

Skin Color and Intelligence in African Americans: A Reanalysis of Lynn's Data

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Finding a modest yet statistically significant correlation between skin tone and vocabulary test scores among African Americans, Lynn (2002) concludes that "intelligence in African Americans is significantly determined by the proportion of Caucasian genes" (p. 365). In this reanalysis of Lynn's data, I demonstrate that his bivariate association disappears once childhood environmental factors are considered. Therefore, a genetic link between skin color and intelligence among African Americans cannot be supported in his data. Investigators seeking to establish a genetic connection between racial ancestry and intelligence must move beyond simple bivariate results to address the confounding influence of environmental conditions that affect cognitive development.

KEY WORDS: skin color; intelligence; African Americans; cognitive skill.

In his recent study based on unique data from the 1982 General Social Survey (GSS82), Lynn (2002) uncovers a modest yet statistically significant correlation between skin tone and vocabulary test scores among African Americans ($r = .17$; $p < .01$). Relying on Rushton's (2000) theory that persons of African ancestry are genetically predisposed to lower intelligence than persons of Asian or European descent, Lynn concludes that "intelligence in African Americans is significantly determined by the proportion of Caucasian genes" (p. 365). In this reanalysis of Lynn's data, I present evidence indicating that a genetic link between skin color and intelligence

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among African Americans cannot be supported. Rather, I demonstrate that family background and educational attainment entirely explain the bivariate association between skin tone and cognitive ability.

SKIN COLOR AND TEST SCORES

Table 1 presents my replication of Lynn's bivariate results comparing mean vocabulary test scores by skin color for African American respondents in the GSS82 data. The vocabulary test score refers to the respondent's total number of correct answers on a 10-item multiple-choice word association test administered during the interview. For self-identified African Americans, skin color was assessed by trained African American interviewers on a five-point scale: 1 = very dark brown, 2 = dark brown, 3 = medium brown, 4 = light brown, 5 = very light brown. (Lynn erroneously states that skin color was self-reported by survey respondents.)

My bivariate results differ slightly from Lynn's because he apparently omitted seven respondents with no correct answers on the vocabulary test. Nonetheless, the overall pattern is highly consistent with his bivariate findings. Although results lack a compelling monotonic association, they indicate that African Americans with light skin tones tended to score higher on the 10-item vocabulary test than darker African Americans. The largest difference in mean test scores occurred between respondents coded "dark brown" ($m = 4.01$) and those coded "light brown" ($m = 5.25$). The statistically significant Pearson correlation coefficient indicates that light skin color modestly correlates with higher vocabulary scores ($r = .164$, $p < .001$).

TABLE 1

**Mean Scores on 10-Point Vocabulary Test by Skin Color:
African Americans in the 1982 General Social Survey**

Skin Color	Mean	SD	N
Very Dark Brown	4.43	1.98	42
Dark Brown	4.01	1.76	106
Medium Brown	4.91	2.24	208
Light Brown	5.25	2.16	67
Very Light Brown	5.00	2.29	14
Total	4.70	2.14	437

Note: F -test = 4.82; $p > .001$.