

## behaving: from genes to gender

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#### Summary:

I want to offer further explanations and provide an article with new examples and facts about what generates everyone's personality, including yours and mine.

We will look at the gay gene, the alcoholism gene, or the violence gene, and see if they make any sense in a scientific context.



#### VALUES

#### First of all, who are you?

You might say your name, job, or whatever else you like. You will likely try to find yourself within a bunch of words whose meanings you have learned from parents, school, friends, the Internet and so on. You learned what a job is, what morality is, what is good or bad, beautiful or ugly, acceptable or not, violent or relaxing. One interesting, but disturbing, example of how important environment is in developing your personality and values is feral children: kids raised in extreme environments. <u>Genie</u> was devoid of social contact from birth. When she was discovered ten years later, she was so different from a normal human being that she was considered "mentally ill," although she had no brain damage whatsoever. She couldn't talk or walk properly. She showed no feelings of empathy, morality, objectivity, sociability, and so on - behaviours thought to be normal and inborn to all humans.

Watch "<u>Secret of the Wild Child</u>", a documentary about Genie.





There are other cases, such as a <u>girl raised</u> more among dogs than humans so that she behaved more like the dogs than humans.

These examples are not cases in which the children have brain damage. The examples show not only that human values come from the environment, but that even one's walk, facial expressions, or body language are influenced by one's experiences. You can watch these two documentaries: " <u>Wild Child The Story of Feral Children</u>"

and "<u>Feral Children</u>" and read more about this topic.





Even tiny differences in the environment can cause huge changes in behavior. One example is of two identical twins, one of whom is stung by a bee at age 4. That one small event over his extended life may make him fearful of all insects for the rest of his life, causing "insectophobia". This kind of event is one reason people have very different personalities. Their life experiences are always unique.

This is why people looking at the Moon have so many different reactions to it: some will photograph it as art, some will not care, and others may cry with amazement. So, even when we see the same thing, we have different interpretations of it because of personal experiences--which shape our values.

#### GENDER

You may think there are only two genders, male and female, but you would be mistaken from both a cultural and biological perspective. There are people whose biology doesn't permit a distinct identification as male or female. It is called <u>intersex</u>.

Cultural gender is a different thing though, and depending on the culture, there may be more than simply female or male genders. We know that even those two differ: there are many "masculine" people who are very different from each other. In India (Hijra), Nepal, Pakistan, and Samoa people accept a third gender as being legal. Fa'afafine, for example, are boys raised as girls in random fashion who behave like women because of that. So the environment even changes what we call "gender".

Watch "<u>Me My Sex and I</u>", "<u>Sex Swap</u>" and "<u>The Codes of Gender</u>" to learn more about gender.



Within the scientific community, there is no longer any doubt that taste is mostly created by what is around the "thing" you taste: the color, the restaurant, the name of the food, the shape of it, or whether it is soft or crispy.

Even for those with a different biology, such as more taste buds, taste preferences are shaped by their experiences. There are people who wouldn't eat mushrooms, but because of different circumstances, end up loving them.

Watch "<u>The Truth About Taste</u>" documentary for more about taste.





You often hear that there is a gene that makes people violent, alcoholic, gay and so on. But is there? Can a gene lead to such complex, culturally evolved behaviours? We know indeed that genes determine your eye color or how susceptible you are to certain diseases. But, can genes lead to various types of behaviours?

#### Consider the most often cited cases:

## **VIOLENCE - GENE**

There is a gene called the "warrior gene" (a variation of monoamine oxidase-a gene) which supposedly makes people more aggressive and violent. I remember a documentary by BBC called The Warrior Gene in which they investigated just that. The reporter, a cool, calm guy, finds out at the end of the documentary that he has that gene and his mother tells him that he was lucky because she raised him very well. There is a point there. Even if you see aggression in mice with that gene variation, it doesn't mean it applies to humans. And it doesn't mean, even if it does apply to humans, that they will become aggressive or that this is the cause of violence.

Are most people with this gene violent? If yes, what do you call violence? Verbal violence? Being rude may be seen as violent to some, while dancing around naked may seem aggressive and dangerous to others. Putting someone in debt for the necessities of life so they can never pay it off - even with a lifetime of laborious work - may also be considered violent. So, even the definition of violence or aggression is culturallybased. Therefore, even when the experiment seems to suggest something, it is often extremely vague.

Let's suppose we get some broad definition of aggressive behaviour and find a pattern in those "warriors". If those people can control their behaviour through mental hospitals, anger management sessions, etc, then the gene is less or not important at all. Think of <u>Tourette's syndrome</u>. Basically it causes people to behave in an uncontrollable way. They can't control some of their body or language actions, resulting in different types of tics. Some curse, some engage in small rituals before doing something else, some whistle, and others can't even talk because of it. It is thought that a high level of dopamine causes their brain to trigger impulsively, similar to being electrically over-charged, and this causes their uncontrollable movements. You may want to curse, but you can hold it in - they can't. It's like the one second before you sneeze when you can't do much to stop it.

It is thought, though with little evidence, that Tourette's syndrome is genetically transmitted like the Warrior Gene. We can see both as genes making people behave in a certain way. But here is the thing: we cannot say people with Tourette's are violent, aggressive, funny, or dangerous, etc, because the dopamine makes their thoughts have tiny explosions. Rather, their thoughts are created by their experiences. Thus some may curse in Spanish, some in Japanese, some may play drums better, some may just laugh, and so on.

## 3 MEN WITH TOURETTES ON A HOLIDAY - VIDEO



So the biology of Tourette's syndrome impacts people's body (brain) but that doesn't imply that it also makes them violent or aggressive in any way, or untruthful, funny, stupid and so on. It varies from case to case depending on how they're raised and their experiences. In the same sense, I find it hard to say there is a violence gene. There may be a gene that makes your muscles more tense, increases the level of dopamine in your brain, and so on, but the end result is dependent on environment as in the Tourette's syndrome example.

In both cases,Tourette's and the Warrior Gene, the same patterns of behaviour, the symptoms, are found in people without those genes, thus making the gene less, or not at all important, even it they exists.

There are people with frontal lobe damage from mutation or accident who don't feel emotions like others do. It is a bit tricky to explain, but imagine someone crying or being afraid, and you being unable to understand how he or she feels.

Can we say such people are predisposed to being murderers? Are they going to kill other people just because they do not understand how pain feels? Of course not. One guy with this problem talked about it and said he understands but cannot feel. But this won't make him a murderer! He sees someone crying and, although he can't feel what that person feels, he understands that the other person feels sad. He has been educated on how to react to such a situation, as you have.

Watch documentaries about Tourette Syndrome.

#### **ALCOHOLISM - GENE**

If a gene makes you an alcoholic, I may have it, but since I don't drink alcohol, I don't know and this is the point I want to make. What people say about an alcoholism gene is that some people react differently to alcohol than others at a biological level. It is similar to how you react to certain drugs or foods. They have shown that people with this gene tend not to be affected by alcohol as much as others. So Raul, having this gene, can drink 5 beers and not feel dizzy. So far it says nothing about making Raul an alcoholic, and this is true because Raul regulates how much he drinks. Having that gene does not mean you will become an alcoholic, just that your body reacts differently to alcohol than others.

There are some who do not taste sweets very much. Can we say they are diabetic, or even predisposed to diabetes? Of course not. Even people genetically predisposed to diabetes, but with no taste for sweets, are less likely to develop diabetes if they eat very little sweets. My mother is predisposed to diabetes and she likes sugary foods, but she eats only sugar-free foods so as not to endanger her health. She is doing that because she knows about it and has made an educated decision. So you see, even this kind of gene does not determine behaviour. At most, they can influence things in the same way that having a poor olfactory sense may not let you sniff dangerous gases. But there are already dangerous gases that your nose can't even sense, though you know to stay away from them.

Yes, you may have a physical condition that you can learn about and deal with, but IT does not control you and with understanding, it is you who are dealing with IT. There is a gene mutation which causes people to have no sense of touch. A girl with this condition was looking out the window when a smell of burnt flesh caught her attention. She realised after a few minutes she was standing on a hot radiator. She was careful from that moment on.

## **GAY - GENE**

The notion of a "gay gene" is a controversial topic, but no gay gene has been isolated so far.

Read more about it at <u>Wikipedia</u>: "The relationship between biology and sexual orientation is a subject of research. A simple and singular determinant for sexual orientation has not been conclusively demonstrated—various studies point to different, even conflicting positions"

Also read <u>this</u> or any scientific paper on genes. You will never find the "gay gene".

But like for the other examples, the research is very vague and we may wonder what is a homosexual? Maybe there is sexual attraction in general, and a "gay gene" is one of the manifestations of it.

We know people are sexually attracted to lots and lots of things: animals, toys, big breasts, hair, long feet, children, sounds, old people, dead people, some get sexually excited over fires, electronics, and so on. It is so diverse that if we were to find a name for all of them and a corresponding gene, it would seem completely crazy.

What makes gays so special then? To be honest I have no clue. I do not understand what they are attracted to specifically, but I don't understand myself either in regards to what aspects of a girl are attractive to me and why.

Knowing that which is attractive today wasn't attractive hundreds, even just tens of years ago, we can reasonably conclude that culture impacts what we find attractive and what not.

We see today guys who look very much like girls, and yet they are not gay. And also the opposite - girls who look and behave in a masculine manner. There is a mix of behaviours that cannot be properly defined. There are people who are transformed into gays or lesbians, or other genders as mentioned at the beginning of the article, so if that can be created by the environment alone, then this is very important. It means that the gay gene may play no significant role even if it exists. There was a video that circulated online and made a noise among people. It was a sexy woman, naked, filmed in a bathtub acting in a very seductive way. First the face, then the camera went down slowly to the breasts, and then continued lower. At this point "straight" men were excited and attracted by the women, but gays not at all. But when it goes further down, that "female" had a penis. She was a he, a transwoman, a guy who looked like a women but with breast implants. At this point the straight guys were deeply disgusted. A penis ruined their entire week, but made the gays happy after all. :)

The entire story is very relevant.

If we think about it, the guy who looked like a woman was attractive for straight guys, and it was only a visual or configuration allure. The only problem was the penis, the male sexual organ. What if she/he had a sex change operation as thousands do each year? Straight guys could have been deeply in love with "him" and gays would be disgusted. Watch <u>this</u>, <u>this</u> and <u>this</u> male to female transformations.



Such scenarios happen many times and prove how sexual attraction can be purely visual, and that what is attractive can be rendered by the culture.

Therefore when a gay person likes another gay man, he likes the present gay man, the visual perception of him, and not the gays of the 16th century. That means they are influenced by the culture and the environment they are exposed to. This imposes the configuration for the sexual preferences.



Gay-like behaviour in animals seems to be an argument for gay being natural, but there are serious problems with that theory.

First of all, there are plenty of "abnormal" sexual behaviours in animals, not only attraction for the same sex. You can see tons of <u>youtube</u> videos of turtles trying to have sex with shoes. Can we put us "in their shoes" and see this act as a manifest of the shoe-turtle gene? Or is it better to see what makes the turtle attracted to that shoe in the first place? It seems to be visual so we have to investigate from this point on.

This is how you do science in my opinion. Same with gays, lesbians, heterosexuals, and so on. If we are to understand what makes people attracted to whatever they are attracted to, we should carefully investigate it. If the turtle was blind, it probably wouldn't have tried to have sex with that shoe in the first place.

You should ask yourself what made you attracted to girls if this is your preference. Do you remember? Because I personally don't. It is a mystery to me. It just happened at an age when I could understand the cultural difference between boys and girls. And this is the key.

## The blind gay

I read an article about a boy blind from birth who did not like to play with boys because he was overweight and was afraid of falling down. Because of that, he ended up playing with girls and eventually behaving like them. "I much preferred sitting and reading a braille book, or talking to the girls. I even learned to bounce a ball, and learned some of the rhymes the girls would say while playing ball or jumping rope."

But he was eventually rejected by the girls: "I was teased unmercifully, and soon, even the girls got tired of playing with me, and so I mostly stayed alone, reading, and listening to what was going on around me." Could that have been the moment that made him attracted to boys?

He doesn't claim that but it may be so because, as he says, he did not know at that age about the difference between boys and girls: "All the boys were interested in sports and rough games. I wasn't. Some talked about girls, but because I was blind from birth, and because nobody ever talked to me about sex, I had no idea what was being discussed. I am ashamed to say that I didn't even know the difference between girls and boys, except that girls were usually nicer to me, and yet, I felt a strange feeling when hugging a male student."

So he did not know the difference between boys and girls, only that at a cultural level, girls are nice and boys are tough. And then he was rejected by girls and later, he started to be attracted by what he understood as being boys.

Of course it is my interpretation of the whole story, but please read the <u>article</u> he wrote and draw your own conclusions.

You should keep in mind that all those behaviour examples people say are gene-driven can be triggered by environment alone. So even if these genes are ever isolated, if people with no such genes show behaviour similar to those who have them, then those genes are relatively less important, or not important at all, and we should take a look at the environment.

# We could have ditched the entire article for this last point because it is completely relevant and as scientific as it can get.

**A.** You are your neural-connections and there is no doubt about that. What you like, what you accept, what you recognize, even your senses from pain to sight, are influenced by these neuro-connections. This is why a person with Alzheimer's disease forgets his name, or doesn't know how to make a coffee anymore. Parts of his/her neuro-connections are negatively affected.

**B.** We also know as a fact that even the act of thinking changes the physical structure of your brain. New experiences shape your brain, your neuro-connections. Even if you are born with a specific neuro-connection the brain is so plastic, it can and eventually will change. This is why even genetically identical twins have different neuro-connections. Watch this brilliant TED presentation with a full explanation of that:



## Ok, so, from A + B = you are your experiences. Simple.

People are so different from each other, yet very similar in many ways. But both cases are shaped by different or similar experiences.



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