

James Scanlan <jps@jpscanlan.com>

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## University of Maryland Methods Workshop - Oct. 10

To ldugan@umd.edu • kland@soc.duke.edu • sbushway@albany.edu • bjohnso2@umd.edu • cmaxwell@msu.edu • dmears@fsu.edu • dn03@andrew.cmu.edu • teraghu@umich.edu • mtw1@cornell.edu • ramona.rantala@usdoj.gov • kitty.smith@copafs.org • martha.gardner@ge.com • russell-lenth@uiowa.edu • pierson@amstat.org

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Dear Members of the ASA Committee on Law and Justice:

This note has two purposes. The first is to suggest to the members of the American Statistical Association Committee on Law and Justice in the Washington, DC area (especially those at the University of Maryland) attend a methods workshop titled “Rethinking the measurement of demographic difference in outcome rates” that I will be giving at the Maryland Population Center of the University of Maryland from 10:00 am to 12:00 pm on Friday, October 10. The details are in reference 1 and the content will be a variation on workshops given at Harvard’s Institute for Quantitative Social Science in October 2012 [2] and the epidemiology and demography arms of the University of Minnesota in September 2014 [3] (though the legal implications are most fully addressed in a September 2013 faculty workshop at the University of Kansas School of Law [4]).

The second is to alert the entire Committee of an issue to be addressed to a degree in the workshop, but that I will likely address at some point in a formal letter to the Committee or the ASA leadership generally. In that regard, I note that I have for some time been in contact with ASA Director of Science Policy Steve Pierson, who advises the appropriate course for seeking ASA action of the type I desire is to address the matter with the Committees.

The Maryland methods workshop will explain the patterns by which standard measures of differences between outcome rates tend to be systematically affected by the frequency of an outcome and the reasons that the existence of such patterns undermines those measures for quantifying demographic differences in outcomes in the law and the social and medical sciences. The most pertinent of these patterns in the law enforcement context is that whereby the rarer an outcome the greater tends to be the relative difference in experiencing it and the smaller tends to be the relative difference in avoiding it.

One way that I commonly demonstrate this pattern is by showing how lowering a test cutoff will tend to reduce relative differences in pass rates while increasing relative differences in failure rates, as in the following four recent articles. (The Amstat News article arose from contacts with Steve Pierson.)

(a) “Race and Mortality Revisited,” *Society* (July/Aug. 2014)

[http://jpscanlan.com/images/Race\\_and\\_Mortality\\_Revisited.pdf](http://jpscanlan.com/images/Race_and_Mortality_Revisited.pdf)

(b) “The Perverse Enforcement of Fair Lending Law,” *Mortgage Banking* (May 2014)

[http://jpscanlan.com/images/Perverse\\_Enforcement\\_of\\_Fair\\_Lending\\_Laws.pdf](http://jpscanlan.com/images/Perverse_Enforcement_of_Fair_Lending_Laws.pdf)

(c) “Misunderstanding of Statistics Leads to Misguided Law Enforcement Policies” (*Amstat News*, Dec. 2012):

<http://magazine.amstat.org/blog/2012/12/01/misguided-law-enforcement/>

(d) “Things government doesn’t know about racial disparities,” *The Hill* (Jan. 28, 2014).

<http://thehill.com/blogs/congress-blog/civil-rights/196543-things-the-legislative-and-executive-branches-dont-know>

The Society article also illustrates the point with income data showing that reducing poverty will tend to increase relative differences in poverty rates while reducing relative differences in rates of avoiding poverty, something I also showed in my guest editorial in the Spring 2006 issue of *Chance*. [5]

The most glaring anomaly in the law enforcement setting arising from the failure to understand this pattern (which is discussed in the Society article at 14-16 and throughout the other three articles mentioned above) involves the following situations. Based on the belief that reducing the frequency of an adverse outcome will tend to reduce relative racial/ethnic differences in rates of experiencing those outcomes, the federal government has for some years been encouraging lenders and public schools to reduce the frequency of adverse lending outcomes and adverse school discipline outcomes. In fact, however, reducing the frequency of an outcome tends to increase, not decrease, relative differences in rates of experiencing the outcome. Unaware of such fact, the federal government continues to monitor the fairness of lending and discipline practices on the basis of relative differences in adverse outcome. Thus, by complying with federal encouragements to reduce the frequency of such outcomes, lenders and schools increase the chance the government will sue them for discrimination.

While the situation regarding the monitoring of lending and discipline practices is an unusually perverse consequence of the failure of federal agencies to understand the ways the frequency of an outcome affects relative differences in experiencing and avoiding it, the same failure of understanding has undermined virtually every law enforcement activity that involves appraisals of demographic differences in outcome rates including with respect to efforts to determine whether racial considerations have influenced sentencing decisions.

I hope Committee Members in a position to attend the Maryland workshop will consider doing so. But I urge all members of the Committee to read references (a) through (d) and consider what role the American Statistical Association should play in circumstances where federal law enforcement policies are based on perceptions of statistics that are the exact opposite of reality.

Sincerely,

James P. Scanlan  
Attorney at Law  
1529 Wisconsin Avenue, NW  
Suite 300  
Washington, DC 20007  
Office phone: 202-338-9224  
e-mail [jps@jpscanlan.com](mailto:jps@jpscanlan.com)

1. Rethinking the measurement of demographic differences in outcome rates. Methods Workshop to be presented to the Maryland Population Research Center of the University of Maryland, Oct. 10, 2014.  
Abstract: [http://jpscanlan.com/images/University\\_of\\_Maryland\\_Workshop\\_Abstract.pdf](http://jpscanlan.com/images/University_of_Maryland_Workshop_Abstract.pdf)  
Workshop details: [http://www.popcenter.umd.edu/new\\_e/event\\_1406225824132](http://www.popcenter.umd.edu/new_e/event_1406225824132)
2. The mismeasure of group differences in the law and the social and medical sciences. Applied Statistics Workshop at the Institute for Quantitative Social Science at Harvard University, Oct. 17, 2012: [http://jpscanlan.com/images/Harvard\\_Applied\\_Statistic\\_Workshop.ppt](http://jpscanlan.com/images/Harvard_Applied_Statistic_Workshop.ppt)
3. The mismeasure of association: The unsoundness of the rate ratio and other measures that are affected by the prevalence of an outcome. Methods Workshop at Minnesota Population Center and Division of Epidemiology and Community Health of the School of Public Health of the University of Minnesota, Minneapolis, Minnesota, Sept. 5, 2014.  
[http://jpscanlan.com/images/University\\_of\\_Minnesota\\_Methods\\_Workshop.pdf](http://jpscanlan.com/images/University_of_Minnesota_Methods_Workshop.pdf)
4. The mismeasure of discrimination. Faculty Workshop, University of Kansas School of Law, Sept. 20, 2013.  
[http://jpscanlan.com/images/Univ\\_Kansas\\_School\\_of\\_Law\\_Faculty\\_Workshop\\_Paper.pdf](http://jpscanlan.com/images/Univ_Kansas_School_of_Law_Faculty_Workshop_Paper.pdf)
5. "Can We Actually Measure Health Disparities?," *Chance* (Spring 2006).  
[http://www.jpscanlan.com/images/Can\\_We\\_Actually\\_Measure\\_Health\\_Disparities.pdf](http://www.jpscanlan.com/images/Can_We_Actually_Measure_Health_Disparities.pdf)