Greek IQ

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Buj's Study

The only comparative study of the average IQ in various European nations, using the same, culture-fair test (Cattell, Scale CPT3) and during roughly the same time period was performed by Buj [1] in 1981.

Buj administered his test to samples in the capitals of the nations included, over a 5-year period. The sample size was 1 for every 40,000 inhabitants. The sample included individuals from all ages from 16-20 to 60, in 10-year increments.

The means and standard deviations for the 21 populations tested are given in the table below. Note, that the test in question was normed on a white American population with a mean of 100 and a standard deviation of 24. Note that normal IQ tests use a standard deviation of 15. The normalized mean value in a standard (SD=15) scale is also given in the table below.

|	IQ Mean	IQ Std Dev	Normalized IQ Mean (SD=15)
Italy	103.8	35.2	102.4
Poland	108.3	29.7	105.2
Germany	109.3	22.4	105.8
Spain	100.3	34.7	100.2
France	96.1	27.1	97.6
Yugoslavia	105.7	34.1	103.6
Czechoslovakia	100.4	25.9	100.3
Bulgaria	96.3	34.7	97.7
Great Britain	102	19.3	101.3
Sweden	105.8	25.8	103.6
Greece	99.4	25.6	99.6
Belgium	99.7	23.6	99.8
Finland	98.1	26.6	98.8
Holland	109.4	16.1	105.9
Hungary	100.5	21.4	100.3
Portugal	102.6	18.7	101.6
Switzerland	102.8	19.4	101.8
Austria	103.5	15.3	102.2
Ireland	99.2	17.3	99.5
Denmark	100.7	13.3	100.4
Norway	101.8	11.6	101.1

There are several interesting observations to be made. First of all, the mean IQ values show a range of only 8 IQ points. This is a tiny fraction of the global IQ variation, where groups have been said to have IQs as low as 70 and as high as 116. Thus, we emphasize the homogeneity of European IQ variation.

A second observation is that there is no significant geographic structuring of mean IQ. A linear regression of mean IQ with latitude revealed a statistically insignificant association ($R^2 = 2.5\%$). This means roughly that northern and southern Europeans are not significantly different in their mean IQ.

Mean IQ Vs Latitude (21 European Populations)

$y = 0.092x + 97.637$
$R^2 = 0.0253$
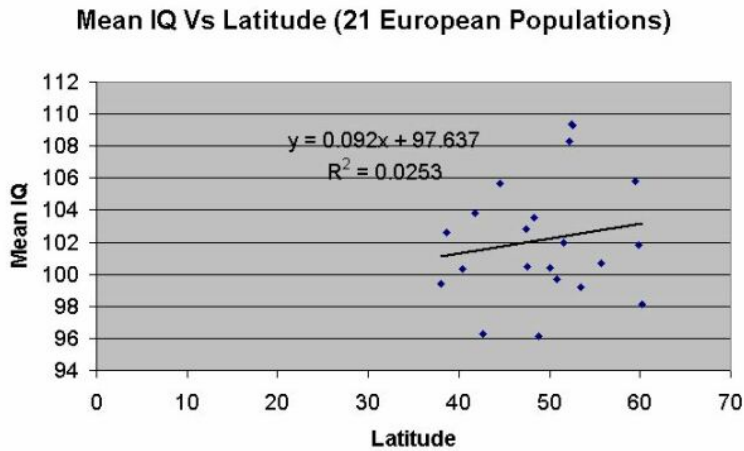
A third observation is that there is a significant (p0.05) geographic structuring of the standard deviation of IQ. A linear regression showed that 21.4% of the variation can be explained by latitude alone. This indicates that southern Europeans tend to be more variable than northern Europeans, with possible overrepresentation at the high and low ends of the IQ curve.

Standard Deviation of IQ Vs Latitude (21 European Populations)

$y = -0.5043x + 48.585$

$R^2 = 0.2135$

IQ Std Dev (y-axis), Latitude (x-axis)
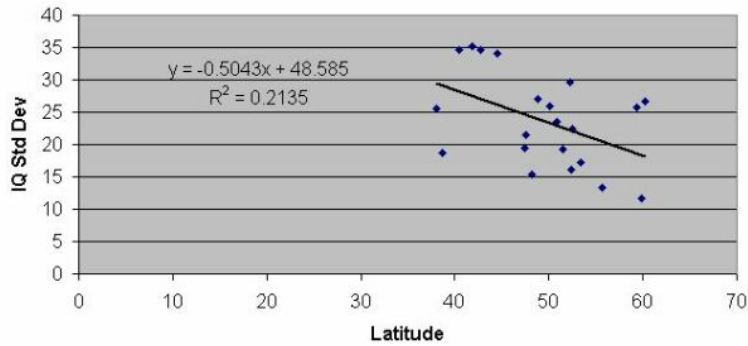
It is striking that some northern European population groups, e.g., the Norwegians have a very very low standard deviations (11.6), less than half that of the white American population (24). In contrast, e.g., the Italians and the Bulgarians have standard deviations about 150% of white Americans. There are many possible reasons for this:

- **Sample Selection**. Local problems with selection of samples in the European capitals may have distorted the results. Buj notes that the difference is too large to be explained by chance alone.

- **Heterogeneous Population**. It may be that southern European societies, which underwent the trasition to urbanization are still largely heterogeneous, including elements of dissimilar backgrounds. This will be discussed further for the case of Greece.

- **Genetics**. A tantalizing suggestion is that the relative genetic homogeneity of northern European populations may in fact be linked to their lower IQ variability. Northern Europeans lived in the pre-civilized stage much longer than their southern counterparts. It is not unlikely that social stratification and distinct social roles (from unskilled laborer to philosopher) in the European South may have created a wider spectrum of cognitive aptitudes in the population.

More research much doubtlessly be done to confirm, or deny the standard deviation differential and to investigate its possible causes.

The Greeks

With respect to the Greeks, we note that their mean (99.4) and standard deviation (25.6) are insignificantly different from the white American mean. That means that in 1981, Greeks were

roughly as smart as white Americans. But, we must note that the population of Athens included a wide variety of individuals, some of rural origin and poor education, others of city origin and better education. Indeed, according to Alexopoulos [2], there was a difference of 12 IQ points between rural and urban Greeks in 1979, close to the time of Buj's study, which was reduced to only 4 points by 1997.

Newer comparative data are lacking, but we may speculate as for the causes for this reduction in urban-rural difference and its effects on overall Greek IQ. As Alexopoulos himself suggests, the main cause has to be increased media penetration, better transportation and rise in overall cultural level in rural areas. There has been no significant flow of rural populations into urban areas post-1979, especially not compared with the situation in the two decades after the Greek Civili War (ending in 1949) when the size of Greek cities, especially Athens tripled. Social progress may also have improved urban Greek IQ, to a lesser degree.

Thus, it appears that the change in Greek IQ over the last twenty years is probably an improvement. Hence, the figure of 1981 probably underestimates present-day Greek IQ.

That the rural-urban IQ difference is entirely cultural is shown by three factors: (i) its drastic reduction during a period where flow of population to the cities was not intense, (ii) the population structure of Greece, whose population was mostly rural and agricultural only 2-3 generations ago: this means that the cities of Greece have not had enough time to breed a population which might differ genetically from the general Greek population. Finally, (iii) the overwhelming success of students from the countryside in standardized competitions, such as entrance examinations to tertiary education, as opposed to their city counterparts, indicates that rural Greek students excel at a national level, perhaps having higher degrees of motivation to improve their social status through education.

Lynn's Study

A book [3] by Lynn and Vanhanen gives the Greek IQ as 92. This low value is an artefact of the authors' methodology which we will subsequently explain. First of all, the value of 92 is relative to the British population, hence it is in reality 94 relative to the white American population usually taken as a standard in IQ studies.

Second, the value of 92 is the average of two separate studies, the aforementioned by Buj (although Lynn erroneously reports the IQ for Greece as 97), and a study from 1961 on 9-14 year-olds [3]. The logic of the averaging is not properly explained by the authors and is extremely misleading. First, the sample is not an adult one, and while child IQ is correlated with adult IQ, it is not necessarily an accurate predictor thereof. Second, the parents of the 1961 sample probably had a low educational level compared to the 1981 one. This is because universal 9-year education was only adopted in Greece in 1965, by the government of G. Papandreou; also, access to education in rural areas was more constrained and the education of many was interrupted during the two Balkan Wars, two World Wars, one Greco-Turkish War, and one Civil War that Greece fought in the first half of the 20th century. Educational attainment of parents is a factor influencing intellectual development of their children.

Third, the generation of 9-14 years olds of 1961 was born during the aftermath of World War II, and during the Greek Civil War. Food storages, Army-guerilla warfare and general privation doubtlessly had adverse developmental effects. For all these reasons, the value of 92 for Greeks is completely artificial and does not represent the Greeks of 1981, much less those of the present-day.

Demetriou's Study on Greeks and Chinese

Recently, Demetriou et al. [4] compared the intelligence of Greek and Chinese pupils aged 8 to 14. It is generally reported that East Asians tend to score somewhat higher than Europeans in IQ tests, but the causes of this are little known. In this study, the researchers compared the two groups on measures of processing efficiency, working memory, and reasoning and the three separate domains: verbal/propositional, quantitative, and visuo/spatial.

The methodology used in this study allowed for a more fine-grained assessment of the intelligence of the two groups. A series of different models were tested, and a particular three-level model was found to best explain the performance of the two groups. The first-order factors of this model were: speed, control of processing, phonological/visuo-spatial/executive working memory, and spatial/quantitative/verbal thinking. These are obviously not independent of each other, and three second-order factors were identified: processing efficiency, working memory, and thinking. Finally, a third-order general factor, or g was identified.

This model captures the fact that individuals have both general capacities which are useful for many different tasks, as well as more specialized capacities, which are useful for particular ones, e.g., reasoning about numbers. It is thus a better way to compare two groups than just g, measured by IQ tests, because that is a mix of all different aptitudes and obscures the underlying factors in which two groups may differ.

The first important finding of the study was that the model described above was valid for both Greeks and Chinese pupils. This provides some evidence that the thought process of the two groups is similar, and uses the same set of biological tools, which can be conceptualized as organized in a three-tier hierarchy. There is no difference between the two groups in this respect.

The second important finding is that the Greek pupils did not differ from the Chinese in g or general intelligence. This contrasts with many reports in the literature about the superior intelligence of East Asians compared to Europeans, which are based on studies which average across different capacities and do not take the architecture of mental processing into account.

The Chinese did outperform the Greeks in visuo/spatial ability, but this difference was smaller at earlier ages, grew during the first years of schooling and decreased later. The authors suggest that this pattern can be explained as follows: the Chinese students train their visuo/spatial ability during their early school years, as they have to learn many logographic characters of the Chinese writing system. Later in life, the Greek students adopt compensating strategies to deal with visuo/spatial information, and therefore the difference decreases in this realm.

References

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