

Evil – It's in Your Genes!!

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Just within the last couple of decades, whole fields of scientific study have arisen that never existed before. Fields such as behavioral genetics, social genetics, as well as neuroscience and cognitive science have received a lot of study, and have given us vital and fascinating insights into the building blocks of human nature. Does the Bible shed light on these areas as well? And do these areas have implications for how we understand the nature of sin, the potential for overcoming sin, and even the kind of “nature” that Christ assumed? Since God is the designer of our biological, psychological, and spiritual frameworks, He does not want us to remain in the dark about the most basic building blocks of human nature.

One of the most common misconceptions in popular culture is that if something is “genetic,” then an individual is now programmed in a certain way, to be a certain type of person, and they have lost the ability to choose. The misunderstanding is that “genes” violate, or remove, our freedom of choice or freedom of expression. “If my genes are a certain way, then I have lost the ability to control my own destiny.”

This misunderstanding comes from the fact that there are some traits, physical ones being the most obvious, that do occur without regard to our choice. For example, your natural eye color is determined entirely by your genes. You cannot, by trying hard, or by making a mental decision, change your natural eye color. Making a choice cannot change skin color. You cannot grow taller just by deciding to grow taller. You get the idea.

We then transfer that thought process to more complex intellectual, social, and psychological phenomena such as intelligence, behavior, and morality. We then try to simplify—erroneously—this multi-factorial picture into one of two simplistic boxes. Either:

A. Genetics has nothing, or nearly nothing, to do with behavior because it's all environmentally influenced and controlled, or:

B. If genetics *does* have something to do with our behavior and morality, then people are pre-programmed to do certain things without the ability of their free will to override those genes. They see a certain outcome or behavior as being inevitable and unchangeable.

Neither of these two extremes is accurate in the majority of cases. The most appropriate way to understand these issues reminds me of something I learned from one of my professors in medical school. He said, “Genetics loads the gun, and environment pulls the trigger.” What he meant was that our genetic makeup sets up probabilities or predispositions or influences which impact the likelihood of a certain disease or behavior or outcome, but it only *sets the stage*. Genetics, in most situations, do not determine an outcome apart from our environmental circumstances and personal choices.

Diabetes is an easy example. Many people are prone to develop diabetes during their lifetime depending on the genetic makeup that they enter life with. But whether or not they actually develop diabetes is dependent on many factors that they have control over such as diet, weight, how much they exercise, etc. (The primary cause of diabetes is eating more calories than are needed or used by the body).

Many behavioral and moral issues are of a similar character. We as individuals may be likely to exhibit certain behavioral traits or an intellectual ability based on our genetic composition *and* our environmental circumstances and personal decisions.

Genes don't stop working the day we are born. Genes are active throughout our lives. Specific genes become more active or less active throughout our lives, switching off and on in response to cues from the environment, and in response to the personal choices we make.

Many of us grew up with an oversimplified "one gene, one outcome" type of picture. It is much more complex and multi-factorial than that. There are at least three factors we need to take into account when we are looking at human behavior and human morality. Our behavior, morality, intelligence, etc., are all influenced, but not inevitably determined, by:

1. Our genetic heritage
2. Our environmental influences (home, parents, church, school, friends, diet, lifestyle, etc.)
3. Our own individual choices.

To ignore any one of these factors would be to have a very skewed and incomplete picture.

Let's look quickly at a few of the many areas where we see the effects of genetic influences in the moral, social, and behavioral realm. Remember, we are not talking about genetic programming or genetic predestination, but about genetic influences and pressures.

Twin studies are one of the best ways to attempt to tease out the differences between genetics and environment. Identical twins, who grow up together, share the same genetics and very similar environments, whereas fraternal twins who grow up together would share a very similar environment, but not the same genes. This should help us recognize, to some degree, the difference between genetic factors and environmental influences.

Probably one of the clearest examples is alcoholism. Identical twins, who share 100% of their genes, have a concordance rate of 60% for alcohol dependence. Fraternal twins, on the other hand, have a concordance rate of only 30% for alcohol dependence. This means that if one identical twin is an alcoholic the other identical twin has a 60% chance of also being alcoholic, but if one fraternal twin is alcoholic, the other fraternal twin has only a 30% chance of being alcoholic. So in this situation, about half the risk of developing alcoholism is related to genetics.

Adoption studies can also help reveal this difference between genes and environment. Sons of alcoholic fathers have a four-fold higher risk of developing alcoholism than sons of non-alcoholic fathers, *even if they are adopted out of the alcoholic home shortly after birth into a nonalcoholic home*. Interestingly, sons of non-alcoholic parents who are adopted into families with an alcoholic father do not demonstrate an increased risk of alcohol dependence. This is fascinating in that it reveals that the choice of the father to drink, actually changed the genetic heritage he passed on to his son!! This is one of many examples where a behavioral choice by a parent changes his genes! Our DNA is actually altered by the choices we make! This should give us insight into what scripture means where we are told that Jesus was born of the "seed" (DNA, genetics) of David (Jn. 7:42, Rom. 1:3, 2 Tim. 2:8).

Other behaviors that appear to be genetically *influenced*, but again, not genetically programmed or determined, include violence and sexual aggression, optimism versus pessimism, novelty/thrill-seeking behavior (such as sky-diving, bungee jumping), obsessive-compulsive behaviors, maternal nurturing behavior, etc.

While many of these areas are still under study and potentially controversial, it does point to an accumulating body of evidence that reveals genetic influences relating to many areas of human nature and relationships and behavior.

WHAT DOES THE BIBLE SAY ABOUT BEHAVIORAL GENETICS?

Exodus 34:6-7: ⁶And the Lord passed by before [Moses], and proclaimed, The Lord! The Lord!
A God merciful and gracious, slow to anger, and abundant in loving-kindness and truth,

⁷Keeping mercy and loving-kindness for thousands, forgiving iniquity and transgression and sin, but Who will by no means clear the guilty, *visiting the iniquity of the fathers upon the children and the children's children, to the third and fourth generation.* (Emphasis supplied throughout).

Often when we look at this verse we stop with the first part where the Lord is described as merciful, gracious, slow to anger, abundant in loving-kindness, forgiving, etc. However, what do we understand it to mean in v. 7 where it says that God ... “[visits] the iniquity of the fathers upon the children ... until the third and fourth generations”?

Does it mean that if someone sins, God imposes a supernatural punishment, or penalty, or curse on the person, on his children, on his grandchildren, and on his great-grandchildren? And then after miraculously punishing and cursing the individual and his children for four generations, God is finally satisfied that enough suffering has occurred and He stops His curse?

Notice by contrast what Ezekiel 18:18-22 says in harmony with many other passages of Scripture:

¹⁸ But his father will die for his own sin, because he practiced extortion, robbed his brother and did what was wrong among his people. ¹⁹ "Yet you ask, 'Why does the son not share the guilt of his father?' Since the son has done what is just and right and has been careful to keep all my decrees, he will surely live. ²⁰ The soul who sins is the one who will die. The son will not share the guilt of the father, nor will the father share the guilt of the son. The righteousness of the righteous man will be credited to him, and the wickedness of the wicked will be charged against him.

Clearly God does not curse or punish children for the errors of their parents.

Notice another example: When Jesus healed the man who was born blind, the disciples asked who had sinned—the blind man or his parents. The disciples’ thinking was that when we sin, God does bad things to us, or our children, like making people blind. What kind of picture of God did they have?

John 9:1-3: ¹As [Jesus] went along; he saw a man blind from birth. ²His disciples asked him, "Rabbi, who sinned, this man or his parents, that he was born blind?" ³"Neither this man nor his parents sinned," said Jesus, "but this happened so that the work of God might be displayed in his life."

The disciples actually thought that God was the type of being who goes around blinding people for life if they sin or their parents sin!! Jesus clarifies here that suffering doesn't come in this life from God cursing people because they sin, or from God cursing people's children because the parents sin. God's work and attitude is seen in the healing of the blind man, and in the relieving of suffering. The disciples and people of Jesus' day had it completely backwards. They saw God as the *cause* of sickness and suffering, rather than the *remover* of sickness and suffering.

So Exodus 34 is NOT talking about God cursing people and their children when they sin. What it *is* saying is that God is merely opening up to us the fact that when we as individuals make wrong choices, the *effects of those choices*—either for good or evil—follow laws of cause and effect which God designed and upholds, and thus, have *influences* on our children.

Just as in the example of alcohol, our behavioral and moral failures as parents can have genetic consequences for our offspring for several generations to come. So often we look at the relation between sin and its consequences as the arbitrary imposition of punishment or penalty by God, rather than seeing the inherent destructiveness that accompanies all sin, including its effect on others. The “iniquity that is passed on, or visited, from the father to the children unto the third and fourth generation” is the inherent destructiveness—genetic and environmental effects— that is introduced into a family from the choices of the parents.

This should make us appreciate the tremendous responsibility and opportunity that we have when we make choices in our own lives. We can make choices that will give a positive and “righteous” heritage—both genetically and environmentally—to our children, or we can bequeath a negative heritage.

The effects of sin and of righteousness have a real and biological genetic effect on us. Sin and righteousness change us as people. Sin is a real entity that has genetic consequences. When we make decisions, when we form habits, when we think certain thoughts, there is biological and physiological change occurring in our brains and in our bodies.

Sin has biological consequences. When we see something and form a memory, something changes in our brains—in the chemistry and biology of our neurons.

When 2 Cor. 3:18 tells us that “by beholding, we become changed,” it is defining a biological reality of our human nature and human neuroscience. We change, and the *changes that we undergo can be passed on to our children for generations.*

Sin is a real and dangerous entity that we need to avoid at all costs—not because God gets upset and curses us when we sin—but because sin damages and changes us in ways that we cannot see in the short term. As Adam and Eve observed the first dead falling leaves after they left Eden, and saw Cain, their first born son, kill his brother, Abel—how acutely they must have felt the “realness” of sin.

What we think and what we do make us who we are as individuals. When we engage in selfish or lustful thinking, we are establishing patterns in our minds/brains that become more and more fixed over time.

“As a man thinketh in his heart, so [is] he.” Prov. 23:7.

What ever influences our mind, our thoughts, our hearts, makes us who we are.

This is why we are told repeatedly in inspiration that the law is immutable and unchangeable. The law is immutable and unchangeable—not because God is stubborn and won’t change—but because these laws are woven into the fabric of our nature and our being. To eliminate the ability we have to be a negative influence on others, would of necessity include the loss of our ability to be a positive influence on them as well.

Notice the encouragement in these two verses that we have a Savior who experienced the same reality as we do:

Heb. 2:14: “Inasmuch then as the children have partaken of flesh and blood (fallen genetic heritage), He Himself likewise shared in the same ...”

Heb. 2:16: “For verily he took not on [him the nature of] angels; but he took on [him] the seed (fallen genetic heritage) of Abraham ...”

Rom.5: 19, 21: “¹⁹For just as through the disobedience of the one man the many were made sinners, so also through the obedience of the one man the many will be made righteous ... ²¹so that, just as sin reigned in death, so also grace might reign through righteousness to bring eternal life through Jesus Christ our Lord.”

This verse brings out so clearly what we are talking about. Because of the sins of Adam and Eve, evil entered our world. Adam and Eve passed on to us a fallen genetic inheritance—a fallen nature—a genetic inheritance that produces death.

But the good news is that where sin has taken root in our world, grace has increased all the more. Paul, in v. 21, talks about an organic, cause-effect relationship, between grace and righteousness, and eternal life. And this life is revealed and exemplified in the life of Jesus.

As there is an inherent relationship between sin and death, there is also, praise the Lord, an inherent relationship between righteousness and life. Just as our mind is shaped for the worse by dwelling on sinful and selfish things, our minds can be shaped for the better by dwelling on the things of God and the love He has for us.

So often we do things that we think only affect *us*, without realizing the effects they will have on our offspring and those around us, and how these wrong decisions, made repeatedly over time, can handicap and make all the more difficult the lives that others will lead. But also, right decisions, made repeatedly over time, can bless and enhance the lives of others.

We have the chance to have our minds changed and altered for the better by appreciating the law of love that God has given to us.

And be not conformed to this world: but be ye *transformed* by the *renewing* of your mind, that ye may prove what [is] that good, and acceptable, and perfect, will of God. Rom.12: 2.

It used to be thought for many decades that the nervous system couldn't change—after adolescence it was fixed, hard-wired. But now we have confirmation from science that what the Bible told us all along was true. We can have our minds changed and renewed and healed from the damage that sin has done to it.

Whether we have been saddled with the damaging effects of sin because of the failures of our parents, or because of our own personal failures, there is good news that God is the Great Physician who can heal all the damage done.

"My wayward children," says the LORD, "come back to me, and I will heal your wayward hearts (minds)." "Yes, we will come," the people reply, "for you are the LORD our God. Jer.3: 22.