce relative racial differences in rates of experiencing the outcomes. The UK Ministry of Justice has adopted some of the recommendations of the report that are based on that mistaken belief. Though unmentioned in the post, an important theme of the UK report was that mistrust in the fairness of the criminal justice system on the part minority offenders causes them not to avail themselves of the benefits of pleading guilty to well-founded charges as often as white offenders. The report regarded addressing that mistrust to be important priority. Yet the report itself, in consequence of its failure to understand how measures tend to be affected by the prevalence of an outcome, itself contributes to the distrust in the system and will provide a basis for that mistrust to increase as the report's recommendations are implemented.

Finally, as suggested or stated in the prior section, it must always be kept in mind that the erroneous belief that reducing adverse outcomes tends to reduce relative racial and other demographic differences in rates of experiencing the outcomes is merely is striking example of a

larger, and virtually universal, failure to understand the way measures of differences between outcome rates tend to be affected by the prevalence of an outcome. It is that larger failure that undermines virtually all efforts to understand underlying processes and to determine how policies affect the comparative circumstances advantaged and disadvantaged demographic groups.

The Coalition for Criminal Justice and like entities are responsible for promoting the erroneous belief that generally reducing adverse criminal justice outcomes will tend to reduce relative racial differences in rates of experiencing the outcomes. But their responsibility is minor compared to that of the government agencies affirmatively promoting that belief and that of the federal contractors and grantees providing the government putatively expert guidance on the measurement of demographic differences. The same holds for all entities or individuals whose activities are of a nature to cause them to be regarded as experts in the measurement of demographic differences but who nevertheless in some manner promote a belief about the effects of policies on measures of racial disparity that is manifestly incorrect. And it especially holds for entities to whose attention I have specifically brought these issues.

The American Statistical Association, which I contacted regarding this subject by letters of October 8, 2015 and July 25, 2016, and the Population Association of America and Association of Populations Centers, which I contacted regarding this subject by letter of March 29, 2016, warrant special mention. Both declined my request that they at least explain to the federal government that many of its policies are based on an understanding of the effects of policies on measures of racial disparity that is the opposite or reality, though neither expressed any disagreement with my explanation of the government's misunderstanding. Indeed, the American Statistical Association – in whose publications my explanations as to why reducing adverse outcomes tends to increase relative differences in rates of experiencing the outcomes had appeared three times between 1994 and 2012⁷ – proffered as a reason for its inaction the belief that I was effectively publicizing the issues.

Whether or not these refusals can be defended as responsible actions on the part of the organizations' leaderships, the organizations' refusals not only left numerous government agencies wrongly believing that generally reducing adverse outcomes tends to reduce relative racial and other demographic differences in rates of experiencing the outcomes, but left large and possibly overwhelming majorities of their own members believing it as well. Consequently, many of those members, often as employees of government agencies, likely continue to promote that belief.

In light of this letter, however, the fact that so many entities of putative expertise have failed to understand or address this issue does not provide CJJ an excuse to continue fail to

⁷ These include "[Divining Difference](#)," *Chance* (Fall 1994), "[Can We Actually Measure Health Disparities?](#)," *Chance* (Spring 2006) (guest editorial), "[Misunderstanding of Statistics Leads to Misguided Law Enforcement Policies](#)," *Amstat News* (Dec. 2012) ("Statistician's View" column in the organization's membership magazine).

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understand it. Thus, while until now the comparative culpability of CJJ may be minor, that will not be the case if the organization fails to address the matter with the presenters and attendees of the 2018 DMC Conference and going forward thereafter.

Sincerely,

/s/ James P. Scanlan

James P. Scanlan