IQ of Mongolians

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This paper summarizes the results of two studies of the intelligence of Mongolians. Both studies were published in Chinese in Chinese journals that are difficult or impossible for Western scholars to access and read. In both studies the IQ scores of Mongolian children were compared with those of Han Chinese children living in the same communities in Inner Mongolia and Xinjiang Province. The IQ of Mongolian children was found to be approximately 5 IQ points lower than that of Han Chinese children.

Key Words: Mongolians; Han Chinese; Inner Mongolia; Xinjiang Province; Performance IQ; Verbal IQ.

Hitherto nothing has been known in Western countries of the intelligence of the Mongolians. In a compilation of some 500 studies of IQs for more than a hundred peoples and nations, it proved impossible to find any studies of the intelligence of the Mongolians (Lynn, 2006; Lynn and Vanhanen, 2006). We have now located two studies of this question by Chinese psychologists and published in Chinese. The results obtained in these studies are summarized and discussed in this paper.

Before considering these studies, we should consider what prediction can be made regarding the intelligence of the Mongolians. It has been found by Cavalli-Sforza, Menozzi and Piazza (1994, p.78) in their genetic analysis of samples of world populations that Mongolians are most closely related to the Samoyeds (genetic distance = .2) of North East Asia. They have a more distant genetic affinity with the Japanese, Koreans, the Northern Chinese and Tibetans (genetic distance = .05), and a still more distant genetic affinity with the Inuit (Eskimos) (genetic distance = .108). In the compilation of studies of intelligence worldwide, it was not possible to provide any estimate of the intelligence of Samoyeds to whom the Mongolians are most closely related. It was estimated that the Chinese, Koreans, and Japanese (collectively designated East

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Asians) have a mean IQ of 105, while the Inuit (Eskimos) have a mean IQ of 91 (these IQs are calculated in relation to a British mean of 100). We should expect therefore that the mean IQ of the Mongolians would be intermediate between that of the two peoples to which they are most closely related (the East Asians and the Inuit), i.e. in the range between 91 and 105. Since the Mongolians are genetically closer to the East Asians (of China, Korea, and Japan) than to the Inuit, we should expect that their IQ would be closer to these. The genetic distance between the Mongolians and the East Asians is approximately half the genetic distance between the Mongolians and the Inuit (.05 compared with .108). We should expect therefore that the IQ difference between the Mongolians and the East Asians would also be about half the difference between the Mongolians and the Inuit. On this reasoning, the mean IQ of the Mongolians would be expected to be around 100, 5 IQ points lower than that of the East Asians, but 9 IQ points higher than their more distant relatives, the Inuit.

The two studies to be described tested the intelligence of Mongolian and Han Chinese children living in the same communities within the Mongolian Autonomous State of Xinjiang Province and Inner Mongolia. In historical times Inner Mongolia was inhabited by warring nomadic groups, but during the nineteenth and twentieth centuries the Chinese colonized the region and Han Chinese settled it as agriculturalists. Many Mongolians abandoned their nomadic lives and adopted the settled agriculture lifestyle of the Han Chinese. The result of this has been that Mongolians and Han Chinese have come to live in the same settled agricultural communities and enjoy a closely similar environment.

The results of the two studies are given in Table 1. The first study by Na and O (1994) reports the IQs of Han children (N=3213) and Mongolian (N=1481) children aged 5-14. They were tested with an adaptation of Raven's Progressive Matrices designated the Connection Raven's Test (CRT) that combined items from the Standard Progressive Matrices and the Colored Progressive Matrices and which was constructed and normed on a rural sample in Tianjin by Wang Dong. The results are presented as IQs (raw scores are not given). The Han children obtained a mean IQ of 101.6 and Mongolian children obtained a mean IQ of 96.3, giving the Han children an advantage of 5.3

IQ points. These IQs are in relation to 100 for Han Chinese children in China, so the Han sample in the study was closely representative of the national norms. The Han Chinese comprise about 90 per cent of the population of China and about 79 per cent of the population of Inner Mongolia.

The second study is by Yang and Gong (1994) and compared 5-6 year old Han (N=151) and Mongolian (N=150) children for intelligence tested with the Chinese revision of the Wechsler Preschool and Primary Scale of Intelligence (WPPSI) translated into the Mongolian language. Both groups of children lived together in Inner Mongolia. The Han children obtained a mean IQ of 99.1 and Mongolian children obtained a mean IQ of 94.9, giving the Han children an advantage of 4.2 IQ points (as in the first study, these IQs are in relation to 100 for Han Chinese children in China, so again the Han sample in the study was closely representative of the national norms).

The results of the two studies are consistent in indicating that the mean IQ of the Han Chinese is a little higher than that of Mongolians by 5.3 and 4.2 IQ points, respectively. In both studies these differences are statistically significant at $p<.01$. The first sample is much larger than the second sample and the result should be accorded greater weight. When the results of the two studies are weighted by sample size, the mean IQ of the Han exceeds that of the Mongolians by 5.2 IQ points.

Table 1.
IQs of Han Chinese and Mongolians

Age	N	Test	Han IQ	Mongolian IQ	IQ difference	Reference
5-10	4964	RPM	101.6	96.3	5.3	Na & O, 1994
5-6	301	WPPSI	99.1	94.9	4.2	Yang & Gong, 1994

Yang and Gong (1994) study also reported Wechsler Verbal and Performance IQs for the Han Chinese and Mongolian

children. On the Verbal IQ the Han Chinese scored 10.2 IQ points higher than the Mongolian, but on the Performance IQ the Mongolians scored 2.5 IQ points higher than the Han Chinese. This trend was the same in the capital city Hohhot, another large city and in a smaller town although the percentages of the two races varied from place to place with more Han in the cities and more Mongolians in the smaller towns. Interestingly, the bilingual Mongolian children had lower mean IQs than those children who only spoke a single language (either Mandarin or Mongolian) even though they were tested in their better language.

Discussion

The 5.2 IQ point lower IQ of the Mongolians, as compared with the Han Chinese, is very close to what would be predicted from the genetic relatedness of the Mongolians to the Mongoloids and their more distant genetic relatedness to the Inuit (as discussed in the first part of this paper). It is a strength of both the studies that the Mongolian and Han Chinese children lived together in the same communities and experienced similar environments, so the mean IQ difference is most reasonably attributable to genetic differences between the two peoples. It is also useful to note that the children in Yang and Gong's study were 5 and 6 year olds who had either not begun school or had only been in school for a short time, so the intelligence differences cannot be due to school effects. A further interesting finding by Na and O was a link between mean IQ and parents' occupation for the Mongolian children. For the children of scientists it was 101.05, cadres 97.11, workers 93.73 and herdsmen 88.35 (these differences are statistically significant at $p<0.001$). The authors argue that this may be as a result of home environment or else a result of the more able Mongolians leaving the pastoral way of life. Despite Inner Mongolia currently showing the greatest growth rate in GDP of any area in China, the economic gap between the cities and the countryside is increasing and in 2004 was twenty times greater than it was in 1985 (Inner Mongolia Economic Information Network, 2006).

In terms of the international scale of IQs based on a British mean of 100 given in Lynn (2006), the Chinese have a mean IQ of 105. Hence in terms of this international scale the

Mongolians have a mean IQ of 100 (5 IQ points lower than the Chinese). This possibly surprisingly high figure is corroborated by the large brain size of Mongolians because brain size is associated with intelligence at a magnitude of 0.40 in the summary of studies given by Vernon, Wickett, Bazana and Stelmack (2000) and .33 in McDaniel's (2005) meta-analysis. Smith and Beals (1990) in the most extensive data ever published on the brain sizes of 87 peoples worldwide, give an average brain size of 1,489cc for Mongolians, as compared with 1,418cc for Chinese and 1,369cc for Europeans. The larger brain size of Mongolians than of Chinese is inconsistent with their lower IQ. The most likely explanation for this is that there are other neuro-physiological determinants of intelligence (neural processing speed or accuracy, working memory capacity, etc) apart from brain size and that the Chinese have an advantage in these. Cai and Ding (1997) noted that those minority people who lived with the Han in other areas of China had higher speeds in all tests at all ages than those who lived in separate minority areas, indicating perhaps that the speed factor in testing may not be valued in other cultures.

It is an interesting feature of Yang and Gong's study that although the Han Chinese children had a higher Verbal IQ than the Mongolians, the Mongolians had a slightly higher Performance IQ than the Han Chinese. The Performance IQ is largely a measure of non-verbal, visualization and spatial abilities. It has been found in many studies that the Chinese and other East Asian peoples have stronger Performance IQs than Verbal IQs (Lynn, 2006), as compared with Europeans, so the Mongolians have an even more extreme form of the high Performance-low Verbal IQ profile. The explanation for this may be that in the exceptionally cold environment of Mongolia the peoples became wholly dependent on hunting for food and this exerted strong selection pressure for the enhancement of the visualization and spatial abilities that were required for successful hunting.

Although the Mongolians have a high mean IQ, the same as that of the British and other European peoples, and only 5 IQ points lower than that of the Han Chinese, Mongolia today is a third world country in terms of the standard of living at $1,425, about the same as that in sub-Saharan Africa (e.g. $1,474 in Cameroon and $1,735 in Ghana), and well below that in Europe

(e.g. $20,336 in Britain and $22,169 in Germany) (figures for real GDP per capita in 1998 are given for all countries in Lynn and Vanhanen, 2002). Nevertheless, the Mongolians achieved impressive successes in the 13th century when under the leadership of Genghiz Khan, his sons and grandson Kublai Khan they conquered China, much of Asia north of the Himalayas and eastern Europe. For something like a century "Genghiz Khan and his sons ruled over a wider land empire than has ever been formed before or since" (Fitzgerald, 1986, p. 431), although they were subsequently defeated by the Chinese and expelled from China.

The explanation for the failure of the Mongolians to develop as an advanced civilization is most likely related to the harsh environment of Mongolia, which consists partly of the Gobi desert and its fringes, and partly of a high plateau in which "there are few areas suitable for agriculture, since even where the soil is fertile tillage frequently produces erosion" (Encyclopedia Britannica, 1960, vol. 15, p.713). Mongolians adapted to this environment by living as nomads in small groups, dwelling in yurts (tents) and tending herds, largely of sheep, although in recent decades many of them have come to live in permanent settlements.

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