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ELECTONICALLY TRANSMITTED   **(cor. Aug. 14, 2019, see last page)**

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United States Department of Justice
950 Pennsylvania Avenue, NW
Washington, DC 20530-0001

> Re: *Council of Parent Attorneys and Advocates, Inc. v. DeVos*, et al., No. 19-1537 (D.C. Circuit)

Dear Mr. Sandberg:

    This letter has three purposes regarding the government's actions in the referenced case, including the brief as appellant that is due on August 19, 2019. One purpose is to urge the Department of Justice to explain to the court of appeals ways in which the government's arguments in the district court was misleading and to avoid similarly misleading the court of appeals. A second purpose is to advise the Department of the arguments that would support the decision of the Department of Education to postpone compliance with the agency's 2016 regulation (Disproportionality Regulation) requiring that significant racial/ethnic disproportionality in special education programs be measured in terms of the ratio of the rate at which students from a particular racial/ethnic group experience certain outcomes to the rate at which students from all other groups experience the outcomes. A third purpose is to urge the Department to address with plaintiff Council of Parent Attorneys and Advocates, Inc. (COPAA) whether, given the unsoundness of the Disproportionality Regulation for reasons previously unknown to COPAA, it is in COPAA's interest to continue to pursue the case.

    I write to the appellate counsel with direct responsibility for the case in order that the letter will receive careful attention, something that may not always happen with letters to higher levels in the Department.

A. The Ways in Which the Government Misled the District Court and the Government's Obligation to Explain the Matter to the Court of Appeals

    Consistent with arguments advanced in the Department of Education's July 2018 regulation (Delay Regulation) postponing compliance with the Disproportionality Regulation, in

the district court the government argued that there was reason to believe that requiring the use of risk ratios to measure significant racial/ethnic disproportionality in special education programs would (a) incentivize school districts to unjustifiably limit the number of special education identifications in order to reduce risk ratios (referencing a Texas statute limiting special education identifications to 8.5 percent of students), and (b) incentivize school districts to take race/ethnic-conscious actions in order to reduce risk ratios.

Both arguments are misleading, though in somewhat different respects. The first argument is misleading by suggesting that school districts would believe that generally reducing special education identifications will tend to reduce risk ratios because generally reducing special education identifications in fact will tend to reduce risk ratios. As I have previously explained to the Department of Justice, including in the April 13, 2017 letter[1] to the Department and the July 17, 2017 letter to the Departments of Education, Health and Human Services, and Justice that are transmitted with (though not attached to) this letter, contrary to the belief long underlying many federal civil rights enforcement policies, generally reducing an adverse outcome tends to increase, not reduce, the ratio of the rate at which a more susceptible group experiences the outcome to the rate at which a less susceptible group experiences the outcome.[2]

Fairly simple explanations of the point may be found in my "Misunderstanding of Statistics Leads to Misguided Law Enforcement Policies," *Amstat News* (Dec. 2012), "The Paradox of Lowering Standards," *Baltimore Sun* (Aug. 5, 2013), and "Things government doesn't know about racial disparities," *The Hill* (Jan. 28, 2014). Fuller explanations of the pertinent pattern and related patterns by which measures tend to be affected by the prevalence of an outcome may be found in my "Race and Mortality Revisited," *Society* (July/Aug. 2014), "The Mismeasure of Health Disparities," *Journal of Public Health Management and Practice* (July/Aug. 2016), and Comments for the Commission on Evidence-Based Policymaking (Nov. 14, 2016). As discussed in each of the longer items, in reliance on my work and patterns they observed in reality, National Center for Health Statistics statisticians repeatedly recognized that generally reducing an outcome tends to increase relative differences between rates at which advantaged and disadvantaged groups experiences the outcome. Some treatments of my

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[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.

[2] Generally reducing any outcome (whether favorable or adverse) tends to increase relative differences between rates at which advantaged and disadvantaged groups experience the outcome. Since the government appears to well understand that lowering a test cutoff and thereby generally increasing pass rates tends to reduce relative differences in pass rates, it presumably also understands that raising the cutoff and thereby generally reducing pass rates would tend to increase relative differences in pass rates. It is the fact that reducing an adverse outcome tends to increase relative differences in rates of experiencing that outcome that the government fails to understand. See note 3 at page 5 of the April 13, 2017 letter to the Department of Justice and note 5 at page 5 of the July 17, 2017 letter to the Departments of Education, Health and Human Services, and Justice regarding the distinction between a risk ratio and the relative difference it represents. The points discussed there also underlie the usage in this letter whereby I may refer generally to relative differences but refer to a ratio only with reference to a particular ratio (and where the numerator of the ratio is stated or understood).

explanations of the pertinent patterns by researchers outside the NCHS, with the authors' own explanations of the patterns, may be found in the references in the note.[3]

I also call your attention to an article in a 2019 issue of *Educational Psychologist*[4] that does not rely on my work. The article is noteworthy because its authors are associated with the Restorative Justice/Positive Behavioral Intervention and Support community that has long promoted the belief that generally reducing public school suspensions will tend to reduce the ratio of the black suspension rate to the white suspension rate. But the 2019 article from prominent members of that community specifically recognizes that generally reducing suspension rates in fact tends to increase the ratio of the black suspension rate to the white suspension rate.[5]

I also call your attention to the July 2019 U.S. Commission on Civil Rights report *Beyond Suspensions: Examining School Discipline Policies & Connections to the School to Prison Pipeline for Students of Color with Disabilities.* In written and oral testimony at the December 8, 2017 briefing on which the report is based, I explained that generally reducing public school suspensions would tend to increase, rather than reduce, the ratio of suspension rates of blacks and other more susceptible groups to the suspension rates of whites and other less susceptible groups. The report purports to discuss my written and oral testimony at pages 145-146 and the dissenting remarks of Commission Peter N. Kirsanow reproduces portions of my written testimony at pages 214-216.

Consistent with many actions of the Departments of Education and Justice, the *Beyond Suspensions* report throughout promotes the belief that generally reducing suspensions will tend to reduce the ratio of the suspension rates of blacks and other more susceptible groups to the

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[3] Lambert PJ, Subramanian S (Disparities in Socio-Economic outcomes: Some positive propositions and their normative implications. Soc Choice Welf 2014;43:565-576), 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)); Thomas H, Hettmansperger TP (Risk Ratios and Scanlan's HRX), J Stat Distr and Appl 2017;4:27); Kiemele M ("Data Science, Design of Experiments, and Predictive Analysis," Tutorial at the 2019 SETE Conference, Sydney, Australia (Apr. 30, 2018)). Though it contains some inexact phrasing regarding government policies, in my view the last item (slides 14-21) provides some of the easier to understand graphical illustrations of the pertinent patterns. My own graphical illustrations, as in the Commission on Evidence-Based Policymaking Comments and the university methods seminars and workshops it references at page 4 and in note 4 on page 12, as well as in "Divining Difference," *Chance* (Fall 1994) and "Can We Actually Measure Health Disparities?," *Chance* (Spring 2006), are reflections of what I find easiest to understand.

[4] Girvan EJ, McIntosh K, Keith Smolkowski K. Tail, Tusk, and Trunk: What Different Metrics Reveal About Racial Disproportionality in School Discipline. Educational Psychologist 2019;54(1):40-59.

[5] Further, while (in my view) much of the article's discussion regarding measurement of demographic differences in suspensions is not sound, the article appears ultimately to recognize as the soundest measure of discipline disparities the same measure I have recommended since 2007 for measuring of all demographic differences involving outcome rates. See "Race and Mortality Revisited," *Society* (July/Aug. 2014) at 337 n.16. This point, however, goes to the unsoundness of the risk ratio (or its associated relative difference) as the measure of the strength of an association, which is the subject of Section B.

suspension rates of whites and other less susceptible groups. But nothing said in the discussion of my testimony in any way calls into question my contention that reducing suspension rates will actually increase such rates. In fact, if one assumes that the Commission fully understood my testimony, the failure to address that contention at all would be substantial evidence that, if the Commission does not agree with that contention, at least it has no basis for contesting it.[6]

Further, the single situation where the *Beyond Suspensions* report references (at 148) a particular ratio of the black suspension rate to the white suspension in a manner to suggest reductions in suspensions had reduced the ratio, though a disparity remained – the 3.8 ratio that remained after substantial reductions in suspensions between the 2011-12 and the 2013-14 school years – the cited ratio for the latter school year was in fact an increase from a 3.57 ratio in the former school year. Whether that instance involves an effort of the Commission to obscure the fact that the ratio of the black suspension rate to the white suspension rate increased during the period of general reductions in suspensions, the fact that an increase in fact occurred is further evidence that such will be the usual pattern.

But there is ample evidence that general reductions in suspensions will usually be accompanied by increases in the ratio of the black suspension rate to the suspension rate of whites or other groups, even though general reductions in suspensions may often be accompanied by actions, including race-conscious actions, that will reduce all measures of racial differences. Page 8 of my July 17, 2017 letter to the Departments of Education, Health and Human Services, and Justice provided a listing of my web pages discussing situations where reportage regarding school discipline issues revealed that general reductions in suspensions or other adverse discipline outcomes had in fact been accompanied by increases in the ratio of the black discipline rate to the white discipline rate (or the rate for non-black students). A more current, and thus expanded, listing of such web pages discussing those situations is found in the note.[7]

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[6] While few would divine such fact without reference to the witness statement on which the *Beyond Suspensions* report drew most of its language in the treatment of my testimony, that treatment is almost entirely devoted to explaining, not necessarily correctly, that it is mathematically possible for a relative difference between two rates and the absolute difference between two rates to change in opposite directions as the prevalence of an outcome changes. When stating (in note 821) that I found a certain effect by "utilizing relative risk ratios," the report is using a term that actually means the *ratio of two ratios* rather than the *ratio of two rates*. The ratio of two rates that my testimony in fact employed was the same ratio underlying every statement in the *Beyond Suspensions* report that one group was so many times as likely, or more likely, to experience some outcome than another group. It is also the ratio that the government has long employed to measure racial/ethnic disparities regarding adverse criminal justice, lending, and school discipline outcomes after leading affected entities to believe that reducing an adverse outcome will tend to reduce, rather than increase, such ratio.

[7] California Disparities, Colorado Disparities, Connecticut Disparities, Florida Disparities, Illinois Disparities, Maryland Disparities, Massachusetts Disparities, Minnesota Disparities, North Carolina Disparities, Oregon Disparities, Rhode Island Disparities, Utah Disparities, Virginia Disparities, Allegheny County (PA) Disparities, Aurora (CO) Disparities, Beaverton (OR) Disparities, Denver Disparities, Evansville (IN) Disparities, Henrico County (VA) Disparities, Kern County (CA) Disparities, Los Angeles SWPBS, Loudoun County (VA) Disparities, Milwaukee Disparities, Minneapolis Disparities, Montgomery County (MD) Disparities, Oakland (CA) Disparities, Portland (OR) Disparities, St. Paul Disparities, South Bend Disparities, Urbana (IL) Disparities.

Especially compelling evidence of what in fact will usually occur in the case of general reductions in suspensions may be found in studies of racial differences in discipline rates in Maryland by the University of Maryland's College of Education and Minnesota by the Hechinger Report during periods of overall reductions in out-of-school suspensions. The Maryland study showed that statewide the ratio of the black suspension rate to the white suspension rate increased, and an Appendix to the study showed that proportionate declines in suspensions were smaller for black students than for all students combined in 20 of the 23 school districts for which data could be analyzed.[8] The Minnesota study showed that the black suspension rate had a smaller proportionate decline than the white rate in all 73 school districts for which data could be analyzed. This means that in Maryland the ratio of the black rate to the rate of all other students increased in 20 of 23 cases and that in Minnesota the ratio of the black rate to the white rate increased in all 73 cases.

The following table, which is based on data from a 2016 article on truancy in Los Angeles,[9] illustrates reasons why generally reducing sanctions for student conduct will tend to increase the ratio of the black rate to the white rate. The table shows the proportion of blacks and whites falling into various increasingly severe levels of truancy. As the level of truancy increases and the proportions of both blacks and whites falling into the level decline, the ratio of the black rate to the white rate increases. Thus, as schools increasingly limit sanctions for truancy to severer cases of truancy, the ratio of the black sanction rate to the white sanction rate will tend to increase.

Table 1. Black and white rates of reaching various levels of truancy and ratio of the black rate to the white rate

Frequency	Black Rate	White Rate	Ratio of Black Rate to White Rate
Any	34.50%	31.90%	1.08
More than twice	21.70%	16.20%	1.34
More than a few times	9.60%	6.00%	1.60
More than monthly	7.20%	3.70%	1.95
More than weekly	5.60%	2.10%	2.67

I discuss this data further in Section B with regard to an aspect of the Disproportionality Regulation that provides a reason, though not the main reason, why the Department of Education should reconsider the regulation.

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[8] See my "Discipline disparities in Md. Schools," *Daily Record* (June 21, 2018), regarding this and other studies pertaining to Maryland, as well as Maryland policies premised on the belief that generally reducing suspensions will tend to reduce the ratio of the black suspension rate to the white suspension rate. See also my June 26, 2018 letter to the Maryland State Department of Education.

[9] Nadra Nittle, "Truancy, suspension rates drop in greater Los Angeles area schools," LA School Report (Mar. 7, 2016).

Finally, I note that it may seem impossible that for years agencies like the Departments of Education and Justice could believe that generally reducing suspensions will tend to reduce the ratio of the black suspension rate to the white suspension rate when in fact generally reducing suspensions tends to increase that ratio. In that regard, I call your attention to Tables 2 and 3 of the April 13, 2017 letter to the Department of Justice, which show, in terms that should be entirely understandable to middle school if not elementary school students, that lowering income or credit score requirements for securing some loan product will tend to increase the ratio of the black rate of failing to meet the requirement to the white rate of failing to meet the requirement. Nevertheless, for more than quarter of a century all federal agencies enforcing fair lending laws have proceeded on the belief that lowering such requirements will tend to reduce that ratio. But there are many areas where it might seem impossible that government agencies could be so mistaken about a statistical issue when there is overwhelming evidence that the government is indeed mistaken. See the longer references on page 2 *supra*. See also my "Innumeracy at the Department of Education and the Congressional Committees Overseeing It," Federalist Society Blog (Aug. 24, 2017), and "United States Exports Its Most Profound Ignorance About Racial Disparities to the United Kingdom," Federalist Society Blog (Nov. 2, 2017).

In any case, it ought to be the clear that the belief of the Departments of Education and Justice that generally reducing an outcome will tend to reduce the ratio of the rate of the more susceptible group to the rate of the less susceptible group, and the like beliefs of school administrators, are incorrect.

It is true, of course, that the Disproportionality Regulation's requirement that school districts measure significant disproportionality in terms of risk ratios will in fact incentivize school districts to limit identifications in order to reduce the ratios, because, like the Departments of Education and Justice, school administrators mistakenly believe that limiting identifications will tend to reduce risk ratios. But the remedy for problems arising from that mistaken belief would be to correct the belief. This is something the Department of Education could easily do (and which, as discussed in my July 17, 2017 letter, both the Departments of Education and Justice, as well as the Department of Health and Human Services, in fact have an obligation to do).

But it is manifestly improper for the government to lead a court to believe that generally reducing special education identifications will in fact tend to reduce risk ratios even if a mistaken belief about the effects of generally reducing special education identifications on risk ratios does incentivize school districts to limit such identifications. Thus, the government must advise the court of the appeals of the way the government misled the district court. The government must also ensure that it does nothing that may mislead the court of appeals in the same way.

The argument that requiring the use of the risk ratio to measure significant disproportionality will incentive race/ethnic-conscious decisions in order to risk rates is also misleading, though for a different reason. Attaching adverse consequence to findings of racial/ethnic differences of a certain level will incentivize affected entities to take race/ethnic-conscious actions to diminish chances of such findings, and those actions will tend to reduce all

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measures of racial/ethnic disparity (including risk ratios). But the incentive, which is inherent in the Individuals with Disabilities Education Act's (IDEA's) requirements regarding significant disproportionality, would apply to all measures of racial/ethnic difference, including a sound one.

There is nothing special about the risk ratio with respect to this incentive except in the following respect. Due to the longstanding promotion by the government and the social science community of the mistaken belief that generally reducing an outcome will tend to reduce relative racial differences in rates of experiencing the outcome, the principal non-race/ethnic-conscious actions aimed at reducing risk ratios – mainly, some activity or modification of policies that generally reduces putatively[10] adverse outcomes – have been actions that in fact tend to increase those ratios.   Such increases create additional incentives for school districts to take race/ethnic-conscious actions to reduce the ratios. Texas, for example, would tend to have high risk ratios precisely because of its statutory provision limiting special education identifications. But, again, the solution respecting incentives peculiar to the risk ratio is simply for Department of Education to explain that generally reducing an adverse outcome tends to increase, not reduce, risk ratios for the outcome.

The use of risk ratios to measures demographic differences can also cause many problems because the high risk ratios that can exist when outcome rates are very low can be regarded as extremely disturbing by those who do not understand the relationship between the rareness of the outcome and the size of the risk ratio. But that, too, is a problem of understanding that can be corrected.

In any case, it is misleading for the government to suggest that, apart from the factors just mentioned, there is anything special about the risk ratio with regard to the incentivizing of school districts to take race/ethnic-conscious action to reduce findings of significant disproportionality.

B. Reasons Why the Department of Education Must Reconsider the Disproportionality Regulation

Though none of the reasons was asserted in the Delay Regulation, there are three reasons why the Department of Education must reconsider the Disproportionality Regulation, and why a reasoned reconsideration will inevitably lead to withdrawal of the regulation. The first involves the general unsoundness of the risk ratio (or the relative difference it represents) as a measure of association, as well as the fact that adding circumspection to decision-making processes in ways that generally reduce any adverse outcome (including as mandated upon findings of significant disproportionality) tends to increase risk ratios. A second involves the irrationality of comparing the rate of students in a subject racial/ethnic group to the rate of all other students rather than to an advantaged group's rate. A third involves the impossibility of analyzing demographic

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[10] Assignment to special education programs is a favorable outcome for students benefiting from such programs. But the Disproportionality Regulation treats it as an adverse outcome with regard to issues of disproportionality and it can be regarded as such for instant purposes.

differences in rates of in-school suspensions of 10 days of fewer, in-school suspensions of more than 10 days, or out-of-school suspensions of 10 days or fewer.

1. Unsoundness of the Risk Ratio as a Measures of Association

I have described the unsoundness of the risk ratio (or its associated relative difference) as a measure of association in many places, of which the aforementioned "Race and Mortality Revisited" and Comments for the Commission on Evidence-Based Policymaking are fairly comprehensive examples. Most simply, like other standard measures of demographic differences, the risk ratio is an unsound measure of association because it is affected by the prevalence of an outcome. An additionally problematic aspect of the risk ratio for an adverse outcome or putatively adverse outcome in the significant disproportionality context is that school districts that add circumspection to their processes of identifying students with disabilities or imposing discipline – or simply reduce these outcomes by increasing the thresholds for identification of a disability or the imposition of discipline – tend to increase their risk ratios. Further, the remedies imposed following identification of significant disproportionality, by adding circumspection to the processes, tend to increase risk ratios still further.

Even the requirement that upon finding of significant disproportionality, school districts must set aside funds to "provide comprehensive coordinated early intervening services to serve children in the local educational agency, particularly children in those groups that were significantly overidentified" will tend to increase risk ratios for identification of students with disabilities in many and possibly most cases. Effective programs of this nature (*i.e.*, those that reduce the numbers of children requiring special education services) that are provided equally for children of all racial/ethnic groups, by reducing the total number of identifications, will tend to *increase* the ratio of the identification rates of disadvantaged groups to the identification rates of advantaged groups. Effective programs of this nature that are provided solely for disadvantaged groups will tend to *reduce* all measures of differences between identification rates of disadvantaged and advantaged groups. The effect on relative differences of programs that are "particularly" focused on disadvantaged groups will turn on how "particularly" is interpreted and a range of other factors that will likely vary from setting to setting. But concerns about constitutionally of providing greater services to particular racial/ethnic groups in circumstances where there is no finding that the overidentification was due to discrimination and administrative considerations may cause many school districts to draw little distinction between children within and without groups as to which significant disproportionality was found.[11]

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[11] An anomaly regarding IDEA's requirement that, upon a finding of significant disproportionality, a school district must set aside 15 percent of certain funds to provide comprehensive coordinated early intervening services to children in the local educational agency is that the proportion of funds is the same when the group as to which significant disproportionality is found comprises 75 percent of all students as it is when the group comprises 5 percent of all students. In the former case the funds set aside may be inadequate to provide appropriate services even solely for the group as to which significant disproportionality was found. In the latter case, there may be more funds set aside than are necessary to provide appropriate services for all groups or, in any case, substantially more funds for each student needing the services than in the former case.

A sound basis the Department of Education to postpone compliance with the Disproportionality Regulation may be found in the Preamble to the Disproportionality Regulation itself.

My comment on the proposed regulation, after citing several references, made the following point:

> Equally important, the Department of Education must come to understand that the rate ratio (with its associated relative difference) is an illogical measure of association, as discussed in ["Race and Mortality Revisited.," Society (July/Aug. 2014)] (at 339) and [my October 8, 2015 letter to the American Statistical Association] (at 12-13). The Department must also understand that, as reflected in Table 1 of ["Race and Mortality Revisited"] and Table 1 of the ASA letter, a rate ratio of 1.85 for outcome rates of 37% and 20% means the same thing as a rate ratio of 2.60 for rates of 13% and 5%. Without understanding the patterns described in the above materials the Department of Education cannot provide useful guidance on the measurement of racial and other demographic differences.

The point in the second sentence regarding the fact that the 1.85 and 2.60 ratios mean the same thing can be compared to the point at page 12 of my April 13, 2017 letter to the Department of Justice that there would be no basis for distinguishing between the situations reflected in the two rows of the letter's Table 1 with regard to the comparative likelihood that two decisionmakers had engaged in discrimination.[12]

The Preamble to the Disproportionality Regulation (Federal Register, Vol. No. 243, page 92407 (Dec. 19, 2016)), presented the perceived content of the above-quoted language in the following manner:

> Similarly, one commenter argued that the risk ratio is an illogical measure of the association between two groups; for example, a risk ratio of 1.85 for outcome rates of 37 percent and 20 percent means the same thing as a risk ratio of 2.60 for rates of 13 percent and 5 percent[.]

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[12] To fully understand this issue, one needs to recognize that, even though the forces causing the adverse outcomes rates of advantaged and disadvantaged groups to differ are the same forces causing the groups' favorable outcome rates to differ, the relative difference for the adverse outcome indicates that those forces are stronger in the situation reflected in second row of the table while the relative difference in the favorable outcome indicates that those forces are stronger in situation reflected in the first row of the table. But it is not necessary to discuss the matter further here.

The compacting somewhat garbled that matter in two respects. It conflated two separate ideas such that second idea was presented as it if were an example of the first.[13] Due to the compacting, the Preamble also inserted a phrase "association between two groups" which has no statistical meaning, though the insertion would appear to be good faith effort to convey the concept of an association between a factor (*i.e.*, group membership) and chances of experiencing an outcome.

Nevertheless, the language in the Preamble would convey to astute observers that there existed a claim that the risk ratio was a problematic measure of significant disproportionality because it caused two situation that were the same to be treated as if they were different.

The Preamble then presented 398 words of purported discussion of this point and a point made by other commenters. But nothing in the language in any way addressed the point of the quoted language as characterized by the Preamble itself.   The discussion did not address whether the situations were in fact the same, or, if so, whether a measure that said they were different could nevertheless be a sound measures of significant disproportionality. In fact, the discussion said nothing in any way acknowledging either point it was supposed to be addressing.

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[13] An argument that a ratio of two rates is an illogical measure of association because it indicates that the two described situations are different when they are in fact the same would, in my view, be an entirely reasonable argument. But I do not commonly make such argument because it rests on whether the two situations in fact involve the same level of association. That is a matter involving a statistical pattern that many people will not easily understand. Rather, when I argue that relative differences and relative effects reflected in rate ratios (or beliefs about them) are illogical, I rely on mathematical facts that most people should recognize are not open to dispute. These arguments hold regardless of the existence of the statistical patterns I describe.

The first argument of this nature, supported by the referenced page 339 in "Race and Mortality Revisited," goes to the illogic of the belief that in the normal course (*i.e.*, absent what is commonly termed a subgroup effect) a factor that affects an outcome rate will show equal proportionate effects on (cause equal proportionate changes to) different baseline rates for the outcome. The argument rests on the fact, which should be evident to anyone who considers the matter, that a factor such as an intervention that causes a reduction (or increase) in an adverse outcome rate is also causing an increase (or reduction) in the corresponding favorable outcome rate. Yet, anytime a factor causes equal proportionate changes in the baseline rates at which two groups experience an outcome, the factor will necessarily cause unequal proportionate changes to the two groups' rates of experiencing the opposite outcome. Since there is no reason to expect a factor to cause equal proportionate changes to two groups' rate of experiencing one outcome than there is to expect it to cause equal proportionate changes to the two groups' rates of experiencing the opposite outcome, it is illogical to expect the factor to cause equal proportionate changes to either outcome. See my Subgroup Effects, Illogical Premises , Inevitability of Interaction pages and my Comment on European Medicines Agency Subgroup Guidelines (July 31, 2014) and Comment on FDA Proposed Subgroup Regulations (May 16, 2014).

The second arguments goes to the illogic of the belief that a ratio reflects the same level of association for two different pairs of rates. The argument rests on the fact, which also should be evident to anyone who gives the matter any thought, that the forces causing adverse outcome rates of two groups to differ are exactly the same forces causing the groups' favorable outcome rates to differ. Yet, any time the ratio is the same for two pairs of rates of a disadvantaged and advantaged group – as, for example, where rates of 20% and 10% and rates of 10% and 5% both yield ratios of 2.0 – the ratios for the opposite outcome will necessarily be different from one another. This is the point of referenced pages of the American Statistical Association letter at 12-13. See my also my Illogical Premises II page.

Thus, in July 2018, the Department of Education could have presented an entirely satisfactory basis for rethinking the Disproportionality Regulation by simply restating the issue I had raised and pointing out that discussion in the Preamble had failed to address the point. Ideally, however, the agency would have further explained the point in terms the public could understand.

Further, the Disproportionality Regulation was adopted at a time when the agency believed that generally reducing an adverse outcome would tend to reduce risk ratios for the outcome and thus that adding circumspection to decision-making process and various actions required upon a finding of significant disproportionality would tend to reduce risk ratios. Assuming the Department of Education now understands that generally reducing an outcome in fact tends to increase the risk ratios, the simple fact that the Disproportionality Regulation was adopted at a time when the agency believed the opposite provides a compelling reason for rethinking implications of the regulation before states are required to comply with it.

2. Irrationality of Comparing a Group's Rate With the Rate for All Other Persons

Even with a sound measure of association it rarely makes sense to compare one group's rate with the rate for all other persons. That is, when black and white rates for any outcome are, say, 15 percent and 5 percent, all measures of differences concerning such rates would be different in situations where a student body is comprised solely of blacks and whites and situations where the student body is partly comprised of other groups. For example, if a student body, is one-third black, one-third white, and one-third Hispanic, and, say, the Hispanic rate is 10 percent, the black 15 percent rate would be compared with a 7.5 percent rate rather than a 5 percent rate. Yet, there is no reason to believe that the former situation, with a black-other risk ratio of 3.0, is any more warranting of review of underlying processes than the latter situation, with a black-other risk ratio of 2.0

Further, in the latter situation, no measure would find disproportionality as to Hispanics since the 10 percent Hispanic rate would be same as the rate for all other students combined (*i.e.*, the 10 percent rate for blacks and whites combined). See my IDEA Data Center Disproportionality Guide page and slides 98 to 106 of my October 10, 2014 University of Maryland workshop.

3. Impossibility of Analyzing Differences in Rates of Experiencing Intermediate Levels of Exclusion

The Disproportionality Regulation requires that school districts calculate risk ratios for (in the order in which the regulation lists them): (a) out-of-school suspensions and expulsions of 10 days or fewer; (b) out-of-school suspensions and expulsions of more than 10 days; (c) in-school suspensions of 10 days or fewer; (d) in-school suspensions of more than 10 days.

I an uncertain of the meaning of expulsions with regard to either 10 days or fewer or more than 10 days, but I believe I can ignore the issue for instant purposes.

Even with a sound measure of association, it is not possible to analyze demographic differences in individual levels of punishment except for the extreme level (*i.e.*, in the instant situation, (b)). Categories (a), (c), and (d) reflect various lesser forms of exclusion than (b), such that the ordering from least to most severe would be (c) (d) (a) (b). It is impossible to analyze rates of falling into (a), (c), or (d), though it is possible to analyze all four categories combined, as well as (a), (b), and (d) combined, (a) and (b) combined, or (b) alone.

By way of comparable example, it is possible to analyze two groups' differing rates of receiving grades of below A, below B, below C, and below D (which is the same as the rate of F), or the corresponding favorable outcomes. But it is not possible to analyze two groups' rates of receiving B or C or D. In fact, especially with regard to C, when two groups have differing rates of receiving such grades, it may not be possible to divine which group is the advantaged group and which group is the disadvantaged group. But the key point is that sound measurement is not possible with regard to any individual discrete category save the ultimate category.

Similarly, in the discipline context, it is not possible to analyze rates of single suspensions, though it is possible to analyze differences in rates of one-or-more suspensions and differences in rates of multiple suspensions. In fact, strictly speaking, it is not possible to analyze suspensions separately from expulsions, though expulsions can be analyzed separately. But, as a practical matter, there are generally too few expulsions to materially impact an analysis of suspensions.

I discuss these issues further on my Intermediate Outcomes and the Discipline Disparities web pages.

Data underlying the illustration in Table 1 can usefully illustrate the issue. The original data were presented in the referenced article in terms of rates at which different groups fell into certain distinct categories and thus had to be reorganized into the form presented Table 1. Table 2 presents that data as presented in the article.

Table 2. Black and white rates of experiencing certain discrete categories of truancy and ratio of the black rate to the white rate

Frequency	Black Rate	White Rate	Black/White Ratio
1 to 2 times	12.80%	15.70%	0.82
A few times	12.10%	10.20%	1.19
Once a month	2.40%	2.30%	1.04
Once a week	1.60%	1.60%	1.00
More than once a week	5.60%	2.10%	2.67

The final column presents the ratios of the black rate of falling into each discrete category to the white rate of falling into each the category.[14] It should be evident that, except for the extreme category in bottom row, each ratio is meaningless as far as the comparative situation of blacks and whites is concerned. Every other measure of difference between the two rates would also be meaningless. As discussed on the Intermediate Outcomes page, that holds for a sound measure of association.

There are some additional issues with the Disproportionality Regulation in its current form, some of which would apply in the case of a sound measure of association. These include, at least, requiring that states make determinations of reasonable thresholds without any meaningful guidance as to criteria for reasonableness as to thresholds, instructions to determine progress in terms of reductions in risk ratios rather the reductions in the relative differences that the risk ratios represent, and the apparent sanctioning of any minimum cell size of from 1 to 10 and any minimum n of from 1 to 30. Given the constitutionality issue mentioned earlier, the regulations is also lacking in guidance respecting the meaning of "particularly, but not exclusively … in those groups that were significantly overidentified" with respect to coordinated early intervening services. These are issues to which the Department of Education should be giving thought. But it is not necessary to further address them here.

C. Plaintiff's Interest in Pursuing the Matter

If the Department of Education of education had effectively raised even the first of the matters discussed in Section B as a reason for postponing implementation of the Disproportionality Regulation, it is doubtful that any organization wishing to promote the effective monitoring of demographic differences in educational outcome (and understanding the issue) would have challenged the postponement. In fact, the greater an organization's interest in sound monitoring of demographic differences in educational outcomes, the more it should be supportive of Department of Education actions that might lead to replacement of the risk ratio with a measure that could effectively quantify the forces causing outcome rates to differ and effectively distinguish between the situations of different school districts with regard to the strength of such forces. And such organizations certainly would not want to further an enforcement regime where a school district's adding circumspection to its decision-making processes increases the chances that it will be found to have significant disproportionality.

It is improbable that COPAA currently understands these issues. Presumably, the organization, like virtually every similar organization in the country, believe that generally reducing adverse outcomes will tend to reduce risk ratios for the outcomes. If the Department can effectively explain these issues to COPAA, the organization should recognize that it has no interest in further impeding the Department of Education's reconsideration of the Disproportionality Regulation and should want to facilitate that reconsideration, as well as the

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[14] I do not mean to suggest that a risk ratio was presented in the underlying article or that the article's manner of presenting the data was misleading. But observers who rely on such data do not always recognize the impossibility of making useful comparisons on the basis of various groups' rates of falling within particular categories.

Department's general rethinking of the ways it measures all demographic differences in educational outcomes and the guidance it provides for such measurement.[15]

        Thus, I suggest that the Department of Justice should master these issues as quickly as possible and then attempt to explain them to counsel for COPAA. As indicated below, I am copying counsel for COPAA on this letter.

        Sincerely,

        /James P. Scanlan/

        James P. Scanlan

cc: Marleigh D. Dover, Esq.
     R. Craig Lawrence, Esq.
     Jennifer J. Clark, Esq.
     Seth Galanter, Esq.
     Jean-Claude André, Esq.

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[15] See the handout I provided at March 22, 2018 meeting with Department of Education staff.

Corrections
(Aug. 14, 2019)

Page 1:

First paragraph, line 2: "that brief that is due on April 19, 2019" changed to "the brief that is due on August 19, 2019"

First paragraph, line 4: "were misleading" changed to "was misleading"

Second paragraph line 2: "may always" changed to "may not always"

Page 2:

First full paragraph, line 7: "contrary the belief" changed to "contrary to the belief"

Second full paragraph, line 9: "of longer" changed to "of the longer"

Note 2, line 7: "of my April" changed to "of the April"

Page 4:

Second line: "in any ways" changed to "in any way"

Page 6:

First paragraph, line 7: "tend to" changed to "will tend to"

Second paragraph, line 1: "that belief" changed to "that the belief"

Page 7:

First full paragraph, line 5: "modification or policies" changed to "modification of policies"

First paragraph of Section B, line 7: "tend to" changed to "tends to"

Page 8:

Note 11, line 2: "20 percent" changed to "15 percent"

Page 10:

Second last line of text: "sound measures" changed to "sound measure"

Note 13, second paragraph, line 7: "changes in" changed to "changes to"

Page 11:

First paragraph, line 3: "raised, and" changed to "raised and"

Second paragraph, line 4: "would reduce" changed to "would tend to reduce"

Title to subsection 2. "with" changed to "With"

First paragraph of subsection, second last line: "processes, than" changed to "processes than"

Page 13:

First paragraph, line 4: "Every measure" changed to "Every other measure"

Second paragraph, line 4: "case of sound" changed to "case of a sound"

Page 14:

First full paragraph, line 2: "possibly and" changed to "possible and"