

[PDF] The Genius In All Of Us: New Insights Into Genetics, Talent, And IQ

David Shenk - pdf download free book



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Description:

Louann Brizendine Reviews The Genius In All of Us

,author of and , is a diplomat of the American Board of Psychiatry and Neurology and the National Board of Medical Examiners, and is clinical professor of psychiatry at UCSF. She is founder and director of the Women's Mood and Hormone Clinic and the Teen Girl Mood

and Hormone Clinic. After receiving her medical degree from Yale University School of Medicine in New Haven, Connecticut, she completed an internship in medicine and neurology at Harvard Medical School's Brigham and Women's Hospital, and a residency in psychiatry at the Massachusetts Mental Health Center of Harvard Medical School. She sits on the boards of many prestigious peer reviewed journals and is the recipient of numerous honors and awards. Read Brizendine's guest review of *The Genius In All of Us*:

In *The Genius in All of Us* Shenk beautifully explains why the nature-nurture debate is dead. It is not just the genes we are born with, but how we are raised and what opportunities are open to us that determine how smart we will become. Nurture and experience reshape our genes, and thus our brain. Shenk argues that the idea we are either born with genius or talent, or we aren't, is simply untrue. The notion that relentless, deliberate practice changes the brain and thus our abilities has been undervalued over the past 30 years in favor of the concept of "innate giftedness." Practice, practice, practice (some say 10,000 hours or more) is what it takes. Shenk argues that it is just some fantasy that effortless, gifted genius is born and not made. He marshals evidence to show that genetic factors do not trump environmental factors but rather work in concert with them. Shenk notes that by the sweat of our brow we can train ourselves to be successful--even if we are born with only average genetic talent. Scientists know that how we are raised and how we are trained affects the expression of our genes. If you think you've reached your talent limit, think again, Shenk says. It's not just in your genes, he says, but in the intensity of your motivation. Ambition, persistence, and self-discipline are not just products of genes, but can be shaped by nurture and environment. Certainly it is important to have good genes, but that determines at most only 50 percent of your talent. He underscores the point that intelligence is made up of the skills that a person has developed--with an emphasis on "developed"--through hard work. Encouraging ourselves and our children to work hard requires being surrounded by others also wanting to achieve striving for excellence. Moreover, Shenk gives the hopeful message not just for kids, but also for adults. Happily for us, the human brain remains plastic, changeable and trainable well into old age. So no matter how old you are, if you'd like to be smarter--get to work! --Louann Brizendine

A Q&A with David Shenk

Question: Your book is called *The Genius in All of Us: Why Everything You've Been Told About Genetics, Talent, and IQ is Wrong*. That's a big claim. Everything and how so?

David Shenk: It is a bold statement, and it reflects how poorly the public has been served when it comes to understanding the relationship between biology and ability. The clichés we've been taught about genetic blueprints, IQ, and "giftedness" all come out of crude, early-20th century guesswork. The reality is so much more interesting and complex. Genes do have a powerful influence on everything we do, but they respond to their environments in all sorts of interesting ways. We've now learned a lot more about the developmental mechanisms that enable people to get really good at stuff. Intelligence and talent turn out to be about process, not about whether you were born with certain "gifts."

Question: In *The Genius in All of Us* you state that the concept of nature versus nurture is over. Scientists, cognitive psychologists, and geneticists are moving towards an idea of 'interactionism.' What does this mean? If the battle of genes versus environment is over, who has won? Which is more important?

David Shenk: They both won, because they're both vitally important. But the new science shows us that they do not act separately. Declaring that a person gets X-percent of his/her intelligence from

genes and Y-percent from the environment is like saying that X-percent of Shakespeare's greatness can be found in his verbs, and Y-percent in his adjectives. There is no nature vs. nurture, or nature plus nurture; instead, it's nature interacting with nurture, which is often expressed by scientists as "GxE" (genes times intelligence). This is what "interactionism" refers to. A vanguard of geneticists, neuroscientists, and psychologists have stepped forward in recent years to articulate the importance of the dynamic interaction between genes and the environment.

Question: You describe genes and environment as a sound board. How so?

David Shenk: In the past, we've been taught that each distinct gene contains a certain dossier of information, which in turn determines a certain trait; if you have the blue-eyed gene, you get blue eyes. Period.

It turns out, though, that the information contained inside genes is only part of the story; another critical part is how often genes get "expressed," or turned on, by other genes and by outside forces. It's therefore helpful to think of your genome as a giant mixing board with thousands of knobs and switches. Genes are always getting turned on/off/up/down by hormones, nutrients, etc. People actually affect their own genome's behavior with their actions.

Question: How do these new findings affect the concept of the "The Bell Curve"--that we live in an increasingly stratified world where the "cognitive elite," those with the best genes, are more and more isolated from the cognitive/genetic underclass? Is that idea now completely obsolete?

David Shenk: Yes, it is obsolete. The idea that there is a genetic super-class that has a corner on high-IQ genes is nonsense. This comes out of a profound misunderstanding of how genes work and how intelligence works, and also from a misreading of so-called "heritability" studies. I am not saying that genes don't affect intelligence. Genes affect everything. But by and large I think the evidence shows that people with low intelligence are missing out on key developmental advantages.

Question: Lewis Terman invented the IQ test at Stanford University in 1916. He declared it the ideal tool to determine a person's native intelligence. Are IQ tests accurate? What are the benefits and fallout of the IQ test?

David Shenk: IQ tests accurately rank academic achievement. That's quite different from identifying innate intelligence, which doesn't really exist. Tufts intelligence expert Robert Sternberg explains that "intelligence represents a set of competencies in development." In other words, intelligence isn't fixed. Intelligence isn't general. Intelligence is not a thing. Instead, intelligence is a dynamic, diffuse, and ongoing process.

The IQ test has valid uses. It can help teachers and principals understand how well students are doing and what they're missing. But the widespread belief that it defines what each of us are capable of (and limited to) is disabling for individuals and society. People simply cannot reach their full potential if they honestly believe that they are so severely restricted.

Question: How do we go about finding the genius in all of us? What steps we can take to unlock latent talent?

David Shenk: Find the thing you love to do, and work and work and work at it. Don't be discouraged by failure; realize that high achievers thrive on failure as a motivating mechanism and as instruction guide on how to get better.

(Photo © Alexandra Beers)

--This text refers to an out of print or unavailable edition of this title.

From *Starred Review* Intent on burying the concept of inborn genius, Shenk uses the 128 pages of "The Argument" to drive home how mistaken the notion of being genetically destined at birth to be a Mozart or a Michael Jordan is. For genes aren't the inalterable essences that environmental effects merely help out; rather, genes and environment interact to realize a person's potential in a constant and complicated process that Shenk attractively exemplifies through the athletic life of Ted Williams, who began hitting practice at age six and, equally important, never gave it up; also, considered to have magically sharp sight, he tested only high normal upon entering naval aviation—the thing was, he developed himself to, as Ty Cobb said, "see more of the ball than any man alive." En route to the startling revelation that Lamarckism (variation by inheritance, not Darwinian natural selection) has truth in it, after all, Shenk corrects common knowledge about what twin studies and IQ tests really show; clarifies the arguably most misunderstood genetics term, heritable; and scientifically revives faith in not just practice and determination but also parenting and lifestyle as crucial factors, along with genes, in the realization of talents. Since this flies in the face of a century of genetic determinism, Shenk employs the equally engrossing 141 pages of "The Evidence" to cite, quote, paraphrase, and comment upon the sources for virtually every assertion in "The Argument." --Ray Olson --This text refers to an out of print or unavailable edition of this title.

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