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Thomas Hally

are we smarter than our ancestors?

Professor of political science and moral philosophy James Flynn, of the University of Otago in Dunedin, New Zealand, is one of the world's leading psychology theorists. In 1984, he received a package from an academic in The Netherlands which contained results of the IQ test Ravens Progressive Matrices. P.A. Vroon, the academic who sent Flynn the package, did not know how to score the tests, but Flynn did. He noticed a huge jump in the scores of Dutch males over the previous generation, and decided to check on data from around the world. The answer always came up the same. IQs were going up dramatically. In 1994, the "Flynn Effect" was the name coined by authors Herrnstein and Murray as an explanation for the increasing IQ scores in more than 30 industrialized and developing nations.

The 73 year old professor *emeritus* found that IQ had improved in the 20th century at the rate of an incredible three points per decade. Earlier researchers had failed to notice this trend because IQ scores are always calculated with respect to the average score of the present group. For example, if the average IQ is 100 and a person scores 20% above average their IQ would be 120, but if that person's score were compared with the IQ of a person a generation earlier, his IQ would be about 130. Flynn was the first psychometric researcher to make this cross–generational comparison. He discovered that the largest gains appear on IQ tests that measure fluid intelligence (Gf) rather than crystallized intelligence (Gc).

The eponymous *Flynn Effect* shows that the average IQ in America on tests like the Ravens Progressive Matrices seems to have risen 15 points between 1930 and 1980; and, in all countries for which data has existed, IQ scores have been increasing.

But to what extent do IQ tests measure raw intelligence versus learning versus some other factor correlated with intelligence? Scholars around the world are still researching this question, but Professor Flynn believes that the hypothesis that best fits the results of his study is that IQ tests do not measure intelligence but rather correlate with a weak causal link to intelligence. Flynn is certain that the increase in IQ is actually an increase in abstract problem solving rather than intelligence. We must re-think exactly what we mean by intelligence.

Because populations experience IQ gains over time, we must constantly restandardize IQ tests so that subjects are not scored against inaccurate IQ norms. The use of obsolete norms can cause problems, particularly when comparing scores between different groups and different populations. A widely held hypothesis is that people lose fluid intelligence over time. In his book, *What is Intelligence? Beyond the Flynn Effect* [1], he discusses a mystery that has baffled IQ researchers for decades: "Are we really smarter than our ancestors?"

Older people were raised in an era when the general level of intelligence was lower. Professor Flynn showed that if a person's IQ

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is calibrated for the period in which they grew up, an old person scores just as well as a young one. The reason that the greying population doesn't do as well on IQ tests as young people is not because older people are stupid, but rather the younger generation simply has had a head start.

Flynn believes that detaching logic from the concrete defines the mark of intelligence in the modern world. We have created the tools and the environment to maximize these scores. Seventy-five years ago there were no televisions, no computers, no cell phones and, in most cases, no automobiles. Programming a VCR or texting a message on a cell phone requires a minimum of abstract savvy. The time-tested, practical ideation and solutions of our parents and grandparents has given way to technology and science.

Professor Flynn's "multiplier effect" is integral to this hypothesis. Simply stated, the more adults (especially higher IQ adults) there are to children, the more likely the young ones will be positively influenced. According to Flynn, the hypothesis that the offspring of two intelligent people are likely to have more "good genes" for intelligence does not convincingly account for the astronomical rise in IQs. Over time, one would expect that that the opposite ends of the Bell Curve would stretch as humans with the highest (and lowest) IQ scores mate and reproduce. Furthermore, individuals with lower IQs are having more children than their higher IQ counterparts. Would this not *lower* the average IQ?

Flynn has opened a Pandora's Box of paradoxes. He believes that 75% of the score on an IQ test is due to nurture and 25% of the score is due to nature. Yet, studies show a strong correlation between the IQs of identical twins raised apart which is higher than those of fraternal twins raised in the same household. The Flynn Effect illustrates the difficulty of comparing test results over time, but says little about the validity of tests within a given generation.

Professor Flynn believes that some of us have reached the upper level of our cognitive functions. Various factors include single parenthood and low birth rates; and we have simply become "lazy". Scandinavia, in especial, has been affected more by this "dumbing" trend, or leveling off, and not those nations studied in the developing world.

The consequences of mental lethargy might be that we, as Mensans, could be called upon to re-think the modern world as we help ourselves function at a higher intellectual level. Isn't one of the original aims of the Society "to foster human intelligence"?

1)Flynn, James R., What is Intelligence? Beyond the Flynn Effect. New York: Cambridge University Press, 2007.

2)http://www.moreintelligentlife.com/node/654

3)http://www.timesonline.co.uk/tol/news/uk/article756647.ece

alternate reality

john blinke

Suppose that you lived in a place where everything was made of neon bulbs. Suppose that the plants, buildings, and animals, all glowed with their own light. Wouldn't that be a strange place to see? Well, it happens that you live in that place. Everything does glow with its own light. We just can't see it without some help because it is in the infrared spectrum.

The light we call infrared, or IR, covers more of the electromagnetic spectrum than visible light does. It starts at .750 microns, just beyond the visible spectrum, and it extends to about 1,000 microns, where the microwave region begins. Industrial infrared cameras operate between about .2 microns and 14 microns, with a deep gap between 5.5 and 7.6, where water vapor in the air
soaks up most infrared energy.

The point of mentioning this is that we have a pitifully poor grasp of reality. In our everyday lives, we can't sense infrared, ultraviolet, x-rays or gamma rays. Other creatures do better than we do. If you want to feel visually deprived compared to another animal, look up the Mantis Shrimp on *Wikipedia*:
they can see infrared and ultraviolet, and they have independent trinocular vision in each eye! We can't sense the very low sounds elephants use to communicate through the ground. We can't hear the ultrasonic serenades mice sing to each other. And we can't smell the rich assortment of odours that dogs enjoy. We don't even see some of the things we think we see. For example, we experience distance as a distortion of vision. Faraway objects seem distant because they
appear small. Our brains interpret diminished size as increased distance. But, we only see apparent size, not distance, itself: some optical illusions are based on this effect.

As we continue to increase our ability to sense the physical universe, we should not be surprised that the world appears different from what we used to know. Continuing bemusement is the price of knowledge.

(For a related video, go to YouTube and search for Michelle Thaller infrared.)

IBD meeting October 1-6, 2008

It's not too late to book for the IBD meeting in beautiful San Martino al Cimino, just 100kms north of Rome. Several activities are programmed for Mensa Italy's 25th Annual Gathering, which coincides with the IBD meeting, including tours of Rome and San Martino al Cimino's surrounding areas. The meetings will be held at ***Balletti Park Hotel*** (www.balletti.com/parkhotel), located just outside the ancient walls of the village.

More details and registration at **www.ibd.mensa.it**

international calendar

September 19-22, 2008 British Mensa Annual Gathering -The Adelphi Hotel, Liverpool. Contact: diane@mensa.org.uk

Sept 26-28, 2008 Mensa Switzerland AG - Lugano, Switzerland. Contact Francois Aubert at francois.aubert@mensa.ch for information.

Oct 1-6, 2008 MIL International Board of Directors Meeting
San Martino al Cimino (VT), Italy

Enquiries ibd@mensa.it

October 31 – November 2, 2008 Dutch Annual Gathering Weekend, to be held in conference hotel Mennorode in Elspeet. Contact jacqueline.bonkenburg@mensa.nl for more information

April 16-19, 2009 - The Annual Gathering of Mensa in Germany (MinD) will be held in Munich. As it will also be the 30th Anniversary of Mensa in Germany, we would like to invite you all to celebrate with us. Details next issue.

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Answers to Cryptosquare: beast, error, arena, sonic, track