

BOOK REVIEW

IQ and the Wealth of Nations

Richard Lynn and Tatu Vanhanen
Praeger Publishers, Westport, CT; 2002. 298 pp.
\$67.95, hardback. ISBN 0-275-97510-X

Heredity (2004) 92, 359–360. doi:10.1038/sj.hdy.6800418

Reviewed by K Richardson

This book starts with the ‘hypothesis’ that differences in IQ are (partly) responsible for differences in national wealth around the world. It ends with the claim that the gap between rich and poor ‘will be impossible to eradicate’ (p 195). In between is a remarkable creation and moulding of data to show the statistical correlation the hypothesis requires. But there is circularity in the whole exercise.

As the authors acknowledge, national wealth reflects industrial development, which requires an ever-expanding middle class, and IQ scores simply reflect middle class membership. It is a widespread error to treat IQs as values on a simple biometric trait, as these authors do. There is no scientific basis for it. The Parisian Alfred Binet originally devised the IQ test to screen children for educational difficulties, and made clear its conceptual foundations: ‘Psychologists do not measure...we classify’, he said (quoted by Zenderland, 1998, p 96). This is because IQ tests are not constructed on the basis of any scientific model of intelligence: they are simply created (by statistical manipulation of item content) to identify individuals who have already been deemed to be ‘intelligent’ by other, more subjective, criteria. Test items are devised impressionistically by middle class psychologists and simply mimic psycholinguistic structures of schooling and middle class (eg clerical/administrative) occupations. This cultural embedding is as much true of the (superficially concealed) structures in nonverbal tests like Raven’s Matrices, as of those requiring little more than simple factual knowledge (see Richardson (2002) for review). Test performance also requires certain class-related affective dispositions such as self-confidence and self-efficacy beliefs, and even status consciousness (Lovaglia *et al*, 2002). Of course, test preparation is much assisted by the more active encouragement for school learning found in middle class homes.

Good IQ scores thus simply reflect the educational aspirations and the cognitive, linguistic, and affective dispositions that go with middle class background. They have been shown to be quite unrelated to the truly complex cognition demanded in everyday social and practical tasks. Perhaps, the best evidence for this is the so-called ‘Flynn effect’. This refers to the huge secular increases in average IQ test performances over many decades in all countries where records are available. Scarcely mentioned in this book, because fatal to its basic thesis (see below), and baffling psychologists who still think of the IQ as a biometric test, it simply reflects the rapid expansion of the middle classes, and their associated psycho-linguistic/affective dispositions. It is not a reflection of increased mental ability as such, as Flynn agrees.

In other words, the average IQ of a population is simply an index of the size of its middle class, both of which are *results* of industrial development. So, an association between IQ and national wealth is hardly surprising, though its causal direction is the opposite of that assumed by L&V. But I would not take the ‘evidence’ presented in this book to serve arguments either way. Of the 185 countries in the sample, ‘direct evidence’ of the ‘national IQ’ is available for only 81! National IQs for 101 countries are simply estimated from ‘most appropriate neighbouring countries’, that is, the ‘known IQs’ (sic) of their ‘racial groups’ (p 72). But, even for most of the others, ‘direct evidence’ is putting it strongly, as even a cursory glance at the motley tests, dates, ages, unrepresentative samples, estimates, and corrections show. A test of 108 9–15-year olds in Barbados, of 50 13–16-year olds in Colombia, of 104 5–17-year olds in Ecuador, of 129 6–12-year olds in Egypt, of 48 10–14-year olds in Equatorial Guinea, and so on, and so on, all taken as measures of ‘national IQ’.

But this exercise in creative data collection is further confounded by the afore-mentioned secular IQ gains (mentioned here in only a few lines in Appendix 1). Now if IQ is a test of innate intelligence, as these authors suggest, there should not be such enormous gains, and if scores only represent increased ‘competence’ at the test, as some suggest, then it only proves what a mixed-up instrument it is. Never mind, L&V think they can still reveal the alleged ‘true’ intelligence of nations underneath. Their scheme is to take the British Ravens IQ in 1979 as 100, and simply add or subtract 2 or 3 to the scores from other countries for each decade that the relevant date of test departs from that year. The assumptions of size, linearity and universal applicability of this correction across all countries are, of course, hugely questionable if not breathtaking. Flynn’s original results were from only 14 (recently extended to twenty) industrialised nations, and even those gains varied substantially with test and country and were not linear. For example, recent studies report increases of eight points per decade among Danes; six points per decade in Spain; and 26 points over 14 years in Kenya (confirming the expectation that newly developing countries would show more rapid gains). It is obvious that larger or smaller corrections over larger or smaller numbers of years can transform relative scores and rank orders, especially if the gains are nonlinear.

With the measures of GDP, L&V admit that estimates may be ‘highly unreliable for developing countries’ (p 83), excluding up to 50% of the workforce, with often huge differences between males and females, and thus often ‘not strictly comparable across regions’ (p 83). This whole empirical license becomes absurd when the correlation between ‘IQ’ and GDP is extended back to 1820, nearly a century before the IQ test was invented (yes, we just get more ‘estimates’).

On L&V’s one-sided attempts to ‘validate’ the IQ test, I will be brief. Intercorrelations among tests simply describe the variance structure of scores, not their origins, and ‘there has been relatively little progress in understanding their nature’ (Deary, 2001a, p 127). Correlation between test scores and, for example, school

performance – at least part of which is built in by methods of test construction – give us no causal picture. L&V do not mention that the correlations they present between IQ and job performance are also controversially ‘corrected’: raw correlations are very weak (~ 0.3), and these tell us nothing about causes, which could be entirely noncognitive in origin. Finally, weak and confusing correlations between IQ and reaction times, which L&V naively take as an index of ‘the efficiency of the brain’ (p 66), are not ‘theoretically tractable...merely linking an unknown to another unknown’ (Deary, 2001b, pp 167).

I will also be brief on the crude ‘genetic’ model being promoted here. In an age when we know beyond doubt that there are very few truly additive, Mendelian loci for complex traits (Glazier *et al*, 2002), why is it that psychologists continue to test and report additive-only models? Because the only methods available (twin and adoption studies) are incapable of testing any *other* model! And why are such estimates of additive gene variance so huge (80% of total IQ variance according to L&V)? Because they are riddled with methodological defects. (The poor empirical standards in this area are really quite shocking, in my view.) On the ‘racial’ categories, upon which this book is fundamentally predicated, see the Editorial in *Nature Genetics* (24, 97–98, 2002): ‘the concept of race is a social and cultural construction which has no scientific justification in human biology’.

This is not so much science, then, as a social crusade. The Pioneer Fund of America, champion of many dubious causes in the past, will obtain little credit from having assisted this one. The myriad corrections and estimates aside, this is a blast from another age, an old-fashioned attempt to give an imperial mindset biological validity. As Binet himself said, when he saw his test being wielded like a dipstick by Anglo-American eugenicists, ‘we must protest against this brutal pessimism’.

References

- Deary IJ (2001a). Human intelligence differences: a recent history. *Trends Cogn Sci* 6: 121–130.
- Deary IJ (2001b). Human intelligence differences: towards a combined experimental–differential approach. *Trends Cogn Sci* 5: 164–170.
- Glazier AM, Nadeau JH, Aitman TJ (2002). Finding genes that underlie complex traits. *Science* 298: 2345.
- Lovaglia MJ, Lucas JW, Houser JA, Thye SR, Markovsky B (2002). Status processes and mental ability test scores. *Am J Sociol* 104: 195–228.
- Richardson K (2002). What IQ tests test. *Theory Psychol* 12: 283–314.
- Zenderland L (1998). *Measuring Minds: Henry Herbert Goddard and the Origins of the American Testing Movement*. Cambridge University Press: Cambridge.

K Richardson

13 Rectory Lane, Wolsingham, Co., Durham DL13 3AJ, UK
E-mail: k.richardson@open.ac.uk