

Faith and Genetics – November 17, 2013

by **David Green**

I know that many of you (myself included) have family members – parents, siblings, cousins, children, and grandchildren – who do not share your religious views.

Some of you have told me about a child you raised and taught to be a progressive free-thinker who then grew up to become a hard-core Pentecostal. Or, *you* may have grown up in a conservative tradition and now you're here, and you have a father or mother who gives you a tough time for falling away from the one true faith.

It can make family gatherings like Thanksgiving kind of delicate. At the very least, you might look around the table and say to yourself, "Am I really related to these people? We actually share the same DNA?"

It's a question a lot of us ask. I have personally fathered two children, both boys. I call my stepchildren mine, too. But from a genetic point of view it's my two sons – now both adults, more or less – who I'm at least 50% responsible for their presence on the planet. And both of whom will likely never see or hear this sermon, so I think I'm safe from any lawsuits.

Even though their upbringing was very similar, and even though they both had the same birth parents, in many respects they are quite unique. For one thing, they don't look a whole lot alike. But their personalities are really distinct. I won't go into all of that; just trust me that some of those differences are pretty significant.

Growing up they received the same medical care, ate the same breakfast cereal, went to the same elementary school, read the same books, and as far as I can remember they were treated pretty much the same at home. They knew they were loved and cared for.

Not that I expected them to grow up as mirror images of each another. I'm different from my own siblings in a lot of ways.

I guess it's that anyone who had kids or anyone who's been a kid, and suppose that means all of us, occasionally wonders if we are the way we are because of how we were raised, or because of how we were made. And by that I mean, the deep stuff of what makes us up, our basic building blocks, our DNA.

Or is it a combination of things? It's the old nature versus nurture question.

It turns out that people who study genetics and who are trying to unlock secrets that can do things like prevent disease or predict the likelihood you're going to develop some kind of physical or cognitive condition – are also uncovering some surprises in how you and I are genetically made up.

Genetics is all that tiny hidden code we carry around that says we're going to have brown eyes or blue or green, that we'll be short or tall, male or female, hairy or bald, have a dark complexion or light.

It's also become pretty clear in recent years that genetics determines not just our physical selves but what we usually think of as our mental or emotional selves. That should tell us that a lot of what we've learned about the mind

somehow being separate from the body is not an accurate picture of who we are. We're both mind and body in the same package.

So modern genetics may be telling us that on the one hand, we don't have as much of a choice as we once believed, not only in determining how we're physically made, but also in how we think.

That's not easy for many of us to swallow, because nurture, we know, really matters. Much of the way we approach child raising and education and a whole slew of social policies are based on the assumption that how we nurture people – especially when they're children – has a direct effect on how they turn out later.

We know our behaviors can be patterned – everything from what we eat to how we treat other people – based on what was modeled for us or what we were taught. I'm constantly catching myself saying something and then realizing, "Wow! I'm turning into my dad." Fortunately, he was a nice guy.

Nurture also implies that there's a choice involved. If we grew up in an abusive home, we can choose – of our own free will – to not repeat those destructive patterns; we're not victims of heredity. And nurture also tells us that people are capable of reforming. If someone's acted in criminal or destructive ways, we like to believe with the right training and kindness and therapy, anyone can become a productive member of society.

On the other hand, genetics seems to be pointing pretty clearly to the strength of biological factors in human behavior. Genetic codes that limit our ability to choose, or give us no choice at all.

Science – and good old-fashioned common sense – is showing us that's absolutely true about a person's sexual orientation. Being gay is not a choice, as many people used to believe. It's just the way you're made and you have no say in the matter, any more than you have a choice about the color of your hair. At least, your natural color.

So, you can imagine, depending on the topic, the whole nature versus nurture debate can heat people up quite a bit.

One of the greatest assumptions underlying so many religions, is that having that faith – or not – is a matter of choice. So, for a lot of people, being religious falls into the category of nurture. And we know that anyone's religion depends greatly on where they were born and when, the religion that's predominant in their society, and their family's religious tradition.

But even with all those factors in place – assuming you're aware of any alternatives like other religions or the freedom to not be religious at all – is that you still have a choice. Religion is not a matter of genetics. If it was, there would absolutely be no point in having an altar at any church because everyone would already be saved.

That's why a lot of religious folks don't care much for a new book by Tim Spector. He's a professor of genetic epidemiology at King's College in London. He's considered one of the world's leading experts in studying the genetic makeup of twins. His book is called *Identically Different*, and it sets out to prove that genes can actually change over time. Or more accurately, they can adapt.

So, very broadly speaking, Tim Spector is saying that how we are nurtured can have an effect on our genetic makeup.

In other words, nurture can sometimes change nature.

The reason he studies twins is because, genetically, identical twins are...well, identical. So, over time, he follows twins. That must be exhausting work, but I do think he gets to travel a lot. But seriously, by studying twins over time it provides a living lab to track not only their physical traits but also every other aspect of their personalities.

And one of the most surprising things he's discovered over the years has to do with religion. Which he didn't initially set out to study.

Most people can accept the idea that a predisposition to a certain disease, or your height, or weight, are things you inherit from your parents. That it's nature.

But when it comes to what we believe, we really want that self-determination thing to be there. It's a choice, and that's part of nurture.

For instance, when we're doing our Path to Membership gatherings here every few months (and by the way, we'll be holding another set of those the last three weeks of January), we give everyone a book to read. It's by a couple of prominent Unitarians and is a good basic summary of Unitarian Universalist history and beliefs.

The title of the book is "A Chosen Faith." So *we're* very invested in the idea that your religion is something you choose; that you have the freedom to determine for yourself. A lot of us are here in the first place precisely because this Fellowship offers a clear alternative to a lot of other churches. We've chosen *not* to play on the Baptist softball team.

But we have *chosen* to be part of this Fellowship – we've chosen to be part of a group that by any other name is a church: a religious community. The question is, did we do that completely by choice, or is there something deeper – in our genes – that made us this way?

In his book, Tim Spector describes a project that was done by research partners – one was an atheist and the other a minister. They surveyed twins to try and find out what part of belief or religious faith was genetic. They found that in 40 to 50 % of us, spirituality could be an inherited genetic trait.

In the news, you've probably heard it referred to as the "God Gene." It's still hypothetical, and there are plenty of scientists who question if it even exists. For geneticists who do believe it's there, they call the gene VMAT2.

It's important to note that this gene doesn't produce any particular *brand* of religious faith or practices, but more of an innate sense of *being* spiritual or having mystical experiences. It affects how we perceive the world, and ourselves, and our relationships to others and the universe. And it also apparently operates independently of any family influences.

A person with this genetic predisposition, during meditation or prayer, might feel a rush of great joy and fulfillment from the reward centers of the brain – the hypothalamus. For the person sitting next to them without that gene, all they're feeling is their chair getting more uncomfortable and they're thinking about their shopping list.

So, according to the God Gene theory, feeling one way or another – having a spiritual experience or thinking about a mental to-do list – is not a choice, but a genetic impulse; a way of being. And again, in the population as a whole, roughly 40 – 50 % of folks tend toward the spiritual because they're just wired that way. They've got the gene.

But even if they have that gene, one story the researchers tell illustrates how people from the same families can end up with vastly different religious perspectives. And how a person's religious genetic makeup can really start to show itself once they grow up.

Caroline and Elizabeth were identical twins who came from a middle-class English family. The father was an Atheist and the mother was Agnostic. When the sisters were in primary school, they both became interested in Christianity – much to their father's dismay – and they decided to get baptized and they prayed and went to church regularly. But as they got older the twins eventually lost interest in organized religion.

By the time they went off to college – to two separate universities – Caroline rediscovered her faith and became a very committed Christian, getting heavily involved in church activities, and she married a proper Anglican man and had babies.

Elizabeth, on the other hand, at the same time became involved with an Islamic group and studied the Koran. Initially she did so because she was anti-any religion, but she eventually converted to Islam and married a Muslim man originally from Pakistan, and they had a little son together. Elizabeth fully adopted Islamic tradition, including wearing a hijab – a veil – in public.

Both Caroline and Elizabeth describe themselves as very strong in their respective faiths. Elizabeth believes Islam to be the one true religion, and Caroline – the Anglican – is upset that her twin sister doesn't believe Jesus is the Messiah. She's quoted as saying she misses being close to Elizabeth and they both regret that neither could sign on as legal guardians of the other's children.

Their Atheist father was by now mostly out of the picture. He had long since divorced their Agnostic mother, who says she was initially amused by her two daughter's religious fervor and couldn't really relate to it. But now she was sad to see how their respective faiths had kept them apart.

The mother's question was, where in the world did her twin daughter's religious conviction – whatever flavor it happened to be – come from? Neither she nor her ex-husband were religious at all, and it's unlikely their school alone would've influenced them that much.

What's more likely is the twins shared a genetic spiritual predisposition, that in their case, resulted in Elizabeth and Caroline taking two very different religious paths.

My hunch is, assuming this genetic theory is right, you and I represent a mix. Some of us do possess the gene VMAT2, and some of us don't. We recently did a congregational survey, and it was interesting to see that a lot of our members expressed an interest or a need for us to offer moments in our worship services or small group meetings of a more spiritual nature.

While for others, that need wasn't great at all. Spiritual stuff just doesn't float your boat.

If it's truly a predisposition – and my experience tells me there *is* something to that – I think we can happily accommodate both. The bottom line is, whether we may have that mysterious gene or not, we've all still chosen to be

here. To be part of this beloved community, where everyone belongs, and no one is required to wear the exact same kind of *genes*.
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