

1: Genetic Studies of Genius - Wikipedia

What does it take to be considered a genius? Is a genius a remarkable musician who moves our spirits, an artist who creates beautiful paintings, a student who scores off the charts on an IQ test or the employee working the Genius Bar at your local Apple store? OK, maybe the last example is pushing.

How to produce genius is a very old question, one that has occupied philosophers since antiquity. Last year, pop-sociologist Malcolm Gladwell addressed the subject in his book *Outliers: The Story of Success*. See pictures of Albert Einstein. For most of its history, the debate over what leads to genius has been dominated by a bitter, binary argument: Simonton takes the reasonable position that geniuses are the result of both good genes and good surroundings. His middle-of-the-road stance sets him apart from more ideological proponents like Galton the founder of eugenics as well as revisionists like Gladwell who argue that dedication and practice, as opposed to raw intelligence, are the most crucial determinants of success. Simonton tries, with this thorough, slightly ponderous, definition: Geniuses are those who "have the intelligence, enthusiasm, and endurance to acquire the needed expertise in a broadly valued domain of achievement" and who then make contributions to that field that are considered by peers to be both "original and highly exemplary. Other investigators count encyclopedia references instead. Such methods may not be terribly sophisticated, but the answer they yield is at least a hard quantity. Is there a more objective method? There are IQ tests, of course, but not all IQ tests are the same, which leads to picking a minimum IQ and calling it genius-level. Also, estimates of the IQs of dead geniuses tend to be fun, but they are based on biographical information that can be highly uneven. But what about accidental discoveries? Simonton mentions the case of biologist Alexander Fleming, who, in , "noticed quite by chance that a culture of *Staphylococcus* had been contaminated by a blue-green mold. Around the mold was a halo. Would you be the genius? Recently, the endurance and hard work part of the achievement equation has gotten a lot of attention, and the role of raw talent and intelligence has faded a bit. See the top 10 non-fiction books of Ericsson has become famous for the year rule: Gladwell is a believer. For one thing, you need to be smart enough for practice to teach you something. In a study, Simonton showed that the average IQ of 64 eminent scientists was around , fully 50 points higher than the average IQ for the general population. See pictures of Bobby Fischer, chess prodigy. Personality traits also matter. Simonton writes that geniuses tend to be "open to experience, introverted, hostile, driven, and ambitious. So what does this mean for people who want to encourage genius? Gladwell concludes his book by saying the 10-hour rule shows that kids just need a chance to show how hard they can work; we need "a society that provides opportunities for all," he says. As I argued here , we need to do more to recognize and not alienate high-IQ kids. Too often, principals hold them back with age-mates rather than letting them skip grades. Still, genius can be very hard to discern, and not just among the young. Simonton tells the story of a woman who was able to get fewer than a dozen of her poems published during her brief life.

2: Is Intelligence Hereditary? - Scientific American

The idea that genius was purely genetic gradually lost popularity with the advent of DNA and the Human Genome Project in the 's. The general consensus though loosely held the belief that genius was still somewhat genetic carrying a sort of mystical aspect to the debate.

Share via Email David Shenk: Thus Arthur Schopenhauer defined the concept of genius "as a gift displayed by semi-mystic beings whose innate qualities sets them apart from other mortals. Mozart, Einstein, Newton, George Best: And that would seem to be that. Every human has the potential to be an Einstein, claims this affable year-old in his latest book *The Genius in All of Us* Icon. There is nothing that special about being exceptionally gifted. It is a comforting assertion. But is it justified? You claim that everything that we have been told about genetics, talent and intelligence is wrong. My interest was sparked when I stumbled into a body of research called expertise studies. Anders Ericsson [of Florida State University] and other psychologists have examined what processes make certain people so good at some activities. They are trying to determine the ingredients of greatness, in other words. For example, they looked at how [professional] violinists practise. To the untrained eye and ear, it seems obvious: But if you look very carefully at those who end up being the best, you discover " by doing intensive tracking of them " that they do practise more, and better, than those in the class below them. That is a theme that extends to all achievements. There is a quantitative and qualitative difference in the practice undertaken by the super-greats " say in basketball " and the mere greats. They work hard at being great. Most people look at child geniuses like Mozart and conclude that his gifts had to be the result of fortuitous genes. Every piece of evidence we have about how genes work, how brains work, where musicality actually comes from, are consistent with the idea that there is nothing that mysterious about Mozart. I am not trying to diminish his achievements, of course. But the more you look at his life, or the life of any other genius, you realise that this was a process. He reacted to an environment that was almost uniquely perfect for moulding him into a child star. We know he was interested in composing early on and we know he was a prodigy as a performer. The untrained mind reacts by concluding he was born that way. And that kind of reaction has been going for a century. Every time we are confronted with prodigious talent, we say it must be genes because we cannot think of any other explanation. In fact, in the case of Mozart, it is clear his upbringing was also remarkable in terms of stimulating his abilities. The trouble is that this problem is getting worse. The more we read about new genes being discovered for human conditions, the more our belief in genetic determinism gets stronger. Yet the vast majority of geneticists would not want that to happen. He practised at playing and composing better than anyone else. But who is to say that drive was not inherited? The source of his greatness would still lie in genes in that case. I think there are genes that influence drive. But I do not think that it is a completely innate characteristic. It becomes part of our personality and psychology and all of that is developed. But, fundamentally, it is a developed trait. Do you think genetics research is going to provide us with more data that suggests that genius is acquired rather than inherited? Modern studies are only just beginning to unravel issues about gene expression and epigenetics, the study of how the environment modifies the ways genes are expressed. Genes are constantly activated and deactivated by environmental stimuli: There is no golden genetic windfall bestowed at birth, but constant interaction between the outside world and our DNA. In other words, your genes do not place a limit on your potential in any way? Our genes influence our lives, but equally our lives influence our genes. And I think that that has important implications. Certainly, in the US, we tend to quietly give in to the suspicion that some people are not as capable of being educated as others. The thing is that if we decide that we need to do a lot more to exploit human talent, then we will all benefit. These things take resources, of course. But the overall message is clear. Our problem is not that we possess inadequate genetic assets but that we are suffering from an inability, so far, to tap into what we already have. Few of us know our true limits and the vast majority of us have not even come close to tapping what scientists call our "unactualised potential".

3: Is genius genetic? | HowStuffWorks

Generic Lyrics: Gold rush of religion, give the people God Cry out to whatever name you choose For your convenience Here's your quick served lie For your salvation There's no way to lose A.

And he believes that serendipity has been on his side. The question of whether high-performers are born or made long has captivated the scholarly community, whose search for answers has led to studies of chess players, musicians and leaders in various fields. In the s, Howard Gardner, professor of cognition and education at Harvard Graduate School of Education, published a ground-breaking work proposing multiple kinds of intelligence. Gardner, a MacArthur grant recipient, also proposed multiple kinds of creativity. *The Story of Success*. Some believe that talent and work both are part of the mix. American Education in the Age of Globalization. With determination and practice, a person can attain proficiency, if not greatness, in many fields, Dr. Zhao noted that research has suggested that mastery of a foreign language becomes more difficult after early adolescence. However, giftedness is no all-or-nothing proposition. Some students classified as gifted struggle with an advanced curriculum; other gifted students show a knack for one discipline but struggle in another, said J. Kaye Cupples, associate professor of education at Point Park University and retired executive director of support services for the Pittsburgh Public Schools. The young player gets more touches than his teammates, which translates into a still-higher skill level, which leads him to a more-advanced team with better coaches. Personal qualities are important, too, including the drive Dr. Kiewra are among those who cited two interrelated factors – a rigorous practice regimen and the influence of Mr. Practice is so powerful that it changes the brain. But how circumscribed is greatness? How successful would Mr. Woods be in another line of work, even another sport? Kiewra noted that Michael Jordan, a basketball superstar, has proven less adept at baseball and golf. Beard and Luis von Ahn, assistant professor of computer science at Carnegie Mellon University and recipient of a MacArthur grant, said many factors influenced their success. Beard said he received good guidance from parents who encouraged him to take schoolwork seriously. He had an early interest in animals, which grew when his father, a biology teacher, began relating stories about extinct animals and fossils. After receiving his doctorate from Johns Hopkins University School of Medicine, he had an opportunity to teach and conduct research at a medical school or to take the paleontology position at the Carnegie. Beard said he had the good fortune, or luck, to choose the latter. The Carnegie position led to cutting-edge research in China, which, in turn, attracted the attention of the MacArthur Foundation. As for talent, Dr. And a work ethic, too.

4: Is genius endowed or nurtured? | High Ability

A genius is a person who displays exceptional intellectual ability, creative productivity, universality in genres or originality, typically to a degree that is associated with the achievement of new advances in a domain of knowledge.

We are talking about average differences among people and not about individuals. By genetic, we mean differences passed from one generation to the next via DNA. But we all share. And we should note that intelligence tests include diverse examinations of cognitive ability and skills learned in school. Genes make a substantial difference, but they are not the whole story. They account for about half of all differences in intelligence among people, so half is not caused by genetic differences, which provides strong support for the importance of environmental factors. This estimate of 50 percent reflects the results of twin, adoption and DNA studies. From them, we know, for example, that later in life, children adopted away from their biological parents at birth are just as similar to their biological parents as are children reared by their biological parents. Similarly, we know that adoptive parents and their adopted children do not typically resemble one another in intelligence. Researchers are now looking for the genes that contribute to intelligence. In the past few years we have learned that many, perhaps thousands, of genes of small effect are involved. Recent studies of hundreds of thousands of individuals have found genes that explain about 5 percent of the differences among people in intelligence. This is a good start, but it is still a long way from 50 percent. Another particularly interesting recent finding is that the genetic influence on measured intelligence appears to increase over time, from about 20 percent in infancy to 40 percent in childhood to 60 percent in adulthood. One possible explanation may be that children seek experiences that correlate with, and so fully develop, their genetic propensities. The ability to predict cognitive potential from DNA could prove tremendously useful. Scientists might use DNA to try to map out the developmental pathways linking genes, intelligence, the brain and the mind. In terms of practical implications, we have known for decades about hundreds of rare single-gene and chromosomal disorders, such as Down syndrome, that result in intellectual disability. Finding additional genes that contribute to intellectual disability could help us perhaps prevent or at least ameliorate these cognitive challenges. Question submitted by Rowena Kong, via e-mail Do you have a question about the brain you would like an expert to answer? Send it to MindEditors sciam.

5: David Shenk's bright idea: Genius isn't in the genes | Global | The Guardian

Although there is no direct evidence for the genetic basis of genius or creativity, one factor deserves distinct consideration, particularly with respect to science—intelligence has indirectly.

Click to share on Pinterest Opens in new window A team of scientists, led by psychiatric geneticists at Washington University School of Medicine in St. Louis, has gathered the most extensive evidence to date that a gene that activates signaling pathways in the brain influences one kind of intelligence. When people had more than one positive variation in the gene, the improvements in performance IQ were cumulative. IQ tests also measure verbal skills and typically include many subtests. For this study, subjects took five verbal subtests and four performance subtests, but the genetic variations influenced only performance IQ scores. The person taking the test would have to put those pictures into an order that tells the story of how the child dropped the vase and broke it and then cried. In this multi-center study, people who have been treated for alcohol dependence and members of their families provide DNA samples to researchers, who isolated DNA regions related to alcohol abuse and dependence, as well as a variety of other outcomes. The CHRM2 gene activates a multitude of signaling pathways in the brain involved in learning, memory and other higher brain functions. Intelligence was one of the first traits that attracted the attention of people interested in the interplay of genes and environmental influences. Early studies of adopted children, for example, showed that when children grow up away from their biological parents, their IQs are more closely correlated to biological parents, with whom they share genes, than adoptive parents, with whom they share an environment. But in spite of the association between genes and intelligence, it has been difficult to find specific variations that influence intelligence. The genes identified in the past were those that had profoundly negative effects on intelligence — genes that cause mental retardation, for example. Those that contribute to less dramatic differences have been much harder to isolate. In , a group in Minnesota looked at a single marker in the gene and noted that the variation was related to an increase in IQ. A more recent Dutch study looked at three regions of DNA along the gene and also noticed influences on intelligence. In this new study, however, researchers tested multiple genetic markers throughout the gene. Converging Evidence for a Gene Influencing Intelligence. Behavioral Genetics, DOI The School of Medicine is one of the leading medical research, teaching and patient care institutions in the nation, currently ranked fourth in the nation by U. Through its affiliations with Barnes-Jewish and St.

6: Source of Genius | HowStuffWorks

-Geniuses are made in this lifetime and born by making in previous lifetime. -According to Theravada Buddhism, even extraordinary talent or ability is the result of nurture, repeatedly doing or practicing for a long time. -According to the philosophy of Theravada Buddhism, genius or talented people.

May 16, In a day and age where medical knowledge is at the touch of a button, we are exposed to a variety of contradictions in medical opinions. Even worse, people flock to the next best health tip without even questioning where it came from. People look to medical professionals and experts for the life changing information they hope exists. So where is everyone turning now? Oz, a man who mesmerizes the audience with his great medical secrets that can supposedly change your life. Oz does provide excellent information on nutrition habits. He demonstrates the healthiest foods to cook such as farm fresh salmon over other fish and to only eat red meat once a week. He also does research and finds new methods of eating that could potentially help you lose weight, or just provide a healthier diet. In my experience, I found Dr. His food tips and facts are usually correct making Dr. He also does a great job at promoting unknown diets that he has researched and deemed safe for people to try. I found the recipes that he endorsed by Hungry Girls to be incredible and would recommend them to anyone. About a month ago, Dr. Oz discussed a natural extract pill called Raspberry Ketone, which contains a high amount of an enzyme from raspberries equivalent to the amount found in 90lb of raspberries. The enzyme is supposed to make fat cells less solid, allowing weight loss to be easier, because the cells would take less energy to burn off. Oz show caused a high demand for the supplement, but that none of their customers had come back for more. They both told me to take that as a sign not to take the supplement because in their time of working, anytime a supplement works well the customers are coming in consistently to buy more. After learning of the interesting lack of faith in the product by supplement salesmen, I conducted some more research on the product. Oz show which made me question the validity of the statements. Furthermore, in an article by ABC news discussing the new hype of raspberry ketone through the Dr. Oz show, the writer had mentioned that other medical experts are concerned about the product, as it has never been through human studies. Oz does not mention the key details of product that make his tip for the product fiction. The more weight a person carries, the longer it takes the raspberry ketone enzyme to break down the fat cells. Also, people with diabetes are recommended to not even be around the ketone enzyme, let alone consume it. But mentioning this would make Dr. Oz sound less sensational and take away from the atmosphere of his show. So, the question is do we keep listening to Dr. The answer is yes, with skepticism. Just like critics have to be objective when they review a book or television show, fans of Dr. Oz need to protect themselves and do their own research on the tips he gives. Take everything he says as having two sides of the story, and search for that other side.

7: Genius - Wikipedia

The belief that a genius is the product of genetic make-up is as pervasive as it is wrong, according to David Shenk Sat 1 May EDT First published on Sat 1 May EDT Share on.

How Genetic Is It? But even intelligence, openness to experience and grit are not enough for genius to emerge. Those traits must be placed together in a singular environment. Contributors control their own work and posted freely to our site. If you need to flag this entry as abusive, send us an email. Hollywood has labeled Spielberg a "genius" at movie-making. But what exactly defines that genius? Is it the creativity of films such as "E. Is the fact that in , Premiere listed Spielberg at the most powerful and influential figure in the motion picture industry and Life named him the most influential person of his generation? The answer is all of the above: The genius question has long tantalized scientists. New studies are defining genius as a more precise constellation of nature and nurture factors. For example, one expects geniuses to be off-the-charts smart. And it is true that geniuses must possess sufficient intelligence to master the obligatory knowledge and skills in their field. However, in his book " Genius ," psychologist Dean Simonton describes another signature genius-making trait that must add to intelligence. Simonton found that genius-level scientists who made the greatest impact scored highest on measures of a personality trait called "openness to experience," defined as broad-mindedness that prods an individual to explore outside the box. In fact, the higher the impact, the more a scientist was engaged in avocations outside of science. And this would seem a paradox: But Simonton shows that genius is linked to a process called "blind-variation and selective retention. If left to percolate, those combine, blindly and at random, to fuel truly one-of-a-kind ideas that everyone wants to emulate. Geniuses, he says, generate products that are highly original, useful and exemplary. And that gift is born out of extraordinary creativity, the kind that revolutionizes the whole domain and inspires future generations. Creativity as a foundation for genius helps one understand how the same term "genius" places Steven Spielberg in the ranks of Isaac Newton, Albert Einstein and Napoleon. Outstanding creativity, born out of an "open mind," undergirds geniuses in disciplines as diverse as philosophy, politics, mathematics and music, Simonton says. His arguments are bolstered by genetic findings. In , psychiatrist Szaboles Keri discovered a genetic variation in the neuregulin 1 gene that was associated with creativity in people with extraordinary intellectual and academic performance. The gene affects neuronal development, synaptic plasticity and glial functioning. Keri suggests that the gene variation may spur reduced cognitive inhibition in the prefrontal cortex. The less inhibition, the more truly original the idea -- and the more the genetic seeding for genius. Psychologist Angela Duckworth conducted a meta-analysis of the "Big Five" personality traits those that blend to define any human being. She then teased apart exactly what aspects of the trait were key and came up with "sub-traits" of industriousness, perfectionism, tidiness, refrainment from procrastination, self-control, cautiousness, task planning and perseverance. Refining this analysis, Duckworth for the first time came up with a new and highly predictive personality trait that she labels "grit," defined as perseverance and passion for long-term goals. And this makes sense. Geniuses must be born with talent, but they also have to work at its mastery. Therefore, geniuses are also endowed with the traits that foster and maintain the ability to focus and practice for years, if not decades. One might expect that environment to be a stable household stocked with books, musical instruments and parents exemplary in role modeling of the domain of interest. And while studies do show that geniuses are more likely to come from homes that are intellectually or culturally stimulating, a meta-analysis details a host of developmental and social factors that also contribute. For example, disruptive events like orphanhood, parental abuse or stigmatizing disabilities can actually force an individual from a normal developmental path, breaking with convention and nurturing that originality component of genius. The same is true for positive disrupters like constant travel during childhood and varied exposure to new cultures and languages. The more unorthodox or varied the upbringing, the more likely the fodder for truly original ideas. In fact, artists set in wild environments -- ones that effect blind variation -- achieve the highest levels of artistic genius. But wildness can go too far. In other words, one major root of genius is linked to madness. What might be the tipping point, genius or insanity, is environment. So, for

example, someone born with the polymorphism and raised in more "stable" environment might learn to check the impulse for inhibition -- and stay sane. Another raised in chaos might not. Another environmental influence toward nurturing genius, and perhaps the most intuitively clear, is what psychologist K. The activities are intensive, regular and must continue for at least 10 years. And geniuses must not only have the ability to perform at this level, they must also perform. Overall, a genius is an exquisite combination: These seeds then must sprout in the right social and psychological setting at exactly the right time. Perhaps that is why they inspire and drive the rest of us to try and build bigger and better castles in the sand.

8: Is being a genius genetic, a talent or an illness | Physics Forums

How to produce genius is a very old question, one that has occupied philosophers since antiquity. In the modern era, Immanuel Kant and Darwin's cousin Francis Galton wrote extensively about how genius occurs.

So if genius is to any extent hereditary, it winks on and off through the gene pool in a way that would be difficult to measure or predict. Like Sisyphus rolling his boulder up to the top of the hill only to have it tumble down again, the human gene pool creates hereditary genius in many ways in many places only to have it come apart in the next generation. Wilson Psychologists once thought, simplistically, that genius was nothing more than high general intelligence, the capacity measured by the intelligence quotient or IQ. Most of them have led relatively successful lives but none of them, so far as I am aware, would be classified as geniuses today. At the other end of the IQ scale, a rare few of retarded or autistic persons, known as savants, can quickly specify the day of the week on which any date in history fell or, although unable to read music, can play on the piano any composition after just a single hearing. These highly specialized abilities seem all the more remarkable in people whose general intelligence may be so low that they are dependent on others for their care and sustenance. Autistic savants are not geniuses either, of course, but these remarkable people seem to me to illustrate an important fact about the structure of mind. A Autism and the modular brain Autism was first described in and is extremely variable in its manifestations. Some autists seem to be profoundly retarded and never develop language. One common theme in autism is an extraordinary lack of social motivation and social intelligence. Most autistic children are unresponsive to people, even to their mothers, and dislike being held or fondled. Unlike normal children, they do not seem to see other members of their species as especially interesting, to be studied and imitated. This may explain why even high-level autists tend to be slow in language development and why, in spite of sometimes high general intelligence, they remain insensitive to social cues. Asperger children seem to be unable to identify with other persons and therefore unable to anticipate how others will react to what they do. Evolutionary psychologists point out that human toddlers back in the Pleistocene who instinctively avoided snakes and spiders were somewhat more likely in consequence to live to maturity and to become our ancestors. Since natural selection works slowly, such a reaction to electric sockets has not yet evolved. Retarded or autistic savants seem to betoken the existence of other special-purpose modules that are capable of efficient functioning even in the presence of a low IQ. Neurologist Oliver Sacks describes some of these prodigies, such as Jedediah Buxton, a simpleminded laborer, who was a prodigious calculator. It is important to understand that the gifts of these autistic prodigies seem to go far beyond extraordinary rote memory. Lemke catches the style of any composer, from Bach to Bartok, after a single hearing, and can thereafter play any piece or improvise, effortlessly, in that style. Stephen, a profoundly autistic child, was consigned at age four to a London school for the developmentally disabled. At age seven, he began to specialize in drawing buildings, such as St. It was the sophistication of his drawings, their mastery of line and perspective, that amazed me and these were all there when he was seven. Steven could draw from memory a complex scene e. Examples like these have led psychologists to postulate the existence of numerous special intelligences which are seen in these savant cases in especially stark relief against a background of general intellectual poverty. It is of great importance to realize that such savant-like talents can also co-exist with high intelligence and in the absence of autism. The young concert pianist, Evgeny Kissin, "the most phenomenal prodigy of our time" Solomon, , p. At 30 months, "Genya sat down at the old Bechstein on which his mother taught and picked out with one finger some of the tunes he had been singing. The next day, he did the same again, and on the third day he played with both hands, using all his fingers The intellectually normal Chinese artist, Yani, displayed her artistic powers as early as did Nadia or Stephen and Sacks describes another gifted young man, now doing fundamental research in chemistry, who could read fluently and with comprehension at age two or repeat and even harmonize with any melody at the same age, and who did remarkable drawings with perspective at age three. Thus, it does not seem to be the case that savant-like gifts result from the conscription of all intellectual resources in the service of a single function. This idea of a modular intelligence contrasts with the view of the brain as merely a general-purpose

computer. Yet general intelligence is both real and important. Its role may be like that of the conductor of an orchestra in which the brass, percussion, strings, and woodwinds are the special-purpose modules. Temple Grandin, a highly intelligent autistic woman and a college professor, learned to use her general intelligence to compensate for her deficient social sensitivity Grandin There is a useful analogy between the domains of mental and physical talent. Each Olympic sport makes different demands on different muscle groups, reaction times, gross or fine motor coordination, and so on. Because of their different genetic endowment, it is unlikely that any world-class distance runner could have become instead a world-class sprinter or weight-lifter or gymnast. Yet all world-class athletes have an unusual degree of general athletic ability. If we were to construct a soccer team of Olympic runners, sprinters, pole-vaulters, gymnasts, and boxers, they would likely beat any other scratch soccer team except one comprised of potential world-class soccer players. If we were to construct special tests for each of the several varieties of savant, tests designed to quantify their remarkable special abilities, we can be confident that, when administered to a sample of the general population, scores on these tests also would form a positive manifold. Good tonal memory would tend to go with good visual and conceptual memory as well as with the ability for mental computation this correlation among the strengths of the mental modules is far from perfect, however; I know people no smarter than I am who have much better memories, for example. Retarded savants are remarkable not just because of a particular gift but also because of the absence of the related gifts that normally go with it. Every acknowledged human genius seems to have had at least a good general intelligence together with an assortment of other gifts or attributes which, in mutually facilitating cohabitation, led to the extraordinary achievements that are the ultimate basis for classification into this special category. One of the ingredients in the recipe for genius, and which I believe may be as essential as general intelligence, is an exceptional degree of mental energy, permitting protracted periods of intensely focused concentration on the project in hand. Our question in this chapter has to do with the origins of these interacting attributes. Or, can genius be achieved? It follows from this postulate of radical environmentalism [2] that every normal human infant, however distinctive in size, shape, and appearance, must arrive equipped with a brain that is essentially identical in structure and capacity with every other new brain, just as all new Macintosh computers are essentially identical when they arrive from the factory. What differences in intellect, interests, character, or personality are to be found later in the adult must, in this view, be attributable solely to differences in subsequent experience or programming. The fact is, however, that Jefferson modeled this first sentence of the American Declaration of Independence after the language of the constitution that had just been drafted for the state of Virginia. That document read like this: No practical man of that period would have given credence to the notion that all humans are biologically equal. Charles Darwin was a scientist and scientists have to be practical people because they study the world of nature rather than the mistier realm of philosophy. Darwin knew that the offspring tend to resemble the parents. Throughout most of human history, people have assumed that the same thing is true of our species, that smart parents tend to have smart children, that the offspring of athletes tend to enjoy sports, that mean parents often have mean offspring. But certain European philosophers, not being practical men, did entertain the notion, following John Locke , that the minds of human babies begin as identical blank slates to be written on solely by experience. One important radical environmentalist was the British philosopher John Stuart Mill , a contemporary of Darwin. It is perhaps not surprising that, in his later life, Mill was inclined to attribute his own intellectual achievements to that extraordinary and intensive early training. It was not until the 20th century, however, that large numbers of intellectuals took up radical environmentalism as an article of faith. They arrived at this common delusion from different starting points and for a variety of reasons. B Marxism Karl Marx wanted to refute the prevailing assumption that the existing class structure of society was somehow preordained by God or human nature. Like many non-Marxist economists of today, he saw human individuals as interchangeable pawns at the mercy of economic forces and his utopian vision required that these same pawns, arrayed on a different board with different rules, would all behave alike and in their mutual interest. The Marxist scientists who still lead the attack on what they regard as the hereditarian heresy are too sophisticated to espouse Lamarckian ideas, but they cling to the egalitarian dream because they cannot imagine achieving the greatest good for the greatest number unless that dream is true. Upper class white males took for granted the genetic superiority of

their race and gender and considered their dominant social position to be a birth right. This position was most clearly articulated by another Boas disciple, Margaret Mead, whom he sent as a graduate student to the South Pacific with the aim of demonstrating that adolescence was less stormy and stressful in Samoa than in the United States because of cultural differences and, in particular, because of the greater sexual freedom allegedly enjoyed by young Samoans. In her book *Male and female*, Mead explicitly asserted the radical environmentalist credo: On the other hand, there is no doubt that there are marked differences in sexual attitudes and practices across human cultures and Mead was assuredly correct in insisting upon both the malleability of human culture and the important role that the culture plays in affecting human behavior. Her mistake, it seems to me, was in conflating human culture, which is relatively easy to change, with human nature, which is not.

B Behaviorism The middle half of the 20th century was the heyday of behaviorism and many behaviorists tended to be radical environmentalists. One obvious reason for this tendency was the reluctance of behaviorists to theorize about mental mechanisms; if there are no theoretical constructs referring to the brain or mind, if one deals only with S--R stimulus-response relationships rather than with S--O--R relationships where O stands for the organism or person, then it is difficult to account for individual differences, much less genetically determined differences. The founder of the movement, J. Watson, is famous for his claim: Nearly 60 years after Watson, the geneticist, Richard Lewontin, made an even more extravagant claim: By claiming nearly limitless plasticity for both psychic and physical development, Lewontin suggested that ambitious parents can make their child not only into a doctor, lawyer, or, no doubt, a genius, at will, but also into a tennis champion or a basketball superstar, if that is what the child aspires to. Watson had only hubris and wishful thinking to back up his assertions. That he chose to state it anyway is a triumph of ideology over reason and evidence.

B Nazi Racism The views and deeds of Adolf Hitler may have had more influence on the nature--nurture question than Marx or Mead or any other thinker. Nazi notions about racial differences and Aryan superiority, the cruel experiments on twins conducted by Dr. Radical environmentalism was no longer just an arguable scientific hypothesis but, rather, it became an article of antifascist faith, no longer debatable in politically correct society, not even on University campuses.

B The Decline and Fall of Radical Environmentalism The long night of radical environmentalism seems, however, to be coming to an end. Throughout the period, occasional studies appeared showing that adoptees resembled psychologically their biological parents more than they resembled the adoptive parents who reared them. Twin and family studies accumulated, showing that the degree of resemblance of pairs of related individuals tends to parallel their degree of genetic relatedness. In recent years there has been a crescendo of twin and adoption studies with mutually corroborative results, and the pendulum of informed public opinion seems to be swinging in the direction toward which these findings point. It is once again possible for reasonable, educated people to acknowledge not only that we humans differ remarkably from one another in nearly every way imaginable but, moreover, that life would be unbearable, perhaps impossible, if this were not so. There are still some elderly survivors of the Long Dark lurking about; geneticist Lewontin, psychologist Leon Kamin, and paleontologist Stephen Gould are three of the better known examples. The dawn light hurts their eyes and they want to cling to the old egalitarian dream. They might finally awaken if they were to try seriously to imagine a world populated exclusively by genetic clones of themselves. If every other person had precisely my own innate gifts and limitations I know that life would be hell. Our species since the earliest times has been dependent for its survival upon a division of labor within social groupings; an organization of specialists being more efficient than a mere congeries of individuals, the extended-family bands formed by our ancestors were therefore greater than just the sum of their component members. Our humanoid division of labor, in turn, has been especially successful because of our within-group differences in talents and interests.

A The human genome The human genome, the book of instructions for the fabrication of an individual, consists of some, pairs of genes strung out rather like beads along the DNA molecules packed within each of our 23 pairs of chromosomes. This complete genetic blueprint is contained within the nucleus of nearly every cell of the body. Genes serve as patterns for making enzymes and other proteins. Each cell is like a chemical factory in which the enzymes are the chemists that synthesize the special molecules required for life. Most of the genes in the human genome are identical in all normal persons; they constitute the instructions that caused us to

develop into *Homo sapiens* rather than into chimpanzees or butterflies or toadstools. Perhaps one-fourth of our genes are polymorphic; from one person to another in the human population there may be two to 20 or more slightly different genes, different alleles that can occupy the locus of a given polymorphic gene. For example, there is one pair of genes, located on homologous loci of one of the 23 pairs of chromosomes in the human genome, that primarily determines eye color and there are two different alleles that can occur in that polymorphic locus. If both of your eye-color genes are of the blue type, then your eyes will be predominantly blue although other genes will influence the particular shade of blue. If either or both of your eye-color genes are of the brown type, then your eyes will be predominantly brown.

9: Dr. Oz: Genius or Generic? - The Corvallis Advocate

What Makes a Genius? Some of the genetic components of vision are well identified, including the red and green color-vision pigment genes, located on the X chromosome. Thomas Sakmar, a.

Finnish immigrants in America, 1880-1920 McCarthy goes too far *Valor Para Vivir Los Valores Learn to Play Guitar (Classic Stories)* *The Constitution and the Building Up of the Body of Christ* *Book of curses and hexes Gujarati paragraph for typing practice Geopolitics and the decline of empire House of hell book Morphologization, studies in Latin and Romance morphophonology Stablecoin maker dao white paper Fly fishing Californias great waters San Luis Obispo and Cal Poly, Ca (Postcard History (Postcard History) BLS My Utmost for His Highest (Believers Life System) Ricci Flow and the Poincare Conjecture (Clay Mathematics Monographs) Legal Guide to Aia Documents/1994 Cumulative Supplement No. 2 Wildflowers along the trail Impacts of non-native fish species in Minas Gerais, Brazil : present situation and prospects Carlos Berna The battle for Rafah Dan brown inferno book Compassionate objectivity Shakespeares Imagination Pressure measurement William Grossman Application of higher order differential equation Dante and the City Samsung wb150f manual espa±ol Reel 60. Oct. 1, 1907 Nov. 3, 1907 vol. 103 Malenovs revenge. Encyclopedia of disability and rehabilitation Campbell biology international edition Ethics integrity in law business REINCARNATION, KARMA AND THE LAW OF CAUSE AND EFFECT CHAPTER 7 Machiavelli: How to Rule? 115 Terrorist crimes within the framework of international criminal law Primitive religions The resource holding corporation among the Mescalero Apache. New Zealand (Modern World Nations) Bataan and beyond Tally objective question paper Aspens, Northern New Mexico 1958*