

Book Reviews

What is Intelligence?

by James R. Flynn

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Beyond IQ

James Flynn is known internationally for his discovery, in the 1980s, of the eponymous "Flynn effect"—the rather surprising fact that measured IQ has risen systematically by around 3 points per decade since at least the turn of the 20th century. Yet he has been relatively neglected by the psychological community in New Zealand, and only in 2007, while in his 70s, was he elected a fellow of the Royal Society of New Zealand. In that same year, he was named Distinguished Scientist of the Year by the International Society for Intelligence Research. He is, I think, something of a national treasure, so why have we neglected him so?

Part of the reason is that the concept of intelligence itself lost favour in psychology, swamped by the rising tide of political correctness. At one time, intelligence testing was seen as among psychology's most valuable contributions to both science and society, and was widely used as a means of streaming in high schools, but from the 1970s it was seen as a mechanism for solidifying class and racial divisions. (I was myself almost doomed to ignominy when, on my first day at secondary school, I failed to correctly open the test booklet, and missed the middle portion of the test. I was fortunate not to be shipped off to an altogether different institution.) Among the most vilified of the scientists of the time was Arthur R. Jensen, notorious for his claims about the heritability of intelligence and the genetic basis of racial differences. Yet Jensen emerges as one of the heroes of this book. Flynn writes that Jensen's

theory of intelligence "has a great beauty rather like that of Plato's theory of Forms," and acknowledges that virtually everything he has done is a response to Jensen's work.

Certainly, the Flynn effect makes nonsense of the claim that racial differences as measured by IQ tests are genetically determined. That test scores should be so malleable over time points to societal and cultural influences rather than biological ones, although they need not contradict the idea that differences captured at a given point in time and within a given culture might depend at least partly on genetic endowment. The structure of intelligence as currently understood depends on correlational methods, and more particularly on factor analysis, and it is worth remembering that adding a constant to everyone's scores on any given test makes no difference at all to its correlations with other tests. In short, mean scores can rise without affecting factor structure.

What is perhaps surprising about the Flynn effect, though, is that the gains are greatest on tests, such as the Raven's Progressive Matrices or the Similarities subtest on the WISC, which are generally thought to measure those aspects of intelligence least affected by environmental factors, and least on the Information, Arithmetic, and Vocabulary subtests, which seem to be most dependent on education and learning. Flynn's approach to this paradox is to examine more closely the actual skills required by the various subtests, and the ways in which society has selected certain skills at the expense of others. He argues that much can be

explained in terms of a gradual shift from pre-scientific thinking, where students were given rules by which to solve problems, to post-scientific thinking, in which students were taught to think more in terms of generalities and on-the-spot problem solving. Science has taught us to be liberated from the concrete, and to be more flexible and resourceful in how we think.

Flynn shows how this can affect performance on a test like Similarities. Given a question like "What do a dog and a rabbit have in common", people of an earlier generation would be inclined to focus on the specifics of dogs and rabbits ("Dogs are used to hunt rabbits") while later, more scientifically literate individuals would easily see the more general answer that both are mammals. This reasoning implies that the early designers of IQ tests were well ahead of their time, and the Flynn effect suggests that the general population has caught up with them. And this leads to the possibility, raised in the book, that the gains may soon be over. They have stopped, it seems, in Scandinavia, but remain robust in the United States.

Flynn also points to societal factors that have contributed to the gains. In the course of time, certain skills are seen as more valuable, and the development of enhanced teaching and societal rewards directed to those skills leads to disproportionate increases. Flynn calls these effects "social multipliers," and uses the analogy of basketball. The invention of TV raised the popularity of basketball, which in turn raised the stakes and led to the enhancement of individual skills. But those with the physical attributes to excel would still perform above those less well endowed, so relative individual rankings would remain the same. So it is with cognitive skills. When grade schools became the norm, people with middle-class values aspired to a high-school diploma, but when high schools themselves became the norm, the stakes were raised to a

university degree, leading to successive enhancement of academic skills. The Flynn effect might then be seen as a measure of how society itself has changed.

The book goes beyond the Flynn effect to describe a new model of intelligence, developed in collaboration with William Dickens, called the BIDS model. The acronym is based on three components: brain, individual differences, and social trends. To my mind, there is some category confusion here—individual differences provide the basis for the measurement of intelligence, certain brain functions appear to be correlates of intelligence, and social trends can influence measured intelligence. Nonetheless he has some sensible things to say about intelligence and its limitations as an indicator of successful living. He makes a case for practical wisdom and critical acumen (WICA) and further indulges a penchant for acronyms with a test he calls SOCRATES (Social Criticism and Analysis Test). Much of the latter part of the book reads as a kind of sermon, telling us how to be better people.

The book is perhaps more a social commentary than a treatise on intelligence itself, and doesn't really give us a clear answer to the question raised by the title. It is in places psychometrically naïve; I found it strange to read sentences like "The degree to which superior people are above average on the various subtests sets their respective *g* loadings." (It's tests, not people, that load on *g*, and it's not just the superior who count.) The book seems more clearly directed to an American readership than to a New Zealand one, and only rarely might the reader discern that the author does not live in the United States. Perhaps this is fair retribution for the relative lack of recognition he has received here. Nevertheless this is an engaging, thought-provoking book which may help us begin to take intelligence seriously again. Although impatient with political correctness, Flynn has a broad liberal spirit, writes in a folksy, accessible style, and is not afraid to confront sensitive issues.