

The debate of nature versus nurture has been going on for so long already, and it may never be totally decided. These book chapters explore the world of behavioral genetics to scrutinize the wealth of proof signifying that much of who we are, from our political opinions to our predisposition toward violence, is inherited.

This stress on genetics opposes one of the more famous theories of the past century, which is the Blank Slate. This theory states that all of us are born innocent and the same, with no personality or behavioral personalities. However, as you'll discover, there's a small proof to back this theory or the similar ones that assert that our mind isn't a cause of generations of evolution.

Chapter 1 - There have been three general; however, incorrect theories about human nature.

The mysteries behind the human mind have demonstrated an interesting topic for eras, as we've tried to know and predict people's deeds.

A lot of our older, common theories about human nature originate from religion: for instance, in Judeo-Christian custom, the mind is seen separate from our physical form and remains after the death of the body.

Nowadays, science is less swayed by religion, and we've got three key theories about the nature of the human mind.

The Blank Slate theory is the first theory, and it's regularly ascribed to John Locke, the seventeenth-century philosopher. It proposes that there is no inherent human nature – that every one of us is born with a clean slate, meaning, everything that shapes us are acquired during the course of time.

This theory highlights the part of social influences in creating the customs, opinions, and deeds we display. Hence, any behavioral patterns that people share, regardless of whether they're of a specific race, ethnic group or gender, are all acquired through experience. This signifies that if a

person grew up with a different kind of parents and a different education system, and was exposed to different media, they would be a totally different person.

The Noble Savage theory is another common belief, which is regularly credited to the eighteenth-century French philosopher known as Jean-Jacques Rousseau. He thought that human beings are naturally selfless and peaceful; however, this natural state becomes ruined by civilized societies that encourage greed and result in violence.

The third theory is called the Ghost in the Machine theory, which goes back to the seventeenth-century and the philosopher known as René Descartes. He assumed that humans are made of two different systems, one that correlates to the physical body and the other one that correlates to the mind. People who followed this belief believed that the mind was complicated in manners that basic mechanical terms couldn't describe.

The Blank Slate, the Noble Savage, and the Ghost in the Machine is also called empiricism, romanticism, and dualism. However, as we'll discover in the following chapter, there's another theory that can clarify how the mind functions.

Chapter 2 - Cultural behavior can be the outcome of evolution and genetics.

For much of the twentieth century, social scientists were fascinated by the Blank Slate theory because it implied that humans didn't possess any tendency to be racist or sexist. Any show of these behaviors could be held responsible for some outside force making people learn them. According to the Blank Slate, the cultural deed could occur effortlessly different from the realm of the brain, genetics, and evolution.

However, presently, we understand that this isn't the situation. Cultural behavior is truly part of our evolutionary growth, the exact extraordinary process that enables all beings to stay alive, flourish and transfer their genes to the following generation.

It's correct that some certain kinds of cultural behavior are arbitrary, like if a country's people drive on the left or right side of the road; however, there are basic motives behind these choices

as well. Nevertheless, in cases such as driving, it's in everyone's advantaged that people behave in a coordinated manner. Hence, we can view cultures as a collection of practices and conventions aimed to organize our lives.

Blank Slate theorists have proposed that the mind has nothing when we're are given birth to; however, when we view what we learn early on, we can notice that this isn't the situation.

Language is maybe the perfect illustration of a learned cultural ability; also, it displays to us that a child needs to be born with more than a blank slate. If the mind were blank, everything it would be able to do is passively recording views and sound like a video camera. However, a child needs to have a mental inclination for making sense of the words they hear because they will immediately know and create new sentences that they've never heard before.

This is only one of the dissimilarities between a child and a parrot. Although a parrot repeats just the same words it hears, a human child has a genetic nature to learn the nuances of language.

As we'll discover in the following chapter, our genes are just part of the story; environmental factors can also play a role in our cultural behaviors.

Chapter 3 - Modern science has discovered associations between the physical realm and the mind.

For the last few centuries, science has done a lot of incredible breakthroughs in combining different fields of knowledge to clarify life's mysteries.

It started with Isaac Newton during the seventeenth century, who broke down the wall between the Earth and the cosmos with his law of gravity. This law flawlessly defined how every object in the world move.

Another wall broke during the nineteenth century, this one was between the living and the dead, as scientists found out that life doesn't need any magic or supernatural trigger. All it needs is the correct mixture of ordinary chemical compounds.

This takes us to the final wall standing – the one between the physical world and the mental world. But, this obstacle, together with the Blank Slate theory, is beginning to fall off.

In current years, science has been forming associations between the worlds of matter and the mind.

One such association is cognitive science or the science of mind.

This field was established in the 1950s on the belief that it's not possible for the mind to ever have a blank slate because this would mean that the mind isn't working when we're born, and we understand that isn't true. With language, you can attempt to teach or write different types of things upon a blank slate; however, it can't be used without some underlying system to classify and apply this information.

Another association is behavioral genetics, a field that looks for the different means genes impact our behavior.

Scientists in this field have agreed that there's nothing as a blank slate because we're born with specific genes that decide how smart, shy or happy a person is – to mention only a few unique features.

Maybe the perfect illustration of this is identical twins that are separated at birth. Although they're brought up in separate surroundings, they'll talk the same way, have the same skill for math and be only as introverted or polite as one another.

Proofs like this also oppose the Ghost in the Machine theory, since identical twins will even grow to like the same kinds of cigarettes, showing that even such kind of preferences originate from genetics and not from one's background.

The Noble Savage theory is also falling under the evidence for genetic personality personalities. Various studies have demonstrated that people inherit specific willingness toward antisocial deeds like thievery, violence or intensified aggression; therefore, it is not only society that teaches these.

Chapter 4 - The proofs of the Blank Slate theory are not sound.

You might reason that these developments in genetic science would be adequate to sink the Blank Slate theory permanently. However, those who hold onto this theory aren't willing to surrender yet.

When the whole human genome was first decoded in 2001, blank slate theorists believed that they had the evidence that they'd been looking for. A lot of scientists were astonished when they published the whole genome, and it just had 34,000 genes, rather than the 50,000 to 100,000 genes that the majority of the geneticists were anticipating.

Those holding on to Blank Slate thinking were fast to mention this smaller number as evidence that human beings aren't that complicated, and hence the mind might really be similar to a blank slate. Nevertheless, 34,000 is just double as many genes as a roundworm!

But, the number itself is deceptive. When you think of the entire likely combinations and various interactions these genes can form, the real complexity becomes seeming.

However, that isn't all; two more defenses try to demonstrate how humans could be given birth to with a blank slate and acquire difficult complex minds while growing.

The first defense is called connectionism, which proposes that the brain's neural networks are like the computer models that can learn and grow connections by identifying patterns.

However, as artificial intelligence has revealed to us, there are restrictions to connectionism that don't relate to humans. For instance, humans know the difference between the general concept of something, such as an object or an animal, and various examples within that group. If a human notices a duck swimming and a picture of Donald Duck, they'll identify both of these as actual depictions of a duck, which is a thing an artificial intelligence system using connectionism is unable to do.

A related blank slate defense is neural plasticity, where the brain evolves its shape over a lifetime.

For instance, In violinists, the part of the cortex associated with regulating the left hand's movement will be more developed than in other people. But, there's no proof that acquiring a skill such as playing the violin will change the manners to which genes have been connected. For instance, gay people can't learn to be straight, or the other way round.

Chapter 5 - A lot of the justifications for the Blank Slate theory are determined by politics and religion.

One of the causes of why the blank slate theory is really pleasing is that it signifies that everybody is really born the same. This is the reason why the fact that we're born with biological differences has been challenged with extreme political opposition.

During the 1970s, there was a radical science movement from the left that criticized the chance of human nature being far complicated than the blank slate.

These "radical scientists" invoked Marxist theory and asserted that attempts to challenge the Blank Slate theory were really part of a scheme to back a discriminatory political system. So, any proof of genetics having a role in forming the brain was rejected as "determinism" and "reductionism."

However, no reasonable scientist considers that our genes are 100% accountable for our body and mind, or that anybody's genes can define the character personalities of all human being.

The Noble Savage theory acquired improved support in the 1970s from other radical scientists who contradicted the notion that anybody might have a genetic susceptibility to violence.

The respected biologist E. O. Wilson mention in his 1975 book, Sociobiology that tribal warfare was a normal incidence in prehistoric eras. However, this statement was strongly rejected by radical scientists who mentioned that anyone willing to propose that one tribe eradicating another tribe was representative of human nature must be in approval of genocide.

The political right was the most vocal in supporting the Ghost in the Machine theory and its consequence that the mind could remain after the body.

This notion is in line with religious groups such as Christian fundamentalists, who were most vocal in its defense.

Logically, anybody who doesn't trust in evolution will decline to trust that a human mind is the outcome of an evolutionary process. And the people who believe the mind has an ethereal soul will barely be inclined to accept that thoughts and feelings are the outcomes of a chemical process in the brain.

Chapter 6 - Leaving the blank slate stirs worries of inequality and imperfection.

It can be worrying to meet the reality of an incident, which is just what leaving the blank slate needs. During the 1970s, after centuries of slavery were the fears of the Holocaust which were still new in the minds of people worldwide. It is not a surprise that the Blank Slate theory presented a reassuring vision of equality.

Rather, people had to deal with the reality that people are naturally different, and this led to an increase in a lot of fears that genetics would be used to defend inequality.

One of the major worries relates to Social Darwinism. People were concerned that differences in crime rates and wage levels would be utilized as proof to defend social discrimination and to propose that some people are inferior to others.

However, just because there are minor genetic differences among sexual, racial and genetic groups, doesn't signify we have to choose Social Darwinism.

Firstly, a person's genetic differences are far from being the mere cause of their social status. And even if a person was given birth to with a genetic disadvantage, it's the obligation of a fair society to have social programs put in place to assist this person, not discriminate them.

Another terror for leaving the blank slate is coping with imperfectibility.

If human beings are born with a specific inclination toward immoral and selfish behaviors, and this is their “natural” predisposition, why stress about fighting it?

The concept that men are born with selfish sexual urges that can lead to sexual assault is the main worry in feminism. However, although one could claim that some detestable acts might be seen as “natural,” also it is “natural” for women not to want to be enforced into having sex. Our value system is determined by the notion that a person’s yearnings aren’t more significant than the right to control one’s personal body. Thus, solely because a desire could be part of human nature, doesn’t signify that it should be accepted.

Chapter 7 - Also, leaving the blank slate induces worries of determinism and nihilism.

Another reassuring part of the blank slate was the extent of control it gave over how a person turned out. With very loving parents and the top schooling, a baby was assured to turn into a perfect child – in theory, though.

However, as soon as we accept the significant part genetics plays in forming our manners, we’re confronted with an existential problem of how much control we actually have over our fate. Are we fated to become like our mothers or fathers?

This takes us to another worry: determinism. This one brings out the question of how much responsibility we can put on a person if their behaviors are determined by their genetics. If a person is born with a predisposition toward violence, then wouldn’t biology be the main excuse for their offenses? Wouldn’t law and morality become outdated?

These were the kind of questions some scientists were questioning as the Blank Slate theory was left. They claimed that no conduct was totally predictable and that just levels of probability are real.

Again, the debate was mainly missing the point, because people were confusing the need to clarify a person's action with excusing that action. There's a huge difference between the two.

Our knowledge of human nature shouldn't be viewed as meddling with our knowledge of what's right and wrong. There are laws and a sense of morality set in place to prevent and punish those people who do harmful things, and there's no point to reason that our legal and justice systems will become outdated as a result of more understanding of why those acts happened.

The last, and maybe the most existential, worry that arises from this new knowledge are nihilism. If our inherited genes are accountable for a lot, and we're nothing but machines created to transfer these genes on to another generation, it's barely a vision that makes life worth living.

People normally try for a much higher truth and purpose for life, and the cold hard realities of biology can't offer this. However, this doesn't signify that one has to go down to the black hole of nihilism.

The biological urges in our genes might offer a simple meaning to life; however, they don't need to substitute the quest for higher meaning. If you attempt the search for happiness and a more filling purpose to life, there's no cause for this impulse to be annulled by biology.

Chapter 8 - The human mind is good at grouping; however, this can cause racism.

With a hundred billion neurons connected by a hundred trillion connections, the human brain is an organ of unbelievable complexity. However, what is the use of all this?

The brain's main objective is to assist us to process the world that surrounds us in a manner that offers our species the best opportunity for survival. However, beyond that, it also forms reality for us.

In making us safe and creating reality, the human mind places things into groups. However, there are opposing views as to exactly how reality is made.

It is proposed by some theorists that most of our alleged reality is a social construct, and this applies to, for instance, human stereotypes. They mention that racism occurs because society keeps continuing racial stereotypes that we continue to group in our brains as reality. So, in order to stop racism totally, they propose that we just have to deny that it occurs and the social construct will fall.

It's real that certain things such as money, tenure, and citizenship are socially constructed notions – they occur because everybody approves that they do. However, some stereotypes, such as the ones that fuel racism and sexism, are a different issue, as they arise from the manner our brain works.

Our brain is built to sort things into groups fast, and this stretches to whether we see someone's aims as being good or bad. Also, the brain likes a good shortcut; therefore, it will fastly accept that every art students are more liberal than business students, for instance, and therefore a stereotype is formed. A related process causes racist and sexist stereotypes.

Although some stereotypes can be supported by statistics, others basically arise from our brain's approach to group things and people. Regardless, they are not just social constructs.

Although the brain is good at sorting things and people into groups, it isn't really great at explaining the abstract world.

We do not have any intuitive knowledge of modern physics, mathematics and the world of genetics because abstract modern science is really new. It hasn't been in existence for long for people to develop this ability and genetically transfer it to their offspring.

Education has precisely been established to fill in this hole.

Chapter 9 - Genetics guides our strongest wants to assist, and our moral emotions can be illogical.

Over millennia, various groups have attempted to put blanket labels on humanity. Classical economists have described humans as amoral and motivated just by self-interest; whereas utopian socialists have claimed that humans want to help one another and be united in one accord.

The reality is, none of these labels is a perfect fit. We're not really selfish egoists or selfless altruists.

Our social desires and wants have developed together with every other thing, and they're created as a result of the fact that people who united as part of a tribe had better likelihoods of survival than misanthropes. Due to this, natural selection has offered us a mind competent of sincere compassion and emotion; however, there are restrictions on this compassion, and it isn't essentially supportive of communal living.

Because our biological imperative is to transfer our genes, the more we are very related to someone, the more prone we are to assist them.

If we consider the history of Israeli kibbutzim, we can notice the restrictions of our communal wishes. These kibbutzim were made to be perfect socialist communities; however, in some manners, genetics ultimately demonstrated stronger than ideals. For instance, parents desired their children to sleep close to them and not in a communal dormitory.

Also, it's essential to admit that our detailed moral sense, impressive as it may be, isn't immune to mistakes and flukes.

Let's look at this story: After a car killed a family's dog, there is an instant where they mourn, and they think of what to do with the body. Because dog meat is seen as food in some countries, they decide to clean, make and eat the dog for dinner.

Your instant reaction may be to judge this act as wrong; however, can you rationally explain the reason for that? Any moral philosopher would probably mention that there is nothing wrong with this act since everyone is agreeing to the behavior and no one is getting hurt.

Most times, our disagreement with someone's behaviors— even when nobody is being hurt by them – is difficult to rationally explain. The reason that our judgment isn't based on someone being hurt, but instead on our evolved moral emotions.

Chapter 10 - Political leanings and violent inclinations can be linked to genetics as well.

As you already know, the dispute on the science of human nature has been a jam-packed minefield. There are religious consequences and problems of sexual identity. Also, there is the curious fact that our political preferences may be hereditary.

Do you recall the behavioral similarities between identical twins that were separated at birth? They won't only grow up to like the exact type of cigarette; however, they also have a tendency to have similar political preferences.

More exactly, on a scale from -1, which is totally contradicted, to +1, which is totally identical, the political opinions of identical twins come in at an average of 0.62.

This doesn't mean that our political opinions are engraved in our DNA; however, it demonstrates how political parties have become occupied by people with certain characteristics. Socially liberal Democrats and conservative Republicans have, over the years, come to have their own personalities. For instance, conservatives, have a tendency to be more upright, authoritarian and stricter followers of rules.

Also, various studies have demonstrated that violence is more a hereditary predisposition and less the effect of social circumstances than previously assumed.

In this present world, it looks like there's constantly a war occurring at a place; however, this isn't essentially a new thing. Though some theorists want to trust that violence isn't part of human nature, the pre-historic archeological history is filled with the proof of bloody wars.

Formerly it was assumed that a person's violent inclinations were strictly an acquired act, caused by social circumstances that comprised discrimination, poverty, and disease.

Scientists assumed they knew the facts that caused violence; however, the fact is we have a small tangible understanding. US crime rates for the last 50 years reveal wild ups and downs that challenge any simple explanation.

Therefore, it would be incorrect to refuse the option that violent leanings are a mixture of social conditions and genetic heredity.

Any parent will say that infant love to hit, bite and kick –a lot so that toddlerhood is, as a matter of fact, the most violent age. And because these children are violent even before they've ever learned about guns, kung fu or war, it's a strong indication that violence is truly in our DNA.

Chapter 11 - The minds of women and men aren't exchangeable; however, this shouldn't hinder feminism.

A pretty short while ago, women were required to be nothing more than obedient housewives and loving mothers. Although this view has transformed in the United States, women are still facing discrimination, disdain and sexual harassment on a daily basis.

Although the women's liberation movement and feminism are justly seen as key historic successes, there is a minimum one division of feminism that has contradicted the modern knowledge of human nature. The division is gender feminism, which states there is just one difference between boys and girls and that is their genitalia.

However, the notion that the minds of women and men are exchangeable is flawed in a lot of ways.

Firstly, there's the brain structure itself. There are really a lot of obvious differences between the brains of men and women that it's simply logical that they have different cognitive abilities.

Research supports this statement by mentioning that men, averagely, take more risks and have a stronger ability for the mental use of three-dimensional objects. Although women are, for beginners, better at spelling, matching shapes and interpreting facial expression and body language.

Neither of these should mean that one gender is superior to the other. Both display the same levels of general intelligence and reason alike while feeling the same simple emotions.

Looking at it from the viewpoint of a gene, there are equally good tactics for being in the body of a male or a female. This is the reason why both sexes have been developed over time through natural selection, leading to the same complex bodies and minds.

So, we can come to an agreement that the two sexes have different minds and still be a feminist because there's nothing discriminatory in having biological differences.

Also, there is no justification for discrimination or the gender pay difference. With the facts these differences offer, we might have a better understanding of what reasons besides discrimination is producing the gap and how society can compensate. If a society values a job that needs abilities that fit male traits rather than female traits, men will tend to perform better. If a different society values jobs with traditionally feminine ability matches, women will do better typically.

Chapter 12 - Three laws of behavioral genetics display the impact of genes, parenting and exceptional environment on human nature.

Eric Turkheimer a psychologist suggested three main laws of behavioral genetics in 2002 based on the empirical outcomes of various tests and, maybe not surprising, they don't back the blank slate theory.

The first law of behavioral genetics states that “every human behavioral trait is heritable.”

What precisely belongs to the category of a behavioral trait is debatable; however, the majority accept that it is anything that can be correctly tested in a person, such as language proficiency, the strength of religious views, or how conservative or liberal a person is. The first law asserts that things like these are inheritable.

There are, definitely, a lot of traits that are not heritable, like your native language and your religion.

The second law of behavioral genetics asserts that “the influence of being brought up in the same family is smaller than the influence of the genes.”

This goes back to the studies on separated twins; however, it also comprises virtual twins, which means that when one brother or sister is adopted or genetically unrelated. Various studies demonstrate that in situations like these, the adopted child’s character will be mostly determined by their genes and that the effect from the adoptive family is really little that it’s negligible regularly. Hence, even if siblings are brought up under the same surrounding from the first day, the adopted child will still turn out entirely differently.

The third law of behavioral genetics asserts that “a large aspect of the variation in complex human behavioral traits is not judged by the influences of genes or families.”

This is a mouthful; however, it signifies that there is a third important influence, separate from family and genes, and it’s the exceptional environment where a person grows up, whether it’s a specific neighborhood or a particular group of friends.

The present approximation on how much influence these different effects have is genes at 40-50%, shared environment or family at only 0-10%, and exceptional environment at 50%.

Chapter 13 - Also, we have the arts in our genes, as well as its beauty that’s been lacking in modern art.

For quite some time now, American schools have been cutting back on subjects such as art and music while concentrating more on science and technology. A lot of advocates for the arts have protested this change in US education and assume the arts are at risk of vanishing. However, some hints may assist them to rest easy.

Apparently, the arts aren't suffering a lot nowadays, probably because art is in our genes.

Art has constantly been our manner of showing human nature, and the product of art has been increasing together with the world's population. Art can be seen in all cultures worldwide, whether it's singing and dancing, painting and sculpting or telling stories. It's somewhat simple to notice how art is part of our human nature.

Our wish to create art might originate from our ambition to mate, because creativity is generally known as an indication of someone's intelligence, and hence the quality and attractiveness of their genes.

But, research proposes that some works of art offer more pleasure than others, and this might clarify the wrong conviction that the arts are disappearing.

People normally react better to pictures of traditional beauty and panoramic landscapes. Still, modern and postmodern art has abandoned these pictures in favor of more abstract notions.

Therefore, presently, instead of flowers, ballerinas and sun-dappled vistas, we have the splatters of Jackson Pollock and upsetting abstract pictures that require more than a passing look to appreciate. Likewise, modern music has also left more traditional rhythms and melodies in favor of dissonance and atonal compositions.

It's essentially this type of modern art, which rejects traditional beauty in favor of abstract pictures and sounds, meaning deteriorating. Our sense of beauty is just like our other senses and part of our evolutionary adaptation. It's possible that anybody who's complaining about there being a little bit of art is actually saying that there's less traditional art produced.

Art and beauty both have a huge part in human nature; therefore, it is not surprising that they stay closely twisted.

The Blank Slate: The Modern Denial of Human Nature by Steven Pinker Book Review

The human mind does not start as a blank slate, neither is it a ghost in the machine, functioning alone from our other biological processes. Neither is it correct that humans are born as decent savages who are simply corrupted by the trappings of modern society. Rather, the human mind emanates fitted with a complicated structure that assists us to understand the world and offers us the instincts to stay alive and succeed in it.

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