

Review of: "Deep roots of admixture-related cognitive differences in the USA?"

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Potential competing interests: No potential competing interests to declare.

The latest version (I reviewed the first version some months ago) has many improvements in response to reader reviews. As Peter Frost notes in his review, there are serious limitations to this historical data, but not, in my opinion, enough to invalidate the study. As long as we do not over-interpret the findings, they add another “piece of the puzzle” in explaining race-related test score gaps. It is certainly of interest that the admixture analysis of the limited available data from a long historical time period gives results closely in sync with the findings from the latest high-quality genetic and test data (e.g., ABCD); in both cases, the genetic hypothesis explains a big part of race-related test score gaps.

The historical existence of “Mulatto” communities with separate cultures from the associated Black communities (mentioned by Frost) is more of an issue in the earlier historical periods than in more recent decades. Those separate communities have mostly been absorbed into the Black community. I am sensitive about offensive terminology but disagree that “Mulatto” should be replaced in the text, given its widespread and neutral use in the historical dataset. There is no reason other than hyper-sensitivity that this term should be seen as offensive in this context.

The partial residual plots in Figure 1 on pages 17 and 18 are great at providing a clear, intuitive picture of the quite strong and consistent relationship between European admixture and measured cognitive performance within self-identified race categories. The presentation of these plots could be improved since in one case the graphs are split across pages, which makes it more difficult to appreciate them and see the graphical relationship clearly. Also, the use of different bubble sizes dependent upon sample size in Figure is not adequately explained in the text (at least, I could not find the reference guide to it).

Typo on page 8: “Selected years for the present study include 1850, 1860, 1870, 1880, 1990, 1910, 1920, and 1930.” 1990 should be 1900. As they note, the 1890 data was lost to fire.

On page 13, phi inverse is written as phi minus one. This seems to be due to a missing superscript operator in the typesetting of the document. Perhaps the authors could add a sentence “Let $f(\cdot)$ denote the inverse of the cumulative normal distribution function” so that they do not need to use a superscript in typesetting. Another little typesetting issue: “to g” is often printed as “tog” without the space. No understanding is lost in most cases, but it is annoying.

I am glad to see that the paper has received wide readership.

