A review of Richard Lynn's *Race Differences in Intelligence: An Evolutionary Analysis* (Click [here](#) for summary chart. **Warning:** 20 page review.)

The generally listed "peak" age for scientific creativity and productivity is around the surprisingly young age range of 30-40, but the same exact age doesn't apply to all scientific disciplines. The peak in fields that demand greater doses of pure reasoning, such as mathematics, theoretical physics, and molecular biology, appears to be somewhere in the twenties. So, for instance, James Watson discovered the double helix at 25 and then dropped off the radar as anything but a nerd celebrity. In contrast are fields such as evolutionary biology, where years of collecting and assimilating large amounts of data can be required for original analysis. So, for example, Charles Darwin was 50 years old when he published his landmark *The Origin of Species*, not to mention 62 for *The Descent of Man* and 63 for *The Expression of the Emotions in Man and Animals*. What's true for evo-bio may also be true for the often belittled field of psychometrics, or the measurement and analysis of human intelligence, and for much the same reasons. So, to take some more obvious examples, we find that John B. Carroll published his seminal work, *Human Cognitive Abilities*, at the age of 77, while Arthur Jensen was similarly 75 when he published *The g Factor* in 1998 (This spring, in fact, Jensen releases his treatise on mental chronometry, *Clocking the Mind*, at 83).

Richard Lynn, Professor Emeritus of Psychology at the University of Ulster, is surely another example. Now 76, Lynn has released a large number of papers and 5 books since his "retirement", 4 of them since 2001, starting with 1996's *Dysgenics*, 2001's follow-up *Eugenics*, 2001's *The Science of Human Diversity*, 2002's *IQ & the Wealth of Nations*, and now *Race Differences in Intelligence*. Richard Lynn appears to be a surprising exception as a modern hereditarian researcher who has not had to fight an exasperating battle with his institution, but his reputation in the media has been characterized by much the same turbulence as his colleagues' - most prominently during the *Bell Curve* backlash of the mid 1990s. Thus Leon Kamin's [review](#) of the book in *Scientific American* included:

I will not mince words. Lynn's distortions and misrepresentations of the data constitute a truly venomous racism, combined with scandalous disregard for scientific
objectivity. But to anybody familiar with Lynn's work and background this comes as no surprise . . . It is a matter of shame and disgrace that two eminent social scientists . . . [would cite the work of] Richard Lynn . . .

Similarly, New Republic senior editor Charles Lane used Richard Lynn as his launching pad for two jeremiads against The Bell Curve in the invidiously titled (and argued) Neo-Nazis! published in The New Republic, and an expanded version of this article which appeared in The New York Review of Books, titled The Tainted Sources of The Bell Curve, featuring Lynn as the eponymous "tainted source". While these and similar articles in the popular press may have helped solidify Lynn's reputation as a "fringe" researcher among certain segments of the literate public, his reputation as a scientist in differential psychology remains secure and respectable. Little known, for instance, is the book review of Richard Lynn's Dysgenics (about the genotypic decline of socially valued traits) by the late scientific legend William Hamilton in the Annals of Human Genetics. This review is still available free at the journal's website as a tribute, because it was actually Hamilton's last published piece, submitted just two weeks before his tragically premature death in 2000. In comparison to Kamin's recriminations, Hamilton had nothing but good words for Lynn's character and work, calling Dysgenics a "brave and fertile book", and Lynn himself "brave, thick-skinned, and very persistent to swim against . . . popular antirealistic currents." and that "Lynn . . . does an excellent job with the facts". The contrast between interchangeable talking heads rebuking Lynn as a crank in popular magazines with Hamilton, possibly the most eminent evolutionary theorist of the 20th century, praising him in a prestigious journal at about the same time, could hardly be more ironic. (Meanwhile it is actually Kamin himself who can most convincingly be charged with data distortion and heavily compromised objectivity, see Mackintosh 1998 pp 78-79, 98-102).

Lynn's follow-up book Eugenics (about remediya the genotypic decline of socially valued traits) received similar praise in the American Psychological Association Review of Book's (Lykken 2004) as "[a]n excellent, scholarly book . . . one cannot reasonably disagree with him on any point unless one can find an argument he has not already refuted.", as well as by the journal Nature (Martin 2001) as a "comprehensive histor[y]" and a welcome one, "given the importance of the topic" of dysgenic trends. Lynn's third recent book, The Science of Human Diversity, a hagiography of the Pioneer Fund, also received supporting words in the APARoB from the psychologist Ulric Neisser (2004), who was also chairman of the APA's Taskforce on Intelligence (that was convened largely to counter the proliferation of scientific misinformation against IQ in the Bell Curve aftermath). Despite Neisser's repeated ostentatious and inappropriate insults against his hereditarian colleagues (such as saying that Lynn and Rushton's work on race "turns [his] stomach"), he ultimately couldn't avoid agreeing with Lynn's main argument: "Lynn's claim is exaggerated but not entirely without merit: "Over those 60 years, the research funded by Pioneer has helped change the face of social science"."

Neisser tellingly concludes in agreement with Lynn (and against William Tucker's Pioneer book, also reviewed) that the world was actually better off having the Pioneer Fund: " . . . Lynn reminds
us that Pioneer has sometimes sponsored useful research - research that otherwise might not have been done at all. By that reckoning, I would give it a weak plus" (These words coming from the APARoB should come as some news to certain 'watchdog' outfits which are still attempting to anathemize this same position. Perhaps all these journals and scientists mentioned above should now be added to the list of 'hate groups'?).

Lynn's fourth recent book, along with Tatu Vanhanen, IQ & the Wealth of Nations, received more mixed reviews in academic journals, but this should be taken as a sign of its controversial importance. Heredity, for instance, hedged its bets and printed a hostile review back to back with a sympathetic one (Richardson, Palareit 2004), as is sometimes done with controversial books (APARoB did the same thing for The Bell Curve, The Nurture Aversion, etc.). Unfortunately, much of the criticism in the journals, as is common in the popular press, centered around an obsessive focus with and antipathy towards the book's hereditary position on racial differences, far outstripping its relevance to the book's thesis that national IQ is a major cause of differences in national wealth. Worse still, many negative reviewers were deeply ignorant of the subjects that made them most angry. Some economists were outraged in stereotypical form, out of use of the "discredited" IQ measure. Almost nobody was qualified to understand the race research, which Lynn specializes in, though it deeply unsettled almost all of them. So, for example, most reviewers took offense at the reference to race and brain size but none had informed or adequate scientific ways to critique it. To date though, the book is already generating a surprising amount of original commentary and research given this radioactivity, (Barber 2005; Dickerson, in press; Hunt & Williams, in press; Jones & Schneider, in press; Jones 2005; McDaniel & Whetzel, in press; Voracek 2004), and it is clearly Lynn's most important contribution to date. Also, while not referenced directly it is also influencing international policy. So, for instance, 2004's international panel of economists in league with Britain's Economist magazine, known as the "Copenhagen Consensus", ranked improving micronutrient levels as the second most important action to help the developing world. The impact of nutrition on intelligence was a prominent part of their argument, with 54 references to the word "cognitive" and 10 references to "IQ" (Jones 2005). These issues and recommendations are quite clearly taken from IQ & the Wealth of Nations.

While Lynn has made valuable and original contributions to a number of psychometric issues, IQ&tWoN, and his recent work with sex differences, confirms that group differences in intelligence are clearly his forte, and since so few other researchers dare to touch the issue, the field is mostly wide open for discovery. Which brings me to Lynn's fifth recent and latest book, Race Differences in Intelligence, which Lynn himself describes as ". . . the first fully comprehensive review that has ever been made of the evidence on race differences in intelligence worldwide". (p. 2) In contrast to IQ&tWoN, RDI does not contain a newly created thesis. This is not to say it is unoriginal, many of its ideas (and much of its copious data) certainly originates with Lynn himself, but the theory, its basic outline and many of the key references of this book were almost all first presented 15 years ago in Lynn's Mankind Quarterly article 'Race Differences in Intelligence: A Global Perspective'.
and its companion piece 'The Evolution of Racial Differences in Intelligence', while an even more basic version appeared in his 1978 chapter 'Ethnic and Racial Differences in Intelligence, International Comparisons' in the book Human Variation.

The main strength of RDII is just how much data Lynn has collected, totaling 620 different IQ studies from around the world and 813,778 tested individuals. While IQ&tWoN, published only a few years ago, presented data from 81 countries, RDII has boosted that number up to 100 different countries (additions include Cameroon, Central African Republic, Estonia, Iceland, Jordan, Kuwait, Laos, Lithuania, Madagascar, Malta, Mozambique, Pakistan, Samoa, Serbia, Sri Lanka, Syria, Yemen, and a few others), amounting to 137 newly referenced IQ studies. RDII is seventeen chapters; the first 2 are on the concepts of race and intelligence. The next 10 chapters cover the psychometric data on 10 different racial groups: Europeans, Africans, Bushman and Pygmies, South Asians and North Africans, Southeast Asians, Australian Aborigines, Pacific Islanders, East Asians, Arctic Peoples, and Native Americans. The next chapter discusses the psychometric justifications for these results, while the last four chapters discuss the environmental and evolutionary nature of these differences according to Lynn's assessment.

Chapter 1 & 2: Intelligence and Race

These chapters are small and polemical. IQ&tWoN had a similarly abbreviated, but fully adequate chapter on IQ and I recommend that one instead. Lynn's chapter on race benefits less by squaring old scores with Ashley Montagu than it would by focusing more on the rapid advances in genetics. Lynn, for instance sourly demonstrates that Ashley Montagu and L.L. Cavalli-Sforza have continuously contradicted themselves trying to strategically deny that populations exist and are genetically differentiated even while ultimately admitting that they do. But these conceits ridicule themselves; Tan (2005) and Rosenberg (2002), which both go sadly unreferenced, help illustrate and justify the use and meaning of Lynn's clusters far more than years-old absurd quotes from race-deniers, which are already well on their way to becoming little but historical oddities. On the other hand, Lynn can't be blamed that his book was published too late to catch the latest paper by Rosenberg in the December 05 issue of PLoS Genetics which again concludes, in the face of recent challenges stating otherwise, that:

... if enough markers are used with a sufficiently large worldwide sample, individuals can be partitioned into genetic clusters that match major geographic subdivisions of the globe. ...

Finally, as a tertiary complaint, Lynn also states:

In the 1830s, Samuel Morton (1849) in the United States assembled a collection of skulls, measured their volume, and calculated that Europeans had the largest brains followed by Chinese, Malays, and Native American
Indians, while Africans and finally Australian Aborigines had the smallest brains. He concluded that these differences in brain size accounted for the race differences in intelligence.

This of course was also Stephen J. Gould's argument in *Mismeasure of Man*. Both mens' assertions should be read in light of science historian, William Stanton's more qualified judgment that: "**Morton himself never equated cranial capacity with intelligence**" (Stanton 1960, p. 30), and that Morton's collection was ethnographic in its aim.

**Chapter 3: Europeans**

Lynn first looked at European IQ in his 1978 chapter - it listed 14 studies from 13 different countries including the European repopulated territories of America, Australia, and New Zealand. Lynn found that they mostly scored extremely similar, with an average IQ of about 100. He also noted that results from Spain and Greece in Southern Europe were lower, although Italy was not. By 1991 the number of European countries covered was 23 with 35 studies. In comparison RDIII now lists data for 36 **majority European countries**, as well as data for European peoples in 6 mostly nonwhite nations, for a total of 112 **different studies and a combined sample of 175,950 people**. Since IQ&WoN, much valuable new data from Europe especially comes from the recent book *Culture and Children's Intelligence*. The median IQ of European peoples is now listed as 99, and this mostly holds for rich countries in the North and poor ex-Communist ones in the East, as well as white Americans, Australians, etc., and whites in six different Latin American nations. But there also appear to be some differences too - Ireland, Portugal and Lithuania all have IQs, unlike their neighbors, in the low 90s. Multiple studies give similar results showing the scores are 'reliable' if not 'valid' (Ireland for instance has three studies with large standardization samples showing very similar results). Secondly, while Southern Europe does not score poorly as a block (Spain and Italy score "normally"), Southeast Europe does reflect a regional trend of lower scores that extends from the Balkans into Turkey and the Near East (so for instance Romania 94, Bulgaria 93, Croatia 90, Serbia 89, Greece 93 [5 studies], and Turkey 90). Lynn also compares 4 different regions of Europeans (including North America) on IQ and brain size, finding that North American whites have the largest brains and highest IQs (perhaps because of selective migration?) and Southeast Europeans the lowest test scores and brain size. Of course if there is a decline in the Balkans, Lynn's Flynn reduced estimate of 99 for Europe is incorrect, and needs to be dropped probably even a few more points.

While Lynn looks at adoption studies for evidence of heredity for other races, he unfortunately does not consider it for this major difference within Europe, even though it would seem like an even more suitable test, since these adoptees are not visibly racially distinct, controlling for the possible social effects of e.g., racism or stereotypes. Also, I know that there are, in fact, a number of IQ studies of Romanian children adopted into American and British homes. It was unfortunate that they were not reviewed. My superficial impression is that they indeed show a lower IQ than other adoptees.
I don't expect any of this to go uncontested, and Lynn's accuracy and care with the data is a fitful concern. Lynn and colleagues go back and forth over differences of up to 5 points in the technical literature all the time, and these debates are resolved slowly as more literature accumulates on the controversial/disputed difference, but no one has 'exposed' Lynn fraudulently manufacturing a conclusion, as is sometimes hinted. As with Africa, Asia, and sex differences, Lynn seems adept at building up the case for his controversial estimates with more data over time. But getting overly concerned with values of several points in single European countries is probably unwarranted, as Lynn himself notes, it's more helpful to concentrate on the general patterns.

Chapter 4: Africans

Lynn first looked at Sub-Saharan African IQ in his 1978 chapter - it listed 7 studies from 4 different countries including 1 Diaspora territory: Jamaica. By 1991 the number of African countries covered was 6 with 11 studies. In comparison RDII now lists data for 23 majority black countries in and outside of Africa, as well as data for Diaspora blacks in 5 mostly nonblack nations, for a total of 155 different studies and a combined sample of 387,286 people.

References to the subject from the 60s and 70s typically gave Africans an IQ much like African Americans, thus Jensen (1973) wrote: "We do know that studies of the intelligence of Negroes in Africa have found them to average at least one sigma below Europeans on a variety of tests" (p. 66). Lynn (1978) is no exception. It wasn't until 1991, that Lynn had revised this estimate dramatically to minus 2 standard deviations, which has been the source of much anger and controversy ever since. Well, the current volume drops it a little bit lower even, to an IQ of 67 as the median score from 57 studies collected from 18 different African countries. Similarly, the average IQ of black populations from 6 locations in Latin America and the Caribbean is 71. This is virtually the same as the score for Ethiopians in Israel. In developed, predominately white countries, a second cluster of scores emerge for black Africans. African-Americans, of course, score about 85, while the median IQ from 20 studies of blacks in Britain is 86. Similarly, West Africans from the Dutch Antilles living in the Netherlands were found to have an IQ of 85. Although an older reference, Lynn also leaves out an IQ study of an established black population in Canada, descended from US migrants (Tanser 1939, 1941) - the measured IQ was about 87. Given that the scores have not changed a bit in America for 100 years, the age should not matter, and the educational gap of blacks in Canada is still discussed as a problem and mystery to this day.

More than Asia, Europe, and other areas of the world, the accuracy of such a low IQ for Africa is popularly questioned, but more with reflexive incredulity than adequate methodology. A typical comment is that it is hard to believe that half of Africa is mentally retarded. It is also hard to believe that 16% of African-Americans are "mentally retarded", but 16% of African-Americans do have IQs below 70, and the APA recognizes this as an accurate and factual reflection of ability - IQ tests are not
biased against African-Americans (the criticism is fairly ignorant to begin with since diagnosing mental retardation is mostly orthogonal to the intelligence test, See Mackintosh 1998, p. 177). While this is not controversial now, among scientists, it certainly was as shocking to believe for many back in the 1970s as the 2 SD difference is to many today. While the logic of test bias has been around since at least the 1960s, a turning point in the scientific consensus on African-American IQ certainly came with Arthur Jensen's _Bias in Mental Testing_ (1981) which exhaustively laid out the tools and methods for accurately discerning bias in IQ test results. In principle these same methods can be used to answer if 70 is or is not a spurious estimate for Africa.

Lynn unfortunately is less than thorough and rather unconscientious on this topic, and since the estimate was his to begin with he should be the most careful and aggressive one defending it. Lynn skips the issue of internal test validity entirely, even though there are some key references from Africa that stand repeating, and speak directly to commonly raised issues such as, e.g. language bias. Key references for external validity are also omitted, though Lynn's chapter 13 shows that IQ certainly doesn't underpredict African academic performance where countries are included for International comparisons. So for instance, while African countries like Nigeria and South Africa may score 2 SD below European nations on IQ tests, Lynn shows that international indices of math and science performance between the 1960s and 1990s reveal an even more dramatic gap of about 2 and a half SD. (It was noted in the Wall Street Journal, for example, that in South Africa: "... barely 1% of black high school students pass higher grade math"). Since East Asian nations score even higher than Europe, the gap approaches three standard deviations between Africa and Asia, consistent with earlier reports showing that there was almost no overlap between the highest and lowest scoring countries, e.g. TIMSS 2003 (PDF):

"Singaporean students had the highest average achievement at both grades, with their average eighth-grade performance exceeding performance at the 95th percentile in the lower-performing countries such as Botswana, Ghana, and South Africa."

Lynn also reviews data of so-called Elementary Cognitive Tasks from Africa, such as reaction time tests (how quick you process and react to a lit button on a console), and EEGs, which monitor how quickly the brain responds to a stimulus, confirming the general picture of African IQ. Jensen's upcoming book should have interesting things to say on this topic; a combined battery of ECTs correlate with IQ tests just as well as standard IQ tests correlate with each other (Detterman 1999), indicating that the pen and paper IQ test, as well as most attendant concerns about culturally biased tests, might very well become soon obsolete.

The issue of brain size is similar to that of test bias; I would think Lynn would want to up the arms race against his critics since this issue received so much attention in reviews of IQ&tWoN, despite being such a small and irrelevant part of that book. And yet brain size is prominently used to defend controversial hereditary arguments in many chapters of this book, so it was unwise that key references are similarly omitted like with test
bias. So, for instance, there is no discussion of the importance of, or tests for, a functional relationship between IQ and brain size, even though this is critical to the argument. And such research exists and would have made his argument much stronger and more immune to glib dismissal. Lynn does attempt to resolve one "contradiction" - that women have smaller brains but do just as well as men on IQ tests - by presenting data for his own theory that women actually average 5 IQ points below men. But since the difference between races is larger than the sex difference in IQ, and the brain size differences smaller, I don't see what has been resolved, even if we accept the still controversial sex difference in IQ.

Particularly interesting (not only for Africans, but for other racial groups reviewed as well) isn't just that racial groups score similarly on intelligence tests across an improbable number of different countries, but also have the same profiles (or "multiple intelligences" if you will) on these tests across nations as well. In the US, for instance, if we take poor and rich whites and look at their relative strengths and weaknesses on various test sections we will find the same pattern of strengths and weaknesses. Same for poor and rich US blacks, who have distinct strengths and weaknesses. African blacks show the same test profile as US and Jamaican blacks, for example with strengths on perceptual and short term memory tasks and weakness on tests of abstract reasoning (this is for matched total IQ, remember). The visuospatial profile that also distinguishes women and men and European and Asian/Amerindian populations has also long been noted by research of blacks in Africa and the United States, but this difference is not analyzed by Lynn.

For the first time I've seen, Lynn also reviews tests of "MQ" or musical intelligence for black and white Americans. While blacks score lower on almost all the items, commensurate with the fact that IQ correlates with musical ability, they also do much better, on average, than whites on rhythm items - Lynn calculates a rhythm IQ for Af-Am's of 106, though no cross-cultural results are presented, this has been recognized in a number of societies through time. Since Sub-Saharan Africans have been musical innovators across a number of different countries, this topic should have more attention.

Based on the IQs of transracially adopted black children, Lynn decides that the 1 SD IQ difference of American blacks (same as in Britain and the Netherlands) is 100% genetic, given the lack of any convincing environmental theory or data for the gap. Based on this he decides that poor nutrition primarily is depressing the African (and mostly identical black Latin-American/Caribbean) IQ about 13 points. Indeed, incredulity that African IQ could be any lower than African-American IQ is belied by known drastic comparative disadvantages of Africans on variables known to affect IQ. These include things such as higher lead exposure (which can lead to IQ reductions of 4-7 points) and micronutrient deprivation, such as iodine deficiency (reductions of 10 points). Indeed, critics are incredulous over the wrong gap! - after all, it is the 15 points between American blacks and whites that is hard to account for, not the 15 points between American blacks and Africans. 5 additional IQ points between African-Americans and African-Americans, Lynn attributes to the white admixture of American blacks. Lynn puts the level of white admixture in African-Americans at 25% based on references from 1971 and...
1992, and northern black admixture at 50% (based on pure conjecture) and concludes from IQ studies that African-Americans gain 1 IQ point for every 5% of white admixture. Lynn's estimate is compromised because his admixture references are outdated and his estimate of northern admixture is contradicted by the data. Parra et al. (1998) put the latest estimate of average admixture at 17%, not 25%, and don't even find admixture higher than 23% in any sampled US region. It's difficult to guess why he is using the obsolete reference, when he himself has previously cited the Parra paper and the 17% estimate (Lynn 2002).

On a final note, I will say that Lynn is especially talented at bringing new references to the table, so that while his 1991 report featured only three references of black IQ in Britain, this book delivers 20 - all in support of a black IQ in Britain typically much lower than all other ethnic groups, and much like that of blacks in the US. This is no small ability since critics are terrible at knowing or caring about the literature. But more important is this - Lynn should expand his research ability to cover a broader range of data points. An over-reliance on IQ tends to minimize just how strong these international racial patterns are because it limits the argument to just one kind of data. A book like Lynn's, in my opinion, would be much more effective if it started with the race and worked up to the IQ data, where available, instead of vice versa. So for instance, a more thorough picture would be available of racial patterns if, instead of cataloguing nations where we have black IQ, we first catalogue nations that have blacks, and chart what we know about their comparative situation in each country up from that fact, given whatever data is available, be it IQ or educational or economic data - or even anecdotal (journalism/anthropology) reports or local viewpoints, if that is all that's available. The point is that IQ data is limited and working up to the data from the people would make the patterns even more unavoidable. I have in mind the structure of Thomas Sowell's Migrations and Cultures or Amy Chua's World on Fire which didn't even use IQ data, but demonstrated ethnic patterns through economic, political, and educational data. A merge of style and data between these books and Lynn's would paint an even more persuasive picture of the differences that do, more or less, rather reliably follow race, and perhaps uncover which ones don't as well.

Chapter 5: Bushmen and Pygmies

In Frank Miele and Vincent Sarich's Race, an account is given by Henry Harpending of a resourceful young Bushman who repaired his Jeep by jumpstarting it with a rope, like a lawnmower. Harpending and his colleagues concluded that Bushmen were smarter than other Africans: "All of us have the impression that Bushmen are really quick and clever and are quite different than their neighbors . . . I expect there will soon be real data available from the Namibia school system" (p. 227). On the other hand, Lynn lists the average IQ of Bushmen, estimated from 3 studies, as 54! Lynn decides that this is a reasonable score by considering that it is equivalent to the average score of an American third-grader: "An IQ of 54 represents the mental age of the average European 8-year-old child, and the average European 8-year-old can read, write, and do arithmetic and would have no difficulty in learning and performing the activities of gathering foods and hunting carried out by the San Bushmen" (p.
Lynn's estimate is not new, the same studies and same average IQ were listed in the 1978 chapter, the only thing that has changed is Lynn's opinion, who then wrote: "... it strains one's credulity that a population could long survive the rigors of the Kalahari with a true mean IQ around 55". This should not serve as a "gotcha", because I agree that the 'age' comparison is more appropriate than the 'mentally retarded' comparison for thinking about lower IQ population (such as the 16% of Af-Ams who score below 70). At the same time this also demonstrates a theoretical deficit in intelligence research of distinguishing exactly how an average child with an age unadjusted IQ of 63, a below-average non-retarded adult with an IQ of 63 and a mentally retarded adult with an IQ of 63 all differ in what are fairly considered intellectual abilities (real world indicators of independent self care and adjustment). Suggestions that these are just "personality' differences are rather specious, especially when Lynn gets to the point of comparing young children and apes as well as humans and extinct hominids on the same linear IQ dimensions. Although I agree that test bias literature also confirms important aspects of intelligence are being captured across diverse groups.

Lynn notes there was a Pygmy intelligence study, but says that it does not permit an average IQ, though he does suggest it is lower than other Africans. Since no new data has been collected for Pygmies and Bushmen in over thirty years, these assessments are dead ends. As one caveat, I have to object to Lynn's statement that "Pygmy children up to the age of puberty have normal height, but when they become adolescents they do not have the growth spurt of other peoples because of their low output of the insulin-like growth factor 1" (p. 77). This fact is outdated, a mixed longitudinal study from 1991 found that Pygmies were much smaller than other populations at birth and up until age 5, indicating a suite of adaptations for smaller size.

Chapter 6: Near East and South Asia

Lynn first looked at the Middle-East/South Asia region in his 1978 chapter - it listed 5 studies from Iraq, Iran and India and an average of 86 was given. Except for one study for India, this region was not addressed in the 1991 review. RDiI is pretty much the only survey of Middle Eastern IQ to date, now listing data from 15 predominately West/South Asian countries as well as data on these populations living in European countries for a total of 98 studies and a combined sample of 65,855. The median IQ is 84. 40 studies are also given for South Asians living in a variety of African, Asian and European countries - the median IQ for Indians in India is listed as 82, in South Africa as 86, and in Britain as 89. South Asian Americans have not been tested to my knowledge, but data from income and education indicate they probably have IQs significantly higher than average - this is likely due to selective top-tier migration. Unfortunately, no data for IQ diversity within India is discussed, even though some data probably exists right now and probably contains some fascinating information on caste and ethnic differences. In my opinion South Asia (the Indian subcontinent) should have been a chapter apart from West Asia (the Middle east), highlighted more by the fact that Lynn also lists a score of 89 for the Near East and 82 for South Asia, suggesting the 84 score is misleading.
Lynn argues for a partially environmental explanation for lower West/South Asian IQ with reference to nutrition as he does with other regions, but argues that since these populations perform much lower even in Western nations and have a lower brain size, that there are genetic causes too, which in his evolutionary framework is said due to their more limited exposure to two little Ice ages than Europeans and East Asians. Lynn leaves out an important genetic issue as well, one mediated by cultural events. While the prevalence of cousin marriage is less than 1% in Europe and its Diaspora nations, and low in much of Eastern Asia as well, the Middle East has the highest rates of inbreeding in the world, running to 20-50% of all marriages (see the work of Alan Bittles for more). Jensen (1998, p. 194) lists 14 studies of inbreeding depression on IQ, many of them done directly within the Middle East, and finds the typical cost of cousin marriage is 7-8 IQ points. It is doubtful that this is a major source of the average IQ difference between Europe and the Middle-East, though, since all, or even a majority of, the people of this region do not engage in cousin marriage, making the real effect, at maximum, only a few IQ points. Also most of South Asia, which has much less inbreeding, does not appear any higher.

While Lynn's book lists the IQs of blacks, Asians, Indians, and other groups living as internationally dispersed minorities, this is not done for Ashkenazi Jews, who are largely - sadly - neglected, though a few examples are given to indicate they score highly in America and Britain. Earlier discussions of Israel's IQ, when it was listed as 94 in IQ&Worn treated it as a suspect score, because Ashkenazi Jews are thought to score 1 SD higher than other Europeans. Of course even if this were true (and Lynn himself (2004) estimates the IQ as only about 107), Ashkenazi Jews represent only about 40% of Israel's population, and Oriental Jews and Arabs, who make up the majority, are thought to score nearly as far (if not more) below Europeans as Ashkenazi Jews score above them, so the estimate actually wasn't unreasonable at all (although '95 in a country with a distinct, high scoring population is qualitatively different than a '95' country with a single bell curve). Lynn lists 8 studies for Israel with IQs ranging between 89 and 97 and with a median of 95, but none of the studies are broken down by ethnic background to provide direct estimates of the IQs of Oriental and Ashkenazi Jews. So Lynn uses population percentages (40% Ashkenazi, 40% Oriental, 20% Arab), results from one direct study of Israeli Arab IQ (86), and knowledge from several Israeli studies that indicate that Ashkenazi Jews score 12 points higher than Oriental Jews, to give indirect weighted estimates of 91 for the IQ of Oriental Jews and 103 for Ashkenazi Jews in Israel. No direct studies are given or listed for these groups in Israel, and if Lynn is correct that Jewish-American IQs are really only about 107, then that really isn't different enough from his Israel estimate, in my opinion, that we can rule out their scores being identical in each nation - the estimate just isn't that precise. Another puzzle left untouched is that the listed Oriental Jewish IQ is also 3-7 points above the regional average. Is it possible that for reasons of cultural and/or genetic amalgamation, the two populations are meeting each other in the middle; one being pulled up and the other being pulled down? Lynn does believe Ashkenazi Jews have some genes related to higher intelligence, which he attributes to medieval persecution. At his book's cost, Lynn makes absolutely no mention of Gregory Cochran and Henry Harpending's Ashkenazi paper at this point, which I find curious.
Chapter 8: Australian Aborigines

Lynn first looked at the Australian Aborigines in his 1978 chapter - it listed 3 studies, and he estimated their intelligence, much like Sub-Saharan Africans, as 85. In 1991 the same three studies were listed, and there is no suggestion Lynn lowered his estimate. When Ed Miller examined studies of Australoid intelligence in 1996, he too suggested something like 85. In comparison RDiI now lists data from 29 studies of Australoid populations, including those of New Guinea for a combined sample of 4,785. Since that time Lynn has dropped the Australoid IQ average a dramatic 23 points, down to 62. This is considerably lower than all previous estimates have suggested, but Lynn's review also highlights just how neglected this populations intelligence has been, even by Lynn, until now. Small admixture and adoption studies exist for Australian Aborigine intelligence and both suggest something hereditary. These populations have had some of the lowest technological development of all populations and also have the smallest brains of any living population. An exception is the visual parts of the cortex, which are much larger than in Europeans. Interesting given their much lower intelligence, then, that their visual memory abilities are substantially superior - one researcher found a visual memory IQ of 119. Genetics are further suggested because the advantage is also true for very young children and for aborigines born into modern urban settings.

Jared Diamond famously stated that he believes the populations of New Guinea to be more intelligent, on average, than Europeans. The median of 5 intelligence studies in New Guinea is reported as 63, no different than Australian Aborigines. It seems that if what Diamond asserts is true, at the very least children from this stock raised in white homes should be able to, on average, reason through a Piagetian conservation of water volume problem as well or better than their environmental siblings, which is not what we find.

Lynn offers the opinion that the Australoids have lower intelligence than Africans because their population numbers were lower, and thus less likely to accrue advantageous chance alleles (he applies this theory to a number of other populations, such as the Mongolians, Eskimos, Polynesians and Amerindians). The rate at which these genes could spread is interesting in the light of Bruce Lahn's ASPM and MCPH1 (also unmentioned!), which may be related to cognitive function, rising to high frequency among these populations but not among Africans. Especially the more recent ASPM, whose range across the entire span of Eurasia in 6000 years does not agree with Lynn's estimate that an advantageous allele would spread only 800 miles per 25,000 years (p 222). Also interesting, if these alleles are related to increased brain size (possible, though yet to be demonstrated), that they exist in such high frequency in these populations.

Chapter 9: Pacific Islanders

As with the Middle East, Southeast Asia and Australoids, very little has been written to summarize the intelligence in Polynesian regions before this book. RDiI reviews 29 studies and a total sample of 7729 from the Pacific Islands.
In his 1938 book, *Heredity and Politics*, written largely as a riposte to the noxious racial politics of Nazi Germany, J.B.S. Haldane devoted two chapters to what evolutionary biology, or more specifically the Neo-Darwinian Synthesis, implies for racial differences in man. Much of what he says is level-headed. On the issue of race and intelligence, Haldane specifically compares the ability of Pacific Maoris with that of Australoids. For instance he cites *Maui Pomare*, a Maori who had actually for a time served as Prime Minister of New Zealand:

> We cannot, I think, deny a very considerable difference in the behaviour of the Maoris and the Australian black-fellow, and we can ask whether it is due to nature or nurture? That is an exceedingly difficult question to answer. But I find it very hard to rule out nature. (p. 141)

Haldane's assessment of ability finds support in intelligence tests. By world standards, Maori are bright, and perform much higher than Australoids. The median IQ of 15 studies of Maori from New Zealand is 90. This is probably higher than other Polynesians, as the median IQ of 14 additional studies from 6 non-Maori Polynesian territories is 85.

**Chapters 7 and 10: Southeast Asians and East Asians**

Starting in the late 1970s with Singapore and Japan, Richard Lynn discovered that East Asian countries obtained higher scores on IQ tests than the Western populations these tests were standardized on (See the picture from the 1982 Discover Magazine cover story on Lynn's findings [here](#)). In 1978 he reviewed 5 studies from Singapore, Japan, and Taiwan. It wasn't then expressly stated that East Asians had higher IQs, although Lynn noted that the result of 107 for Japan "appears to be the highest mean IQ ever recorded for a national population". By 1991 Lynn had raised his number of studies to 15 from 4 countries, and integrated it into his climactic evolutionary theory to argue that East Asians had evolved higher intelligence than Europeans, with a mean IQ of about 106. A number of notable critiques of Lynn emerged in the academic realm since his first studies in the 70s, including an early charge by Stevenson and Azuma (1983) that Lynn's Japanese IQs were inflated by socioeconomic and urban bias. Stevenson (1984) cast further doubt on Lynn by conducting a large international IQ study of his own, finding equal scores between a group of Chinese, Japanese, and Minnesotan elementary school kids. Finally, in *Asian Americans: Achievement beyond IQ* (1991), unusually principled hereditarian challenger James Flynn reanalyzed 100 years of IQ scores of North American Asians, which scholars had previously judged to average about 106. Although Flynn agreed with Lynn that IQs in Japan were higher than in America, he argued that earlier American studies were uncorrected for the secular increase in intelligence (the Flynn Effect), artificially inflating Asian-American IQs. In other studies, he argued, the Asian samples were not representative. Flynn re-estimated Asian-American IQ down to 98. All of these critiques (save aspects of Flynn's) didn't have much to stand on, even at the time they were leveled, much less now when the contrary data has grown exponentially. For instance, in a response to Stevenson and...
Azuma (printed on the same page as their critique) Lynn (1983) adjusted for the problematic demographic factors and found most of the difference was retained. As for Stevenson's study that found no difference, this is not surprising since Minnesota whites score higher than any other US region, with scores identical to Lynn's average for East Asia. And of course these same Asian countries with higher IQ scores also score higher on international records of math and science achievement than Western countries (see review of 'test validity' chapter below - these measures are almost perfectly correlated with IQ). As for Flynn, Flynn's results only applied to the pre-1980's - several studies from after that (coincidentally?) showed IQs much like what had previously been reported.

Whatever the merit of these previous challenges, Lynn has clearly upped the ante in Race Differences in Intelligence in defense of his argument of higher East Asian IQ. Lynn now presents 101 different studies of East Asians and a combined sample of 128,322, giving an average IQ of 105. From 5 different Asian countries alone (China, Japan, S. Korea, Singapore, Taiwan), we are presented with 59 studies - 4 times as many studies from East Asia as Lynn presented in 1991. 34 of these new just since IQ&tWoN! The median IQ from these studies is 105. In responses to Flynn's earlier book, Lynn reanalyzes 27 studies of Asian-American IQ. In contrast to Flynn's 98, Lynn finds a slightly higher average IQ of 101 for Asian-Americans, from 9 studies previous to 1950 (consistent with their higher academic and professional accomplishments at that time). For 9 studies since 1950, Lynn finds an IQ of 104, virtually identical to countries in East Asia. Additional studies show similar East Asian IQ in Canada, Britain, the Netherlands, Brazil, and Malaysia. Though educational and economic data not included in the book would paint a similar picture in over a dozen other countries from Jamaica to Russia.

In defense of a hereditary explanation, Lynn presents data from 4 studies of East Asians adopted into white homes, showing higher IQ scores. In fact here the data is even stronger than what Lynn presents - more IQ studies exist than what he presents, as well as other supporting evidence. In a month or two on GNXP I will present the first comprehensive investigation of international transracial adoption literature (a large expansion off this post), presenting much data not included in RDiI, particularly for East Asians.

Lynn also included an earlier chapter on Southeast Asians, but given an issue with their relationship with East Asians I've decided to review them together. The only native country from Southeast Asia to appear in 1978 was Indonesia, and, like the Middle-East, little data existed for this region until IQ&tWoN. RFil lists data for 6 Southeast Asian countries in 18 studies for Southeast Asians living both in Asia and abroad for a total sample of 13,433. The median IQ is listed as 87. It is suggested based on brain size and scores abroad that these scores are partly genetic. As with the other chapters, Lynn justifies his racial division of East and Southeast Asia by reference of L.L. Cavalli-Sforza's History and Geography of Human Genes, but Lynn does not order his countries how they should be arranged according to this reference. This book tells us that South China lumps closer genetically with Southeast Asia than North China: "Northern and southern Chinese are substantially different
"genetically" (p 100); ". . . the South Chinese . . . are more closely related to Southeast Asia than to Northeast Asia" (p 229). This is significant because many of the high IQ scores Lynn places in the 'East Asian' chapter are from various South Chinese populations, such as the Hong Kong studies, as well as much of the over-seas Chinese scores from America and Southeast Asia. This creates a potential problem for a genetic theory of either East Asian high ability or Southeast Asian low ability, as noted by Ed Miller over ten years ago:

The importance of this finding of a relatively large difference between the North and South Chinese is that much research is done on American or Canadian born Chinese (Vernon, 1982), which are predominantly of South Chinese descent, coming from Hong Kong, Canton, or their vicinity. It may be risky to generalize from this to the whole of Han China.

For those interested in behavior and economic development, the resemblance between South Chinese and the Filipinos, Malays, etc. presents a problem. The South Chinese generally do well on intelligence and academic tests whether tested in the US or in Hong Kong, often better than Caucasoids. Filipinos generally don't do as well. Within Malaysia, the Chinese test much better than the Malays. Within Southeast Asia, the overseas Chinese generally do much better economically than the Malays (Sowell 1994). Thus, it is surprising to see the small genetic differences between the South Chinese and adjacent populations.

In a related criticism, one of the adoption studies that Lynn uses to support a higher genetic East Asian IQ, (Clark & Hanisee 1982) is actually mostly comprised of Southeast Asians, about half the sample being Vietnamese. Lynn resolves this by asserting that most of the Vietnamese in this sample were actually Chinese-Vietnamese, but I see nothing in the original paper to indicate this, and since most of the higher achieving overseas Chinese in Southeast Asia are from the Southeast Asia genetic cluster anyways, I hardly see how this resolves anything. While one might posit a cline in IQ scores (and scores do seem to drop off from Thailand into Malaysia), the South Chinese show absolutely no deficit in ability or differentiated profile from East Asians. This makes an interesting contrast between Southeast Europe and the Middle-East where we see a cline in ability follow a genetic cline across a stark cultural boundary, suggesting genetics. Instead here we have another cline in genetics, but a stark difference in ability following a stark cultural boundary, suggesting environment. This might mean that underperforming Southeast Asian-American groups, such as the Hmong, have hidden potential after all. Then again, selection could have occurred in China independently for this trait, long after the formation of the races, but modern selection and subracial populations are at odds with the theoretical structure of this book. Likely much more data is required before simplified assumptions and approaches can relax.
Finally, at the risk of being too trivial in my criticisms (which I offer in benign spirit), Lynn asserts "Only one study has been published on the heritability of intelligence in East Asians (Lynn and Hattori, 1990)" (p. 145), citing his own study from Japan. This is not correct. In the *International Handbook of Intelligence*, a group of Japanese psychologists write: "Since the beginning of the history of psychology in Japan the issue of the heredity of intelligence has been a major focus of inquiry. We can find a notable twin study in the very first volume of The Japanese Journal of Psychology" (pp. 310-311), and they go on to discuss several studies of heritability from Japan published in both American and Japanese journals stretching back to early in the 20th century.

**Chapter 11: Arctic Peoples**

The general consensus among the few scholars interested has long been that arctic groups, though living 'primitive' hunter-gatherer life-styles (much like some of the other extremely low-scoring groups reviewed here) do unusually well at IQ-type tests - in fact not much different than Europeans. The earliest discussion of Eskimo intelligence that I know of (incidentally, not cited by Lynn) is in Robert Marshall's *Arctic Village* (1933). Marshall gave all the Eskimo children in the small settlement town of Wiseman, Alaska the Stanford-Binet, and found them to outscore the American norms. Marshall commented that the "...startling record shows these little Eskimos to far better advantage than normal American white children" (p. 79). Of course by that point the record was very small: Florence Goodenough found similar results with her Draw-a-man tests on a handful of other children, and Marshall discusses several other tests showing similar performance but does not clarify if this was his sample or another. With the advantage of 40 more years of data, John W. Berry (1971) indicated this view had not changed in his review of studies of Eskimo intelligence in the 1970s:

Probably the most interesting consistent finding is that Eskimos differ very little from [white] norms on tests involving perceptual skills or those abilities tapped by "performance scales" of conventional intelligence tests. It is often found, of course, that non-western peoples (e.g. in Africa and among American minority groups) perform significantly lower on these tests, and so this northern result is in many respects a unique finding.

Richard Lynn appears to be the first person to challenge this in his 1978 review, where he argued that one of Berry's studies actually showed an IQ in the 80s instead of 100, due to an inappropriate age comparison. He also presented one more study showing a score in the 80s, although he allowed that another study did show comparable scores. RDI, in contrast, includes 15 studies of Arctic populations and a total sample of 2,690 people. Lynn concludes that they are the (distant) third most intelligent racial group reviewed, with an average IQ of 91.

Even in Marshall's book there is discussion of the Eskimos ability to draw detailed maps from memory. Like the Australian
Aborigines, with whom they share a recent hunter-gatherer lifestyle, Lynn shows the Arctic people have an elevated visual memory IQ of 106. Although it is not shown that this likewise present in Eskimos removed from the hunter-gatherer lifestyle, it is also a feature shared by related groups such as East Asians and Native Americans.

Chapter 12: Amerindians

Several studies of Native American intelligence were discussed by Lynn (1978), though no exact average was given. By 1991, 15 studies of North American Indians groups were discussed and a median IQ of 89 was provided. In contrast, RDII now discusses 63 studies of Amerindians with a total sample of 37,304. For 21 studies of North American Indian groups Lynn finds a median IQ of 86, and for 11 studies of Latin American Indian groups across five different countries, Lynn finds a median IQ of 86. Additionally, 20 studies of (mostly mixed race) Hispanic Americans reveal a median IQ of 89, identical to the meta-analysis by Roth (2001). Small hybrid and adoption studies are also presented.

In World on Fire Amy Chua describes the relationship between economic status and "Indian-blood" throughout Latin America: "Latin American society is fundamentally pigmentocratic: characterized by a social spectrum with taller, light-skinned, European-blooded elites at one end; shorter, darker, Indian-blooded masses at the other end . . ." (p 57). As an example she describes her experience in Mexico:

Almost without exception the Mexican officials, lawyers, and business executives we dealt with were light-skinned and foreign educated, with elegant European names. Meanwhile, the people doing the photocopying and cleaning the floors were all shorter, darker, and plainly more "Indian-blooded." While considerable social fluidity exists in Mexico, it is also true that lightness of skin correlates directly and glaringly with increasing wealth and social status. (p 59)

The trends Chua observes within Latin American countries also appear to operate between these countries, with countries with mostly European populations, like Chile and Uruguay, being the most economically developed and countries with largely Amerindian populations, such as Bolivia and Ecuador being the least economically developed. Coblogger emeritus Godless Capitalist once compared 12 South American countries and found a correlation of .96 between GDP-per-capita and percentage of the population that is white.

Lynn's data confirms this general picture with intelligence as well. Both with between country differences (e.g. Uruguay (96) and Chile (99) score like European countries, while Ecuador's IQ scores range within the 80s), and within country differences; to use Chua's Mexico as an example, last year Lynn tested a representative sample of 920 in Mexico with the Standard Progressive Matrices and found that whites had an IQ of 98, Mestizo (mixed race) 94, and Native Indians 83 - all compatible
Chua's observations of a "spectrum" of "social status" by amount of "Indian-blood".

Chapter 13: Validity and Reliability

I covered some of this topic prematurely in the Africa section, but this chapter deals with the appropriateness and accuracy of these cross-cultural IQ results. 'Reliability', in this case, is how replicable an IQ score is within each nation - telling us if a score is capturing something that can be fairly generalized. Despite the Flynn Effect, reliability is very high. If a nation is tested a second time or third time, the second and third score will look much like the first one - the cross-cultural reliability of the scores is .94.

As an example, I noted last year that a 1997 test of almost 4000 Thai children (not included in RDii) found an IQ the same as the only earlier result from Thailand, a much smaller sample from 1989. Evidently Thailand has an IQ about 8 points lower than the West. The second question though is if the replicable score reflects a replicable ability or just a replicable test score - is 92 an unfair reflection of Thai ability? That isn't to say, "is it permanent or genetic", just "is current performance in other domains in agreement with the measurement". 'Validity', in this case, is if an IQ score predicts the same real world outcomes for one population as it does the reference population. For this Lynn looks at five data sets of international math and science performance, which span 30 years (Other IQ researchers have started matching up national scores with these data sets as well; Hunt & Wittman, in press). All the data sets correlate with the IQ measurements from .8 to .9, and Lynn even suggests that correction for attenuation gives them a perfect relationship.

Typically the differences appear even larger on these scholastic measures than they do on the IQ measures, so while the difference in IQ between East Asian and European countries is about 0.33, or a third of a standard deviation higher, their achievement scores are 0.44 higher. And while Africa falls 2 SD lower in IQ, math and science achievement scores taken from West Africa, East Africa, and Southern Africa are 2.44 SD lower than European nations. These scores are, of course, related to national wealth as well, as demonstrated in IQ & the Wealth of Nations, where the correlation between IQ and economic development was .73. Lynn doesn't mention that Jones & Schneider (in press) also found IQ to be the best international measure of economic human capital, better than all educational variables, all but a single one of which didn't even pass a significance test for GDP growth between 1960 to 1992. Lynn gives a correlation of .51 between IQ and GDP growth between 1950 to 1990. The IQs were high before many of the rich countries got rich, suggesting a cause not a consequence of growth (Jones 2005).

Jared Diamond (2004), quite inadvertently, illustrates the consequences of economists ignoring intelligence with this quote:

"... around 1950, when South Korea, Ghana and the Philippines were equally poor, most economists predicted that resource-rich Ghana and the Philippines were on the verge of wealth, whereas South Korea was doomed to remain mired in poverty. The result, of course, has been the opposite..."
Chapter 14: Genes and Environment

While genes may have been mostly irrelevant to the main arguments of IQ&tWoN, the same could hardly be said about this book where genetics are freely stressed. This chapter again reviews the evidence for genetics, including that the same patterns reappear across numerous nations, admixture and adoption studies. But here Lynn also covers what aspects of the environment are likely causing racial differences too, which Lynn is able to do with more accuracy and sophistication than critics who are more concerned with protecting taboos than figuring out sociological puzzles. Many of the popular and politically acceptable "answers" such as aspects of the shared family and education fail direct and adequately controlled tests (Lynn does believe education has an important impact on achievement, if not intelligence, and has written a book on this topic, which was also adapted into a National Review cover story). Lynn focuses here on his own hypothesis - nutrition. Before any other psychologist Lynn (1990) had proposed and supported the hypothesis that nutrition is responsible for the Flynn Effect. He has also demonstrated previously why it the best supported environmental explanation for certain racial differences. In this chapter Lynn compares NGO reports of four different signs of severe malnutrition - underweight, anemia, wasting, and stunting - for five developing regions. This shows that Latin America suffers the least malnutrition, followed by the Middle-east, Asia/Pacific, Africa, and finally South Asia, which suffers the worst malnutrition of any region. Lynn decides half the African deficit is due to malnutrition, but that it can't account for any of the American gap, where blacks show no other physical signs of malnutrition. But here Lynn doesn't mention breast-feeding, which as Arthur Jensen has shown (1998, pp 506-507) is practiced almost three times as much among white Americans than African-Americans and has been associated with IQ gains of nearly 10 points. It is likely that effectively encouraging breast-feeding would have a positive impact on the next generation of African-Americans.

Chapter 15-17: Climate, Brain size, Intelligence and Evolution

These three, closely related last chapters, which begin with a summary of the work and theories of Harry Jerison, regarding intelligence, evolution and brain size, cover Lynn's evolutionary theory of racial differences. As with most evolutionary psychology, as well as evolutionary anthropology of humans, the theory and its assumptions will remain controversial. Lynn's main agent of racial differences in intelligence is relative exposure to two recent ice ages, one 77,000-50,000 years ago, and another, more severe one 28,000-10,000 years ago, which he argues increased the intelligence of Europeans and East Asians significantly above other world populations.

But is this theory plausible? Well, let's ask that with several more specific questions, a) Does intelligence follow a pattern consistent with this theory? b) Do the differences look genetic?, and c) Is there evidence to suggest this evolutionary pressure?

As to the first question, the answer has long been regarded as 'yes'. It has been noted since the 18th century that the more
wealthy regions existed in the temperate regions with the poorer regions in the tropics/subtropics, something that economists and sociologists have also considered during the 20th century (see also David Landes). Evidence used to support Lynn's theory, is often just indirect ways of restating this same fact. So for instance the upcoming paper by Templer & Arikawa (in press) is presented as evidence which finds that national IQ is strongly related to lowest national winter temperature, -.69, and that skin pigmentation (mostly a record of evolutionary latitude according to recent evidence) has a very strong correlation with intelligence, .92. These relationships hold within and between continents. The most notable example of this, though, is brain size. With several minor reversals, the 10 populations in Lynn's book, stack almost in the exact same order on brain size as they do with IQ. Most people, even so-called "scientists", deal with this uncomfortable fact by simply denying any association between brain size and intelligence, either in humans or across the evolutionary record, something clearly and overwhelmingly contradicted, in both cases, by the scientific evidence. The same folks, interestingly, often hedge their bets by also denying any race differences in brain size. This too has turned more and more desperate as the studies pile up. The same folks, interestingly, often hedge their bets by also saying the differences, which don't matter and don't exist, are probably not genetic. Since this is not likely either, the most scientific objection (compatible with these three well supported premises) is that the race differences in brain size are just yet another way of stating that high IQ/wealthy populations occupy the temperate zones and low IQ/poor populations, the tropics/subtropics. Bergmann's rule states that animals in colder climates tend to be larger and rounder to conserve body heat, while ones in warmer conditions smaller and thinner to help shed excess heat more efficiently. On the one hand while this may be true for the heads of our races, it isn't exactly true for the bodies, as head and body measurement data from the US shows that East Asians have much larger heads than African-Americans, but smaller, thinner bodies (Rushton 1997), which complicates the Bergmann explanation. In other words East Asians and Europeans don't just have larger heads, they have larger Encephalization quotients (EQs), or brain size controlling for body size - which also tracks changes in intelligence across the evolutionary record, so Rhesus monkeys have an EQ of 2.10, chimps 2.60, Australopithecus 3.70, Homo habilis 4.30, Homo erectus 5.00, and the average modern human 7.5 (while average IQ of modern humans = 90). Before the second most recent ice age, Lynn reports, the Europeans had an EQ of 7.3, which had inflated to 8.1 by the end. So apparently current differences in EQ between human populations are comparable to differences between species, which also correlate with transfer index scores and performance on other animal intelligence tests. (e.g. chimpanzees outscore rhesus monkeys). Unfortunately, Lynn does not help disentangle possible confounding between climate and intelligence by calculating EQs for the various groups, or detail if these scores are different from the raw sizes. And it matters for the evidence that suggests climate instead of intelligence. For instance, the head sizes continue to increase with latitude, while intelligence does not; the largest human head sizes of all are at the frigid southern tip of Tierra del Fuego and among the arctic populations such as the Eskimos. Interestingly here, Lynn may have undermined one of the best possible evidences for his theory, even if not completely. After all, scientists had long thought that the arctic group was the only
group living a ‘primitive’ lifestyle that scored anywhere close to (much less the same as) white European populations on IQ tests. Lynn is the first one to dispute and revise the Eskimo score as such, down to 91, even though he is the biggest proponent of cold increasing intelligence. Still, though, the actual IQs of Eskimos and related groups still support Lynn's theory as much as they undermine it, as they are still the third highest scoring population on earth behind Asians and Europeans (even if they cluster with the other populations). Even if northern brain sizes are entirely due to climate instead of selection for intelligence, it's possible that, while other neurophysiological processes can modify intelligence independent of brain size (and Lynn puts this at some 75% of existing differences), increased intelligence in some measure is a likely by-product of brain expansion, given their intimate developmental associations. This is still consistent with what we find with larger-brained, higher IQ northern latitude populations. Interestingly the pattern may be even more consistent with Lynn's theory than he himself recognizes. Take Amerindians - Lynn argues (pp 242-243) that North American Indians should have higher intelligence than South American Indians due to greater exposure to the second ice age, but he also decides that both groups have an IQ of 86. But this is due to Lynn's method of taking the median, which doesn't always appear to be the best average. It gives equal importance to throw-away studies with 20-30 people and demographically controlled standardization samples with 1 and 2 thousand people. Lynn's number of 86 for North American Indians, for instance, is significantly lower than what was found by the largest study yet of Amerindian intelligence - the Coleman Report, which tested nearly 5000 Native-Americans and found an IQ about a half a standard deviation above African-Americans. When we take the weighted average of all the American groups, using the numbers in Lynn's book, we get an IQ of 90 for the Arctic people, 88 for North American Indians, and 86 for South American Indians. Since the sub-Arctic Indians living below the Eskimos scored almost as highly, perhaps there is a cline in intelligence down the continent, that may have reversed approaching the frigid area of Tierra Del Fuego, where brain sizes again inflated.

As to the second question, 'are race differences in intelligence genetic', this is not one question but a different one for each race. Again, since adoption studies are perhaps one of the best clues for this in the existing literature, hopefully I'll be able to provide some original insights to this shortly. Right now, the least convincing, I would say, are the low intelligence of other Eurasians, such as Middle Easterners, South Asians and Southeast Asians (this isn't to say not convincing). Most convincing, at this point (due to the most data) would be that sub-Saharan Africans score somewhat below Europeans, and that East Asians score somewhat above Europeans for reasons relating to genetics. Intermediate levels of evidence also suggests Australoids and Amerindians are somewhat less intelligent.

I put Southeast Asians in the 'least convincing' category for reasons discussed above, and Middle Easterners and South Asians (as well as Southeast Europeans) partly for some studies I have not mentioned here. But another important reason is that Lynn is chronocentric. The Middle East and India are relatively underdeveloped today, but have been ahead of Europe in the
past; the Middle East relatively recently even. While it's possible that both these groups changed through time, this still seems to contradict Lynn who pushes the differences back deep in evolutionary time. According to Lynn, the Middle East and India never had high IQs (i.e. 100), because they were never exposed to the business end of ice age winters. But how to explain the times in semi-recent history when Islamic civilization, science and scholarship, was at a more advanced stage than Christian Europe? I suppose parallels exist even today, when a higher IQ Chinese population is temporarily more underdeveloped than the West, due to bad governance, etc. Still it's doubtful both that all intelligence differences are genetic, and that all the ones that are genetic have stood still for over ten thousand years. Lynn rightly points out that differences across space is a basic expectation from evolutionary theory, but differences across time are as well, and that all the major differences were formed when Lynn hypothesizes, requires us to believe that intelligence would stand still all that time after the evolutionary pressures of the last ice age, despite culture and environment creating many new selection pressures. Why should this be so, when Lynn demonstrates major genotypic selection in Dysgenics, just during the 20th century? I would put the major candidates for either change through time or "totally" environmentally depressed in central Eurasia, where history provides notable counterexamples and novel genes could flow as freely as the ancient trade routes.

Third, is there evidence that life in Northern Eurasia would require more intelligence? If we know the pattern exists and have better reasons to suspect genes than to suspect not, it is reasonable to reverse engineer the problem.

Consistent with the relatively higher intelligence we find with Eskimos, one of Lynn's best pieces of evidence that more intelligence is required in the northern latitudes than in tropical/subtropical ones are the tool kits manufactured by the hunter-gatherers in these respective latitudes. Hunter-gatherers in the latter group have on average about 10-20 tools, while the former have 25-60. These tools are also more complex, involving assembly of parts. This appears to be due to two main domains of challenge not faced in the tropical latitudes, warmth and hunting. Warmth of course, requires that iconic "caveman" challenge, of making and maintaining fire, more challenging in the cold snowy environment. It also requires making clothes for adults and infants and when necessary shelters. Where plant foods are available year round in the tropical/subtropics, diet consists almost entirely of gathering supplemented with minor hunting, while the opposite is true up north. Hunting required novel tools and techniques such as tracking and trapping large prey, as well as food storage.

Tools and tool complexity at least add a quantitative dimension to an otherwise verbal plausibility argument (of which Jared Diamond has provided more such evidence for his narrative). And as far as this goes we must ask why the cold is thought to raise intelligence, when it is the African environment, not the European one, that rapidly boosted and created human intelligence. Similarly, nowhere does Lynn mention a challenge in the Neanderthals who populated Europe. Neanderthals were not our ancestors, but our cousins. They were a non-human species (we know this through direct genetic evidence), but they had a recognizably human intelligence. They made skilled tools, and
were excellent hunters. They made clothes, built fires and shelters, cared for their sick and buried their dead, and perhaps played music as well. They too migrated from Africa and became adapted to the European environment. While the Neanderthals may have been roughly equally intelligent, there is little reason to believe the frigid environment they were well adapted to had made them smarter than their African human counterparts, even though they could adequately do all the things Lynn argues Europeans later needed additional cognitive abilities to do. In fact the African humans moved up into the unfamiliar environment during conditions which had pushed down previous waves, and quickly displaced Neanderthals who had evolved in these conditions. The migrants had trade routes, which the Neanderthals did not, and their more sophisticated tools were copied by the retreating Neanderthals, not vice versa. So it would seem that the Africans immediately mastered these tasks, such as hunting, cloth and fire making, etc, that were supposed to increase their intelligence later, with intelligence they already had. And this intelligence evolved in the lower latitudes. Lynn's argument seems much smaller now since the important selective difference must not be between Africa and Europe, but between Europe and even colder Europe. Did making clothes and fire, storing food or trapping prey become even more complicated during the second ice age, because we know they already needed to and were able to do these things, with surprising superiority, before hand. Of course another genetic possibility is that these initial migrants were not a representative group, as they were able to move up into the Levant during an advancing ice age when previous groups of modern humans were unable to withstand these conditions. Richard Lewontin has argued that the high heritability of intelligence suggests that these between-individual differences, as relevant as they are to real-world outcomes today, haven't been much of a fitness characteristic in our evolutionary history and that they may have not been expressed the same or at all in ancestral environments. If this is true, genetic drift could be an even more likely explanation, if not a particularly romantic one.

As Steve Pinker recently pointed out in the 2006 Edge question he submitted, as an idea that's dangerous because it's probably true is that males and females and races differ in their abilities. And he has already cast his lot with Greg and Henry's Ashkenazi theory. Pinker highlights, as Charles Murray did in Commentary several months ago, that the tools now exist to test racial differences and they will probably be tested in this next ten years either directly or inadvertently. If even one well-done study finds a racial difference in cognitive ability, and this is likely, we can count on Lynn's work and others like it, including this book, getting an immediate flood of attention, as curiosities are piqued, taboos crumble and ambitious researchers fill the newly opened niche and quickly educate themselves on the topic with the best information available. And like it or not, on this score Lynn remains one of the only games in town. But it's a big topic for only a few scientists to take on by themselves and it is unlikely that they would get everything right as the first lonely ones to take a stab. So let's invite a lot more research on this topic, and the data will become cleaner, more sophisticated and more accurate. Something all of us should want.

Fig. 1
This chart summarizes the data available in RDiI. It is my approximate tally. The 'Majority' vertical column contains information on populations taken in countries where they form the basic majority. For example, Lynn lists 59 studies of East Asians taken in 5 different Asian countries such as Japan and Taiwan. The 'Minority' vertical column contains information on these same populations taken in countries where they form minorities. So Lynn lists 42 additional studies of East Asians done in 7 other (mostly Western) countries such as America and Britain. The third vertical series of columns are the combined values (they don't always add up perfectly because of coding issues. For instance admixture studies appear in the final tally but not the Majority/Minority columns because this complicates the issue). For Africa, 'Western' indicates the developed countries where blacks score about 85, and 'Non-Western' the developing countries (primarily in the Caribbean and Latin America) where they score about 70.


Dickerson, R. (in press) Exponential correlation of IQ and the wealth of nations. Intelligence.

Hunt, E. & Wittmann, W. (in press) Relations Between National Intelligence and Indicators of National Prosperity. Fifth Annual

---

This chart summarizes the data available in RDiI. It is my approximate tally. The 'Majority' vertical column contains information on populations taken in countries where they form the basic majority. For example, Lynn lists 59 studies of East Asians taken in 5 different Asian countries such as Japan and Taiwan. The 'Minority' vertical column contains information on these same populations taken in countries where they form minorities. So Lynn lists 42 additional studies of East Asians done in 7 other (mostly Western) countries such as America and Britain. The third vertical series of columns are the combined values (they don't always add up perfectly because of coding issues. For instance admixture studies appear in the final tally but not the Majority/Minority columns because this complicates the issue). For Africa, 'Western' indicates the developed countries where blacks score about 85, and 'Non-Western' the developing countries (primarily in the Caribbean and Latin America) where they score about 70.


Dickerson, R. (in press) Exponential correlation of IQ and the wealth of nations. Intelligence.

Hunt, E. & Wittmann, W. (in press) Relations Between National Intelligence and Indicators of National Prosperity. Fifth Annual
Conference of International Society for Intelligence Research, New Orleans.


Labels: IQ

Haloscan Comments