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Some Reinterpretations of the Minnesota Transracial Adoption Study

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This article questions five inferences drawn by Weinberg, Scarr, and Waldman from their 1992 study of the intelligence of transracially adopted children. Contrary to the authors' conclusions, the data indicate that adoption by white middle-class families has no beneficial effect on the intelligence of black, interracial, or white children at an average age of 17 years.

The recent article by Weinberg, Scarr and Waldman (1992) presented valuable new data on the intelligence and educational attainments of black, interracial (black–white), and white infants adopted by white middle-class families and tested at an average age of 17 years. The new data make important contributions to the debate on the relative contributions of genetic and environmental factors to intelligence and to the information on differences in intelligence between blacks and white in the U.S. However, a number of the authors' interpretations of their results do not appear to be warranted. The present article questions the authors' conclusions on five issues where it is considered that the inferences to be drawn from the data are contrary to those advanced by the authors.

Before considering these issues, it may be useful to summarize briefly the salient points of the data. These concern four groups of children raised in white middle-class families: black adopted, interracial adopted (i.e., with one black and one white parent), white adopted, and white biological. The children were tested for intelligence in 1976 (Time 1), at the average age of 7, with the Progressive Matrices, the Stanford-Binet of the Wechsler Intelligence Scale for Children (WISC), and again in 1986 (Time 2) at an average of 17 years, with the WISC-R or the Wechsler Adult Intelligence Scale-Revised (WAIS-R). There was also a small group of 12 Asian children whose results do not add materially to the issues and who are therefore omitted from this discussion. Only the results of those children for whom intelligence test data are available at both ages 7 and 17 are considered here. The results are summarized in Table 1. There are five inferences drawn by Weinberg, Scarr, and Waldman (WSW) from their data. I believe they are all incorrect and I set out my reasons below their conclusions.

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TABLE 1
Mean IQs of Black, Interracial, and White Adopted Children, with IQ Changes From Ages 7 to 17

Children	IQ Age 7	IQ Age 17	IQ Change
Black	95	89	−6
Interracial	109	98	−11
White	118	106	−12
Biological	116	109	−7

1. Adoption Into White Middle-Class Families

WSW: "These results are congruent with those of other recent adoption studies . . . in demonstrating the strong effects of the rearing environment on IQ" (p. 131).

Critic: None of the mean IQs at age 17 of the three adopted groups of black, black–white, and white children gives any support to this claim. In their earlier report on these children at an average age of 7 years, Scarr and Weinberg (1976) compared the mean IQs of the three groups with the IQs of children in the respective general populations and argued that the IQs of the adopted children were appreciably higher. In their later report, Weinberg et al. no longer make this comparison, but it is certainly the appropriate one to use.

The three groups need to be considered separately. First, the black children at age 17 have a mean IQ of 89. A casual reader might suppose that the mean black IQ is 85 and, therefore, that the adopted black children had made a gain of 4 IQ points. This would be wrong and two corrections need to be made. The first is because the majority of the black children came from the north central and northeast regions of the U.S., where the mean IQs of black children obtained in the WISC-R standardization sample are not 85 but 88.1 and 93.0 (Kaufman & Doppelt, 1976), as Scarr (1984, p. 517) has herself noted. Most of the black children apparently came from the north central region, so the appropriate comparison group has a minimum IQ of 88.1. There is, therefore, virtually no difference between the mean IQ of the adopted black children (89) and that of black children reared in their own communities in the north central U.S. But a second correction is also required. Allowance must be made for the secular increase in population IQs from the dates of the standardization of the WISC-R and WAIS-R (1972 and 1978) to 1986, when the adopted children were tested. American IQs have been increasing at approximately 3 IQ points per decade since the 1930s (Flynn, 1984), and this rate of increase has been maintained in recent years (Lynn & Pagliari, 1994). Both tests were used for the assessment of the IQs of the adopted children, so we can take the average of the 2 years as 1975 and add 3.3 IQ points to the mean of the general population, to allow for the

intelligence increase over the 11 years 1975–1986. This brings the mean IQ of the general black northern population up to 91.4. Compared with this figure, the mean IQ of 89 of the Weinberg et al. sample of black infants adopted by white middle-class families shows a small deficit and certainly indicates that they made no intelligence gains as a result of their adoptive experience.

Consider now the adopted white children. Their mean IQ at the age of 17 is 106. Have they, therefore, made a 6-point IQ gain, as compared with a white mean IQ of 100? Surely not. The mean IQ of white children in the WISC-R standardization sample was 102.2 (Jensen & Reynolds, 1982; Kaufman & Doppelt, 1976). (On any test standardized on the total population of the U.S. the mean white IQ is necessarily a little higher than 100). Add 3.3 IQ points for the secular increase of intelligence 1975–1986, which brings the mean IQ of the general population of white children up to 105.7, the same as that of the white adopted children.

Finally, the interracial children at age 17 had a mean IQ of 98. There is no good comparison group in the normal population, but the IQ of the interracial group falls midway between the IQs of the white and the black children. The simplest assumption is that the IQ of the normal population of interracial children also falls midway between the IQs of the black and white populations and, hence, that the IQ of the adopted interracial children is also the same as that of the general population. The upshot is that the adoptive experience had no beneficial effect at all on the intelligence level of any of the three groups at the age of 17. Yet, Weinberg et al. claim that their results show strong effects of the rearing environment on IQ.

2. Race Differences in IQ

WSW: "The results of the longitudinal follow-up continue to support the view that the social environment maintains a dominant role in determining the average IQ level of black and interracial children" (p. 133).

Critic: The study shows mean IQs of 89 and 106, respectively, of black and white children reared in matched social environments. This 17-point IQ difference is the same as, or perhaps fractionally greater than, that of black and white children reared in their own natural environments, which numerous studies place at approximately one standard deviation, or 15 IQ points (Brody, 1992; Jensen & Reynolds, 1982). This shows that the social environment in which the black children were reared had no effect on narrowing the gap between black and white IQs. The difference between the two groups supports the genetic theory of the origin of these differences, because it apparently makes no difference to their IQs whether they are raised in their own environments or in white middle-class environments.

The results of the interracial group add further support to the genetic explanation for the origin of the race differences in intelligence. The mean IQ of the

interracial group at age 17 was 98, halfway between that of the black and the white children. This result is inexplicable in terms of environmental theory but is precisely what would be expected from genetic theory, because the interracial group's IQ should fall halfway between the IQs of the black and the white parent populations. The predominant effect of race, rather than social environment, on the children's IQs is confirmed by Weinberg et al.'s regression analysis, which shows "biological mother's race the best single predictor of adopted child's IQ when other variables are controlled" (p. 132).

3. Age at Adoption

WSW: "The early adopted group continued to show high IQ test performance at Time 2" (i.e., at age 17). "If genetic background but not social environment contributed to the average follow-up IQ of black/interracial adoptees . . . we would not expect their Time 2 IQ to be correlated with adoptive experiences such as age at placement and time in adoptive home" (p. 134).

Critic: The relevant correlations are −.30 between age at placement and IQ at age 17 and +.20, between time in adoptive homes and IQ at age 17. These correlations may appear to suggest that the younger the child is adopted, the higher the IQ at age 17 and, hence, the beneficial effect of early placement.

There are two problems with this claim: (a) The correlations are given only for the black and interracial adoptees and not for the white adoptees. If early placement has a beneficial effect on the later intelligence of black and interracial adoptees, surely it must have the same beneficial effect on white adoptees? Why, therefore, have the white adoptees been excluded? (b) The correlations presented are confounded with race differences because the black children had lower mean IQs, later ages at placement, and shorter times in the adoptive home, as compared with the interracial children. Thus, what appears to be an age-of-adoption effect may be only a race-differences effect. This is suggested by the multiple regression analysis, because, when race is entered first in the multiple regression, it appears as a significant predictor of adopted children's IQs, and adoptive experience variables, entered second, make no significant contribution to children's IQs. What Weinberg et al. need to do to establish their point is to give the correlations between age of adoption and IQ within each of the three racial groups.

4. Regression Effects of IQ Decline From Age 7 to Age 17

WSW: "If genetic background but not social environment contributed to the average follow-up IQ of black/interracial adoptees . . . we would expect them to show greater IQ decline than biological offspring, because their Time 2 IQ would regress back to their biological, but not their adoptive, parents' IQ levels" (p. 133).

Critic: No confidence can be placed in the IQ decline figures because different tests were used at Time 1 and Time 2 and the IQs are not corrected for secular increases in intelligence in the general population. IQs at Time 1 and Time 2 cannot be meaningfully compared. There may have been no decline at all. The authors could adjust the IQs for the secular increase of intelligence and this would throw useful light on the question.

5. Correlations of Adopted Children's IQs With Natural Parents' Education and Adoptive Parents' Education

WSW: "If genetic background but not social environment contributed to the average follow-up IQ of black/interracial adoptees . . . we should expect . . . their Time 2 IQ to be correlated with their biological parents' education but not their adoptive parents' education or IQs" (p. 133–134).

Critic: Weinberg et al. assert that their results do not support the genetic hypothesis, but this is wrong. The correlations are as would be expected from genetic theory, that is, the correlations between biological parents' education and adopted children's IQs are greater than those between adoptive parents' education and children's IQs (.23 and .28 for biological mothers and fathers, as compared with .11 and .14 for adoptive mothers and fathers). A comparison of correlations of the IQs of the biological and adoptive parents with the children's IQs cannot be made because there are no data for the IQs of the biological parents.

The correlations between the IQs of the adoptive parents and the black–interracial children are given (.18 and .20 for mothers and fathers). These are lower than the correlations between the education of the biological parents and the IQs of the children, once again supporting the genetic hypothesis. Nevertheless, these positive correlations do suggest that quality of the adoptive home (indexed by the IQs of the adopting parents) does have a beneficial effect on the intelligence of the adopted children. However, the reader is inevitably curious as to why the correlation is not given for the white adopted children, and this omission places a question mark over the claim. The correlations should be given separately for the three groups of adopted children.

6. Correlations of IQs of Adoptive Parents With Children's IQs

There is an interesting feature of the correlations between the IQs of the adoptive parents and their adopted children that Weinberg et al. do not mention. Mothers typically play a greater part in child rearing than fathers, that is to say, in cognitive stimulation and selection of diet. If the quality of the adoptive home has an advantageous effect on children's IQs, we should expect that the mothers' IQ and education would show higher correlations with the children's IQs than would the fathers' IQs and education. Yet this is not the case. The correlations for

IQ and education for mothers are .23 and .18 and for fathers, .28 and .20. This is a prediction failure of the theory that the quality of the adoptive home affects the child's IQ. It provides further evidence that the quality of the adoptive home has no effect on the IQs of adopted children at the age of 17 years.

CONCLUSION

In their first report on these children, Scarr and Weinberg (1976) argued that a transracial adoption study in which black children were reared in white middle-class homes would provide direct evidence on the issue of the relative contribution of environmental and genetic factors to the low mean IQ of black children. If this adoptive experience raised the IQs of black children, the result would indicate the importance of environmental factors. If it failed to raise the IQs of black children, the result would indicate the importance of genetic factors. Others have accepted that this is the crucial investigation required to differentiate between the environmental and the genetic hypotheses (Brody, 1992; Flynn, 1980).

We now have the results of the study and they support the genetic hypothesis. Five items of evidence lead to this conclusion: (a) Black children raised by white graduates with a mean IQ of 119.5 have the same mean IQ at age 17 as black children reared in their own communities, thereby showing that the black environment from the age of adoption at the age of approximately 1 year cannot be a cause of the low black IQ, and being adopted by white graduates, although the ultimate in headstarts yet has no effect in raising the black IQ; (b) the IQ gap between the black and white 17-year-olds reared in these matched environments of white graduate parents is 17 IQ points, the same as that in the general population, again showing that environmental factors operating after adoption have no effect on the race difference in intelligence; (c) the IQ of the adopted interracial children falls halfway between that of the black and white children, as would be predicted by a genetic theory of the origin of these differences but not by an environmental theory; (d) regression analysis shows that the race of the biological mother is the best predictor of the adopted children's IQs at the age of 17; (e) there are no differences between the correlations of IQs and the education of the adoptive mothers and fathers and the adopted children's IQs, contrary to the prediction from environmental theory that the mothers' correlations would be higher and consistent with genetic theory that the quality of the adoptive experience has no effect. Set against these five items of evidence there is one anomalous result, namely, the positive correlations between the IQs of the adoptive parents and those of the black and interracial adopted children. This anomaly should be examined more fully and the correlation for the white adopted children given. However, this result has no bearing on the problem of the causes of the black–white IQ difference.

All students of the problem of the low mean black IQ are indebted to Weinberg et al. for carrying out and publishing this study. It has provided important

new evidence differentiating the environmental and genetic hypotheses, and the results provide strong support for the genetic position. It will no longer be possible to state, in the words of a recent textbook, that "there is no convincing direct or indirect evidence in favor of a genetic hypothesis of racial differences in IQ" (Brody, 1992, p. 309).

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