

Report on *The Mismeasure of Man* and Other Books

This all began with the recent presidential election campaign. When one of the candidates for vice-president advocated the teaching of creationism in the public schools, I became curious as to just what it was all about. After reading several books from our public library and one controversial high school textbook published by the Creation Research Society that I bought on-line, plus dozens of Internet articles, I summarized some of my findings in a four-page report. That prompted my further curiosity about the biblical foundations of creationism, so I delved studiously into the Bible and its history, much to Mary's amazement, especially the Book of Genesis. But nothing really worth reporting came from all that.

That led in turn to my wanting to learn a lot more about the theory of evolution. As elementary Darwinian evolution was presented to us way back in high school biology class, it struck me as raising more questions than it answered. I have been curious ever since. Our library has a whole shelf of books on evolution, and I have managed to read, or at least skim, most of them. With so much new research now being reported in evolutionary biology, it is a challenge to keep up with all the latest findings. But after all that, I am still looking for answers to two fundamental questions: What keeps harmful mutations from accumulating over time, and how does evolution progress so rapidly, as evidenced by birds and animals adapting to changing situations in only a few generations? I wrote a report about that too, but only two pages this time.

One thing leads to another. Nearly every scholarly book on a scientific subject contains a bibliography for further reading. I often wish I could read, if not all of those cited, at least some. But just the first one contains yet another bibliography, and my reading list forever expands. The thought of so much yet to be studied and learned, starting so late in life, always a slow reader and even slower now—it can all be a bit frustrating. So I zeroed in on just one aspect that especially interested me—research into the inheritance of intelligence in humans. Again, our library has a full shelf and more catalogued under 153.9 Intelligence, but I narrowed those down to just a few specific to my interest. One was *The Mismeasure of Man* by Stephen Jay Gould, 1981. I was already familiar with the author, as his opinions are mentioned frequently in books on evolution. He was sometimes called an evolutionary biologist; although he usually called himself a paleontologist.

What really struck me in most of these books on evolutionary theory was the tendency of authors to write disparagingly of each other, each in their own sometimes egotistic way. Most of the authors are academicians. There seems to be especially intense rivalry and competition in this field. Sometimes they accuse one another of stealing their ideas or using them without credit. But most common is staking out their own coveted territory and denigrating nearly all others, sometimes in a spiteful, insulting, or angry manner. I encountered none of this either in engineering school or later in my work in electronics. Nevertheless, more recently I have come to expect it from my reading of various scientific publications, including even *Scientific American*. But it strikes me as being especially intense in this field.

Gould falls headlong into this category. Not only does he disagree with practically all others mentioned in his book, but he does so in his own snide and haughty style. In fact, that's what his whole book is about. To his credit, at the start he does at least confess that was his intention, as also suggested by the negative title, *The Mismeasure of Man*. All this did not surprise me too much. Years ago I observed one of his class lectures at Harvard aired on public TV, in which he carried on in much the same vein. I do not now remember any of the details, but what I do remember clearly was his manner, which I would characterize as political correctness carried to extremes (even for Harvard), his grandstanding and playing up to his audience, and an arrogant sort of smugness with which he dismissed anyone who propounded ideas contrary to his. Conspicuously lacking was much that I would consider science. As I recall, it was more like drama. But it was a long time ago, and perhaps I am being too critical. Some writers even describe him as a top expert in his field.

Basically, the theme of this book is that differences in intelligence between individuals, or on average between persons grouped by sex, geography, nationality, race or whatever, are accounted for mostly by environment, as opposed to inheritance. He must have had fun pouring through the vast resources at Harvard ferreting out the most outlandish historic examples of bad "science" with which to support his case. Some are so absurd that one example would have sufficed to discredit their source, yet he gleefully goes on devoting an entire chapter to some of them. Those few he agrees with are barely mentioned.

There are many other books on human intelligence. Other authors have pointed out, as does Gould also, the many pitfalls involved in trying to measure it.

(1) To begin with, there is no universally accepted definition of intelligence, and may never be. Most authors, including Gould, are careful to use the qualification "*as measured by such-and-such test.*"

(2) Even if there were, no two authors would likely agree on how to measure it with reasonable accuracy.

(3) Furthermore, there seems to be general agreement that representing anything as complicated and multi-faceted as intelligence by a single number can be at best only a crude approximation.

(4) Then there is the old bugaboo of political correctness. Suppose research showed conclusively some category of people to be less intelligent than another. Would anyone dare publish it, and what purpose would it serve even if they did?

As for specific points propounded by Gould, I took several pages of notes, but will not attempt to summarize them here. If curious, you can read the book and draw your own conclusions. Much of the book consists of detailed and highly technical statistical analysis. Gould must be a smart guy, and it is beyond me to question the accuracy or validity of all those graphs and calculations. But the conclusion he draws from all this is that heredity plays only a small part in not only intelligence but in other human traits that make up what we call personality or character. Personally, I find that hard to believe.

To further illustrate some of the pitfalls in this field of inquiry, I will mention two other books. *What is Intelligence?* By James R. Flynn describes the “massive gains” in scores on intelligence tests in recent years, and the bulk of this book is an attempt to explain what accounts for this dramatic increase, evidently based on a carefully selected set of test results of questionable validity. Sitting right next to this book on the same library shelf was *The Decline of Intelligence in America* by Seymour W. Itzkoff. Using a likewise carefully selected and obviously different set of test results, he comes to the exact opposite conclusion from Flynn. Much of his book is devoted to what can be done to halt this chronic decline, including the author’s controversial ideas about public policy and race, bordering on (that dreaded word) eugenics. The last I knew, Itzkoff was still on the faculty of Smith College.

And finally there is *The Intelligence Controversy* by H. J. Eysenck and Leon Kamin. This interesting book has an unusual format. The question posed by the book is, like Gould’s, how much of human intelligence can be attributed to environment, as opposed to how much of it is in our genes? The two authors take opposite sides. Each author was asked by the publisher to present an argument for his viewpoint without seeing what the other was writing. Then after reading each other’s piece, they could give a brief rebuttal, somewhat like a debate or even a trial. One of the authors presents what I consider, without being an expert on the subject, a scholarly argument to support his case. Alas, the other author goes to great lengths attacking the scholarship and character of the first author, based on some of his previous writings, in an angry and insulting manner, all at the expense of presenting a sound scientific argument. I thought this greatly weakened his case. I leave it to you to guess who took which side.

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Added note: The word *eugenics*, like most words, can have several slightly different meanings. To go back to the source, eugenics was first defined by Francis Galton as “the study of all agencies under human control which can improve or impair the racial quality of future generations.” Who could object to studying that? However, over the years it has acquired an unpleasant association with schemes that go well beyond studying, ranging from reasonable to unthinkable.

Nearly every action of government affecting the health and welfare of its citizenry, if examined closely, will be found to have some effect, however slight, on human evolution. Every couple that decides to have one or more children, or even to have none, is participating in the evolution of the human race. Ever since the days of Darwin, biologists have been pointing out that public policies affecting human evolution, as countless ones certainly do, could have some unintended and undesirable consequences. There have been numerous studies that attempt to show the “lower class” having on average more offspring than the “upper class,” referring to such things as income, occupation, intelligence, and even criminal tendency. Gould takes special delight in showing, probably correctly, that many of these studies are seriously flawed, and some may even be racially biased.

When it comes to intelligence, most scientists, with the possible exception of Gould, now agree that for decades at least, those who score lower on I.Q. or similar tests have tended on average to have larger families than those at the top. (However, most are cautious not to equate test scores with intelligence.) One of the articles in the special Evolution issue of *Scientific American* (January 2009) refers to this disproportionate birth rate as resulting in “reverse evolution.” I was so surprised to see that slip that I wrote a Letter to the Editor, unused of course. The notion of evolution having a forward (or reverse) direction was discarded by most evolutionary biologists over a century ago. Evolution has no forward or reverse. To quote Forrest Gump, *it happens*. Furthermore, I am not so sure all of this is such a bad thing. Look at the front page of any newspaper. Most of the really major troubles in the world today, from Africa to the Middle East and from Wall Street to Washington, have been perpetrated by persons who would probably score above average on an I.Q. test. What we need is not smarter people but better people. No one has yet come up with a test for that.

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Another added note: Richard Lewontin, professor of biology at Harvard, is mentioned favorably and often in Gould’s book. I have just finished reading Lewontin’s provocative book, *It Ain’t Necessarily So*, 2000. I was struck first of all by his habitual snide sarcasm, so similar to Gould’s. The question of evolutionary explanations for human social behavior seems to have evolved into all-out warfare between two opposing sides. On the one side are the sociobiologists, so-called, who seek survival-of-the-fittest explanations for nearly all animal behaviors, including human. Their team is captained by E. O. Wilson and Richard Dawkins. Aligned on the opposite side of this battle line are those who go to the opposite extreme and take great delight in ridiculing nearly everything that smacks of sociobiology. Their team is of course co-captained by Lewontin and Gould (now in spirit only). Since I am far from an expert in all this, I tried to look beyond the technical details and into the mind of the author.

Like Gould, Lewontin goes to great lengths ferreting out some of the more controversial writings of the other side, then rephrases and exaggerates them to make them sound even more ridiculous. Quoting some of the insults he fires off: *know-nothing, mindless, foolishness, supposed to know better, logically fatal, absurdity, ignoring critical facts*, and so on. Another favorite word of his is “*racism*,” when something less charged, such as bias, would have seemed more appropriate. Could it be revealing signs of his own prejudices? He even brings McCarthyism and the Nazi Holocaust into his convoluted skirmishes. (What do they have to do with biology?) I described Gould as carrying political correctness to what I thought was an extreme until reading Lewontin. He outdoes even Gould, and I now find I am not alone in making that observation.

Lewontin finds it necessary to remind readers that he has a graduate degree in mathematical statistics and has taught it for *forty years*. In his provocative chapter on sex, in which his wrath and sarcasm reach new heights, I had the satisfaction of finding what I

thought was an obvious error. He states: "Discounting homosexual partners, the average number of sex partners reported by men must be equal to the average number reported by women," meaning as reported by a sampled population in a survey. Aside from untruthfulness, I can think of several other ways that such a survey could and probably would report inequality, such as in the wording and interpretation of the question. Exactly what for example is taken to be meant by "sex partner." Another way would be if prostitutes or predators were underrepresented in the survey, and yet another way would be in the age distributions of the samples surveyed.

Lewontin writes in a style so typical of academic pseudo-intellectuals. On nearly every page are references to presumed classics in literature, almost none of which have any meaning to me. I kept a dictionary handy to look up mysterious words like "objectification" and "synecdoche" that are sprinkled liberally throughout. Others like "genomania" and "optimalist" I could not find in any dictionary. The main purpose of Lewontin's book appears to be letting readers know how smart he is. Here is what he says about himself, quoting Gould, on the jacket of his book: "Lewontin is simply the smartest man I have ever met." If true, and it may well be, I think that says a lot about Gould and his associates. Of all books on this subject I have read recently, and I have read a lot, Lewontin's strikes me as being certainly the least scholarly.

I thought the most bizarre chapter was "Women Versus the Biologists," the gist of which is that the "sexist" male sociobiologists are guilty of outrageous bias, especially in trying to explain their perceived differences between men and women in terms of evolution, differences which do not even exist according to Lewontin. He would have us believe that all such psychological difference between the sexes "rest on weak evidence or no evidence at all." I had always assumed that the differences were so obvious as to be beyond question. In recent years, a much clearer understanding of the inner workings of the human brain has been gained, especially the different roles played by the right and left sides, and how they interact. It has been found that the human brain tends to be nearly alike the world over, the one exception being the clear anatomical differences between male and female. These were known long before this book was written. Lewontin, as to be expected, dismisses all these findings as just "bad science."

I conclude this review with two other Gould books. *Full House*, 1996, was his 15th book. In his fourth book, *The Mismeasure of Man*, filled with page after page of belabored statistics and graphs about intelligence testing, I thought he was already running out of ideas. Now I am even more convinced. Like Lewontin, he is prone to use mysterious words like "complexification," not found in my dictionary. About half of this book is devoted to explaining, using page after page of arcane statistical analysis (utterly unfathomable to the average reader including myself but evidently his specialty) why the top batting averages in the majors have declined in recent years despite the rules being "unchanged for a century" (page 78). Anyone who knows anything about baseball knows that the rules have changed frequently. Ten pages later this suddenly dawns on him: "Baseball has constantly fiddled with its rules." Then on page 105 he says the changes have been "minor" but not "fundamental," whatever that is supposed to mean. Seven pages later these are referred to as no "major changes", the "same rules," "constant

rules,” and “same basic rules.” So much for the rules, then. Wouldn’t you expect the changes in the size of the ballparks, the playing surface, the night games, the changes and improvements in equipment, and the size of the strike zone to all have some effect on batting averages? Not according to Gould. Since these do not support his argument, they are all classified as “minor,” meaning insignificant. What then is his surprising explanation for decline in batting averages, never even suspected by anyone until discovered by him in a stroke of genius and proven using sophisticated statistical analysis: **General improvement of play**. Believe it or not, that’s what nearly the whole silly book boils down to.

The Hedgehog, the Fox, and the Magister’s Pox is the last of his 20 books (plus three others co-authored), published shortly after he died in 2002. When one is on the faculty of both Harvard and NYU, a museum curator, president of three scientific societies, a traveling lecturer, and host of various TV specials, how much time does that leave for writing 23 technical books in 25 years, including one of 1433 pages? Not much, apparently. This book has the appearance of having been thrown hastily together and never properly edited. Apparently the main object was to bring to a grand climax his longstanding feud with E. O. Wilson over what strikes me as petty arguments about such things as the meaning of “reductionism” and “consilience.” He rants on for chapter after repetitious chapter of insults and insinuations hurled at Wilson that I would characterize as pathological. As for the style of writing, here is an example of one sentence.

“The general principle of ecological pyramids will help me to understand why all ecosystems hold more biomass in prey than predators, but when I want to know why a dinosaur names *Tyrannosaurus* played the role of top carnivore 65 million years ago in Montana, why a collateral descendant group of birds, called phorusrhacids, nudged out mammals for a similar role in Tertiary South America (at least until the Isthmus of Panama arose and jaguars and their kin moved south), why Ko-Ko both caged a rhyme and an “in-joke” to Katiska when he claimed that he “never saw a tiger from the Congo or the Niger”—well, then I am asking particular questions about history: real and explainable facts to be sure, but only resolvable by the narrative methods of historical analysis, and not by the reductionistic techniques of classical science.”

Translation of the above: Gould thinks Wilson is a knucklehead.

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