Chapter 1. Introduction

The problem of why some nations are rich and others are poor has been discussed since the eighteenth century. It was addressed by Montesquieu (1748) in his *L'Esprit des Lois,* in which he noted that rich nations are mainly in temperate latitudes while poor nations are mainly in tropical and sub-tropical latitudes and suggested that the heat in tropical and sub-tropical latitudes is enervating and reduces the capacity to work. Later in the century, Adam Smith (1776) addressed the same question in his *An Inquiry into the Nature and Causes of the Wealth of Nations,* in which he argued that the principal factors responsible for national wealth were specialisation and the division of labour, the skills of the population and free markets. The skills of the population are dependent on their intelligence, because people with high intelligence acquire more productive skills than those with low intelligence. From this time onwards, numerous theories have been proposed to explain differences in the national differences in wealth.

In 2002 Tatu Vanhanen and I examined the theory that national differences in intelligence make a significant contribution to differences in wealth in our book *IQ and the Wealth of Nations.* We gave IQs for all major 185 nations in the world with populations over 50,000. These consisted of measured IQs of 81 nations and estimated IQs for 104 nations that were ethnically similar to those for which we had measured IQs. We found that national IQs were significantly correlated at .62 with per capita income measured as real GDP (gross domestic product) in 1998 (Lynn and Vanhanen, 2002, p.111). We claimed that this showed that differences in national IQs explained 38 percent of the variance in national per capita income (.62 squared = .38).

We were not wholly surprised that this claim received a mixed reception. Among our negative critics, Susan Barnett and Wendy Williams (2004) asserted that our national IQs were "virtually meaningless"; Hunt and Sternberg (2006) described them as

"technically inadequate… and meaningless"; Volken (2003) criticised our national IQs as "highly deficient"; Astrid Ervik (2003) asked "are people in rich countries smarter than those in poorer countries?" and concluded that "the authors fail to present convincing evidence and appear to jump to conclusions"; and Thomas Nechyba (2004) wrote of their "relatively weak statistical evidence and dubious presumptions".

These negative reactions to our work have been well summarized by Juri Allik, professor of psychology at the University of Tartu: "By analogy with many previous controversial discoveries, it is predictable that the first most typical reaction would be denial. Many critics are not able to tolerate the idea that the mean level of intelligence could systematically vary across countries and world regions. Neither are they ready to accept that from the distribution of mental resources it is possible to predict the wealth of nations. The next predictable phase is acceptance of the facts but denying their interpretation. The simplest strategy is to interpret the results as measurement error. A useful strategy is to discover a few small mistakes declaring that all the results are equally suspicious" (Allik, 2007, p. 707).

Others who greeted our national IQs positively were Erich Weede and Sebastian Kampf (2002) who wrote that "there is one clear and robust result: average IQ does promote growth". Edward Miller (2002) wrote that "the theory helps significantly to explain why some countries are rich and some poor"; Michael Palairet (2004) wrote that "Lynn and Vanhanen have launched a powerful challenge to economic historians and development economists who prefer not to use IQ as an analytical input".

In 2006 we published a further study of national IQs and their correlates in our book *IQ and Global Inequality* (Lynn and Vanhanen, 2006). In this we presented measured IQs for 113 nations and estimated IQs for 79 nations, giving a total of 192 nations, comprising all the nations in the world with populations over 40,000. Following the method in our first study, we used the measured IQ of the 113 nations to estimate the IQs for the additional 79 nations that were ethnically similar to those for which

we had measured IQs. We found a correlation of .64 between national 1Q and per capita income measured as GDP (Gross National Product) in 189 nations, and thus closely similar to the correlation of .62 reported in our 2002 book. In our 2006 book we extended the analysis beyond economic development and showed that national IQs explain substantial percentages of the variance in national differences a number of other phenomena including literacy (.65), life expectancy (.75), infant mortality (-.77) and democratic institutions (.53).

In 2012 we published a third study of national IQs and their correlates in our book *Intelligence: A Unifying Construct for the Social Sciences* (Lynn and Vanhanen, 2012). In this we gave revised and updated measured IQs for 161 nations and territories, and estimated IQs for an additional 41 smaller nations and territories, giving IQs for all 202 nations and territories in the world with populations over 40,000. We found that national IQs were significantly correlated with GDP per capita in 2003 at .71, significantly higher than our two previous correlations of .62 and .64, and showing that national IQs explained 50 percent of the variance in national per capita income (.71 squared = .50). We also found that national IQs were significantly correlated with adult literacy (.64), income inequality assessed by the Gini index (47), the rate of unemployment (-.76), researchers in research and development (.67), gender inequality (-.86), corruption (-.59), life satisfaction (.63) , religious belief (-.48), life expectancy (.76), malnutrition (-.52), tuberculosis (-.57), quality of water (.62) and quality of sanitation (.71).

These additional correlates validated our national IQs and a number of scholars came to accept our work on national IQs and its contribution to the explanation of a wide range of national and social phenomena. Heiner Rindermann and Steve Ceci (2009, p. 551) described it as "a new development in the study of cognitive ability: following a century of conceptual and psychometric development in which individual and group (socio-economic, age, and ethnic) differences were examined, researchers have turned their attention to national and international differences in cognitive

competence. The goal is to use cognitive differences to understand and predict national differences in a variety of outcomes: societal development, rate of democratization, population health, productivity, gross domestic product (GDP), and wage inequality".

Martin Voracek (2013) wrote that "The publication of a compilation of national intelligence (IQ) estimates for the world's countries by Lynn and Vanhanen (2002; revised and extended versions: Lynn and Vanhanen, 2006, 2012a) has spawned considerable interest among researchers across a variety of scientific disciplines… Up to now, across dozens of studies, theoretically expected and thus meaningful aggregate-level associations of national IQ with numerous other psychological, socioeconomic, and demographic indicators have been obtained. Variables investigated range from atheism (Lynn, Harvey & Nyborg, 2009), scholastic achievement (Lynn, et al., 2007), fertility (Shatz, 2008), inbreeding depression (Woodley, 2009), health outcomes (Reeve, 2009), and life history traits (Rushton, 2004; Templer, 2008) to homicide (Lester, 2003; Templer, Connelly, Lester, Arikawa & Mancuso (2007) and suicide rates (Voracek, 2004, 2005, 2006, 2007a, 2008), to name just a few examples". Even Earl Hunt, who initially rejected our national IQs as meaningless, conceded that "in spite of the weaknesses in several of their data points Lynn and Vanhanen's empirical conclusion was correct" (Hunt and Wittmann, 2008).

Further support for the validity of our national IQs was provided by Sergey Kulivets and Dimitri Ushakov (2016) of the Russian Academy of Sciences who wrote: "We propose that problem solving is the mediator between human competencies and achievements. Creation of goods and services is based on problem solving in design, production and delivery... We propose a mathematical model based on these assumptions. The simulation reproduces most important traits of Lynn and Vanhanen's (2002) findings. The simulation shows a non-linear growth of economic achievements with national IQ growth as well as an increase of between countries variance. Thereby the proposed model can serve as a satisfactory explanation for empirical data on links between

national IQs and economic achievements".

Heiner Rindermann (2018) has made a major contribution to updating our national IQs and their economic and social correlates in his book *Cognitive Capitalism: Human Capital and the Wellbeing of Nations*. He gives updated national IQs, which he prefers to call cognitive abilities (CAs), for all 200 nations of any significant size in the world calculated from tests of intelligence and educational attainment in the PISA (Programme for International Student Assessment), TIMSS (Trends in International mathematics and Science Study) and similar studies. He follows our work in scaling these on a metric set at 100 for the United Kingdom, with a standard deviation of 15. His CAs for the world regions are as follows. Northeast Asia: 103; Australia/New Zealand, Central Europe and Western Europe, North America: 99; Scandinavia: 97; Eastern Europe: 96; Southern Europe: 93; Southeast Asia: 85; North Africa/Middle East: 84; South/Central Asia: 79; Latin America: 79; Sub-Saharan Africa: 69. These IQs are closely similar to those given in my *Race Differences in Intelligence* (Lynn, 2015).

Rindermann gives a correlation of .82 for 161 countries between national cognitive abilities and per capita income assessed as logged GDP in 2010, showing that two thirds of the variance in national per capita income can be explained by the cognitive abilities of the populations (.82 squared = .67). This correlation is higher than those we reported in 2002 at .62 for 185 countries for GDP per capita and in 2012 at .71 for 192 countries. He has constructed a measure of national "well-being" from wealth, health, life satisfaction, trust, democracy, rule of law, gender equality and low crime, corruption and divorce. He shows that there is a positive correlation of .71 between this and cognitive ability and concluded that "national well-being mainly depends on the cognitive ability level of a society" (p. 382). He also reports a number of other significant correlates of national cognitive abilities that are given in Chapter 3. Another of Rindermann's important contributions is that he has shown that the cognitive abilities of "the intellectual class" (the top 5 percent) generally have a greater positive effect on

national achievements and other desirable outcomes that those of the average, confirming the study by Rindermann, Sailer & Thompson (2009).

In 2017 Robert Sternberg wrote to me that he was inviting the nineteen most cited psychologists on intelligence to contribute chapters on their work to a book he was editing *The Nature of Human Intelligence* and that as I was one of these, he was extending the invitation to me. I accepted the invitation and sent him *The Intelligence of Nations*, which was duly included when the book was published by the Cambridge University Press in 2018. Thus, in the course of twelve years my national IQs had made the transition from "technically inadequate… and meaningless" (Hunt and Sternberg, 2006) to mainstream acceptance.