The Intelligence of Chinese Children in Hong Kong

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ABSTRACT In this study the Culture Fair Test was administered to a sample of 9-year-old Chinese children in Hong Kong. The sample was matched for socio-economic status (SES) to the Hong Kong population. The mean IQ of the sample was 113. This figure needs adjustment for the time interval between the two test standardizations and for comparison with American white children. The effect of these adjustments is to reduce the mean IQ of the Hong Kong children to 104.5.

There have been several reports suggesting that the average level of intelligence of the Mongoloid peoples of China and Japan is higher than that of the Caucasoid peoples of Europe and North America. The first study of this kind appears to be that of Rodd (1959), who administered Cattell's Culture Fair Test to a sample of Chinese 16-year-olds in Taiwan and obtained a mean IQ of approximately 105. A study of Chinese 13-year-olds in Singapore carried out with Raven's Progressive Matrices Test in the mid-1970s obtained a mean IQ of approximately 110 (Lynn, 1977). The Japanese also appear to obtain higher mean IQs than Westerners. The Japanese standardizations of the Wechsler tests all show that the Japanese obtain higher means than the standardization samples in the United States (Lynn, 1982; Lynn and Hampson, 1986a). The Japanese standardization sample of the Columbia Mental Maturity Scale also obtained a higher mean IQ than the American standardization sample (Misawa et al., 1984).

The intelligence of the Chinese population of Hong Kong has received little attention. The only study it has proved possible to find is an unpublished investigation by Chan (1976) which is summarized by Vernon (1982). In this study the Progressive Matrices Test was administered to a sample of approximately 4500 Chinese 13-year-olds. The mean IQ was approximately 120. This is such a high figure that we thought it worthwhile to carry out a further study of the intelligence of the Chinese in Hong Kong. This is the subject of the following report.

Method

The Chinese children tested in this study were 9-year-olds in primary schools. The test used was Cattell's Culture Fair Test, Scale 2, Form A (IPAT, 1973). The test was constructed to be as free as possible of cultural bias and to be suitable for use with a variety of populations, including those who do not speak English. It consists of four non-verbal reasoning subtests. The test was administered by a Chinese

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speaker who gave the initial instructions in Chinese.

The sample was obtained from nine primary schools selected to be socially representative of Hong Kong. The children tested were all those in the fourth grade. The mean age of the children was 9 years 6 months, and virtually all the children's ages fell between the range of 9.0 and 10.0 years. The number of children tested was 376 and was made up of approximately equal numbers of boys and girls.

In order to match the sample in terms of socio-economic status to the total population, information was obtained on the occupations of the children's fathers and mothers. The sample was then broken down into the five SES categories used in the census analyses carried out by the Hong Kong Registrar-General. The mean raw scores of the children from the five SES categories were converted to IQs from the conversion tables in the American manual. The IQs of children in the five SES categories were then weighted by the proportions of the population in the respective categories given in the 1976 census. The resulting mean IQ for the weighted sample was 113.0 with a standard deviation of 14.2. There was no statistically significant difference between the mean IQs of boys and girls.

Results

The mean IQ of 113 obtained by the Chinese children is high. However, this figure is misleading because of the time lag between the standardization of the test in the United States and its administration in Hong Kong. It has only relatively recently become evident that mean IQs have been rising in economically advanced nations, and allowance has to be made for these rises in comparisons of the kind made here. The normative data of the Culture Fair Test were obtained from the United States for the year 1961. The present data from Hong Kong were obtained in 1982. There is therefore a twenty-one-year interval between the collection of the two sets of data. It has been calculated by Flynn (1984) that the mean IQ in the United States, as measured by the Wechsler tests, has been increasing at a rate of approximately three IQ points per decade. Broadly similar increases in mean IQ have been taking place in Britain (Lynn and Hampson, 1986b).

Adopting the American rate of gain of three IQ points per decade, the mean American IQ will have risen from 1961 (the date of the American norms) to 1982 (the date of the Hong Kong norms) by 6.3 IQ points. This reduces the Hong Kong mean, set in relation to an American mean of 100, to 106.7. One further adjustment is necessary in order to provide a Chinese mean in relation to a mean of 100 for American whites. The mean IQ of American whites is approximately 102.2 in relation to a mean of 100 for the whole American population (Jensen and Reynolds, 1982). Making this adjustment reduces the mean IQ of the Hong Kong Chinese children to 104.5. It is considered that this is the best estimate obtainable from the present study of the mean IQ of Hong Kong Chinese children in comparison to a white American mean of 100, as of the year 1982.

Discussion

It is evident that the result is consistent with the previous studies reviewed in the introduction to this paper indicating that the Mongoloid peoples of East Asia tend to obtain higher mean IQs than the Caucasoid peoples of the United States and Britain. However, we have endeavoured to show that the mean IQs obtained by Chinese and Japanese populations cannot always be taken at face value. In studies of this kind account needs to be taken of time lags between the standardizations of the tests in the United States and Britain, and the subsequent collection of norms from countries in the Far East. A further adjustment needs to be made for the fact that the mean IQ of whites in the United States is approximately 102.2. When these two adjustments are made the high mean IQs obtained by Chinese and Japanese populations are brought down to more reasonable levels. In the present study the mean IQ of the Hong Kong Chinese comes down from 113.0 to 104.5. The adjusted mean is clearly the more credible figure. A number of the previous reports have produced exaggerated claims for the intelligence of Chinese and Japanese populations because they have failed to make these adjustments.

Nevertheless, even after these adjustments have been made, the mean IQs of the Chinese and Japanese in the Far East remain a little higher than those of Caucasoids in the United States and Britain.

Furthermore, a number of studies reviewed by Vernon (1982) have shown that ethnic Chinese and Japanese in the United States also obtain higher mean IQs than those of American whites. It appears therefore that the high mean IQs obtained by Mongoloid peoples is a robust phenomenon that is found across a number of diverse populations.

If the generalization of the high mean IQ of Mongoloid peoples is accepted, it poses challenging problems of explanation. Hitherto, environmental theorists have been largely concerned with the black–white differences in intelligence and they have sought to explain these principally in terms of test bias and of socio-economic status, both of which have favoured whites over blacks (see, e.g. Rose et al., 1984). Neither of these explanations can easily be advanced to explain the high mean IQs obtained by Mongoloids. It is difficult to see how the American and British tests, such as the Wechslers, Raven's Progressive Matrices and the Cattell Culture Fair, can be biased in favour of the peoples of Japan, Singapore, Taiwan and Hong Kong. So far as socio-economic status is concerned, all the nations of the Far East are at a disadvantage as compared with the United States and Britain. Thus, in 1970, about the year of the birth of the cohort tested in the present study, the per capita incomes in Hong Kong, Britain and the United States were 735, 1993 and 4270 US dollars respectively (United Nations, 1975). Per capita incomes in the other nations of the Far East have also been substantially lower than those in the United States and Britain. It is evident that socio-economic advantage cannot be adduced to explain the high intelligence of the Mongoloid peoples.

Indeed, if it is correct that socio-economic disadvantage is an environmental depressant on intelligence, it appears that the true Mongoloid IQs must be higher than those obtained and noted in this paper. We do not pursue these questions further here but we suggest that the high mean IQs obtained by Mongoloids pose major explanatory problems which hitherto have not been adequately addressed.

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