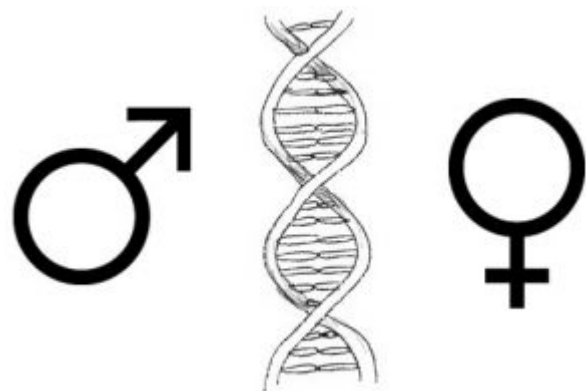


## Gender Differences and the Biology of Leadership

### Description



In [the first article of this marriage series](#), we talked about how women being granted equal rights results in the destruction of a great civilization.

### Naturally, I wondered: “Why!?”

So I started digging into the differences between men and women as far as our biology is concerned. What I found perfectly explained the conclusion of the first article.

This article is not intended to stand alone (*despite its significant length*). It's intended as a part of my series on marriage, and is a companion of the first article especially. You can skip this article if you'd like, but **what you'll learn here is absolutely fascinating and perfectly explains many of the behavioral differences between men and women.**

(*Note: this article focuses on the biology of leadership, so we won't look at the biology that God gave to women to make them amazing at their crucial role in a household and society. If you want to know more about that role, I recommend my article: [How Crucial are Women to a Biblical Household? Very!](#), which also functions as a prologue of sorts to the marriage series here on Berean Patriot.*)

## Biology and Leadership: Serotonin

*(Don't shoot the messenger. I didn't design the human body, I'm just reporting on how God created it. If you have a problem with the biological facts, please take it up with God.)*

There's a neurotransmitter that's closely associated with – and regulates – leadership in humans. Its name is serotonin, and I will spend much time describing its effect on humans and our society because it's crucial to understand it if you want to understand leadership.

Simon Sinek has an incredible video that talks about serotonin and the biology of leadership. It's fascinating, informative, and will give you a better understanding of true leadership. *(It's from an evolutionary perspective, but other than that it's great.)*

The whole video is excellent and well worth your time, but the most relevant part is from 21:16 – 27:24. Please watch at least those ~6 minutes because they are **crucial** to understanding our topic. The intro story is also riveting and on topic.

**The reason serotonin is the “leadership neurotransmitter” is because it's the biological mechanism that regulates hierarchy in all animals.**

And when I say “all”, I do mean all. From humans, to pack animals like wolves or lions, to lowly lobsters...and even some worms.

The ancient part of your brain specialized for assessing dominance watches how you are treated by other people. On that evidence, it renders a determination of your value and assigns you a status. **If you are judged by your peers as of little worth, the counter restricts serotonin availability.** That makes you much more physically and psychologically reactive to any circumstance or event that might produce emotion, particularly if it is negative. You need that reactivity. Emergencies are common at the bottom, and you must be ready to survive.

“12 Rules for Life: an antidote to chaos” by Jordan Peterson – Page 16

On the next page...

**If you have a high status, on the other hand,** the counter's cold, pre-reptilian mechanics assume that your niche is secure, productive and safe, and that you are well buttressed with social support. It thinks the chance that something will damage you is low and can be safely discounted. Change might be opportunity, instead of disaster. **The serotonin flows plentifully. This renders you confident and calm, standing tall and straight, and much less on constant alert.** Because your position is secure, the future is likely to be good for you. It's

worthwhile to think in the long term and plan for a better tomorrow. You don't need to grasp impulsively at whatever crumbs come your way, because you can realistically expect good things to remain available. **You can delay gratification**, without forgoing it forever. You can afford to be a reliable and thoughtful citizen.

*"12 Rules for Life: An Antidote to Chaos"* by Jordan Peterson – Page 17

For further reading, I highly recommend reading the first chapter of Peterson's book *"12 Rules for Life: An Antidote to Chaos"*. He goes into much more detail than I have space for here.

To condense and simplify the neurochemistry: **serotonin regulates hierarchy in humans** (and all other animals too).

- If you have **high serotonin levels**, you're a high-status person. You'll have high confidence and others will voluntarily move out of your way and even do favors for you. Everyone – especially the opposite sex – is attracted to you, and everyone is much more likely to follow your lead.
- Conversely, **low serotonin levels** mean you're a low-status person. You'll have lower confidence and thus you will move out of the way of higher status (*high-serotonin*) people. You'll even do favors for them, hoping to curry goodwill and move up the social ladder. Low serotonin means more difficulty attracting a mate and makes it likely that you'll follow others who have more serotonin.

#### Gender and serotonin

Now comes the "ah-ha" moment.

**The rates of serotonin creation are not the same between men and women**

**Rates of serotonin synthesis** were measured in the human brain using positron emission tomography. The sensitivity of the method is indicated by the fact that measurements are possible even after a substantial lowering of synthesis induced by acute tryptophan depletion. Unlike serotonin levels in human brain, which vary greatly in different brain areas, rates of synthesis of the indolamine are rather uniform throughout the brain. **The mean rate of synthesis in normal males was found to be 52% higher than in normal females**; this marked difference may be a factor relevant to the lower incidence of major unipolar depression in males.

[Source: Differences between males and females in rates of serotonin synthesis in human brain.](#)

Feminists would say:

*But wait; didn't Jordan Peterson say serotonin availability is based on how you're treated? Wouldn't that mean if women were treated better they would make better leaders?*

Yes... and no.

Yes, it would help (some), but **there's a difference between serotonin synthesis and serotonin availability**. Synthesis refers to how much serotonin your body **creates**. Serotonin must be created/synthesized before it becomes available. However, just because serotonin has been synthesized doesn't mean it's available.

Remember, the function of serotonin is to regulate hierarchy.

If you suddenly gain additional status, the serotonin dump is instant. Think about a winning sports team. The moment – the exact instant – they win, the entire team instantly bursts with confidence (*serotonin*). Their bodies didn't synthesize a ton of serotonin at that moment; **their body just made the serotonin reserves available**. The serotonin was previously synthesized (*and stored in the brain*) but couldn't be accessed because of the "lower status".

Conversely, serotonin loss is instant if you suddenly lose status. For example, if the team lost their game, their serotonin levels would instantly drop. Their body didn't "destroy" the serotonin; it simply reduced availability.

### **Synthesis is not availability.**

- Serotonin **synthesis** rates are relatively constant. (*re-read the quote above; it says creation is relatively uniform while levels can vary wildly in different parts of the brain*)
- Serotonin **availability** is based on your perception of your status. (*and thus change frequently*)

You can change the **availability** of serotonin for women, but you can't change the rate of **synthesis**.

You just can't.

Remember, God created the human body. He designed it and we are "*fearfully and wonderfully made*". That means that our biological features, including the differences between the sexes, are intentional and God-ordained.

**That means God intentionally designed men to produce more serotonin than women.**

It's not an accident or random mistake in "evolution"; it's God-designed and ordained. God designed men to produce more of the neurotransmitter that regulates hierarchy, and He designed women to produce less. That fact tells us something about God's plan for hierarchy between the sexes.

### **Other factors reduce a woman's serotonin even further**

From a study entitled: "[Sex Differences In The Brain's Serotonin System](#)":

Their results, which are to be presented in a doctoral thesis by Hristina Jovanovic at the end of February, show that **women have a greater number of the most common serotonin receptors than men.**

They also show that women have lower levels of the protein that transports serotonin back into the nerve cells that secrete it.

Not only do women produce less serotonin, but they also have more receptors. That means **they use up the serotonin they do produce more quickly**. (*Personally, I suspect this is the reason women seem to hit “higher highs” and “lower lows” emotionally than men. More receptors mean a bigger jolt, but – like a sugar rush – bigger jolts come with bigger crashes.*)

But it gets even worse on a closer examination of that quote...

Their results, which are to be presented in a doctoral thesis by Hristina Jovanovic at the end of February, show that women have a greater number of the most common serotonin receptors than men. **They also show that women have lower levels of the protein that transports serotonin back into the nerve cells that secrete it.**

**Even if women could synthesize as much serotonin as men, they can't use it as effectively because it can't get from “point A” to “point B” as efficiently.**

To recap,

- Serotonin regulates hierarchy in humans
- Higher serotonin means higher status, and a higher likelihood that people will follow you
- Lower serotonin means lower status and a higher likelihood that you'll follow others (*who have more serotonin*)
- **Men produce ~50% more serotonin than women**
- Women have more serotonin receptors, meaning they use up the serotonin they produce more quickly
- Women have fewer transport proteins, which means they are slower to replenish it

Since God designed the human body, does this list make it sound like He intended men to lead?

### **Serotonin's other roles (*oh yes, there's more*)**

Serotonin does much more than simply regulate hierarchy and leadership. To quote *Psychology Today*:

As I described [in my last post](#), **serotonin is the molecule of willpower, of delaying gratification**. Decreased serotonin activity can lead to an inability to create and act on well-formed plans. That can mean having difficulty finishing things, or feeling a little down, or getting annoyed easily, or being unable to control your impulses.

[Source](#).

In that author's previous post (*the link in the quote*), he outlines a test that involves rats. The rats were given a choice between two food pellets with easy and immediate access, or four food pellets but they had to wait 15 seconds to get them. Regular rats waited 15 seconds for the four pellets, but rats who

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were given a serotonin blocking chemical went for the two pellets instead of waiting for the four pellets. Increasing the number of pellets (*to 10*) didn't change the result.

Serotonin plays a crucial role in our ability to defer immediate gain now in favor of long-term gain later. That's partially why serotonin is the "leadership" neurotransmitter.

**It should be obvious why the ability to delay gratification is tremendously beneficial in a leadership role (*and life in general*).**

For data on that claim, look no further than "[The Marshmallow Experiment](#)" published in 1972.

Similar to the rat study above, researchers set a child (*age 4-5*) alone in a room with a marshmallow. They told the children that they could eat the marshmallow right away after the researcher left the room, but if they waited until the researcher returned they would get a second marshmallow. The researcher then left the room for 15 minutes.

Predictably, only a few children waited and received a second marshmallow. But what's most interesting is what happened to those children later in life:

As the years rolled on and the children grew up, the researchers conducted follow up studies and tracked each child's progress in a number of areas. What they found was surprising.

The children who were willing to delay gratification and waited to receive the second marshmallow ended up having higher SAT scores, lower levels of substance abuse, lower likelihood of obesity, better responses to stress, better social skills as reported by their parents, and generally better scores in a range of other life measures. (You can see the followup studies [here](#), [here](#), and [here](#).)

The researchers followed each child for more than 40 years and over and over again, the group who waited patiently for the second marshmallow succeed in whatever capacity they were measuring. In other words, this series of experiments proved that the ability to delay gratification was critical for success in life.

[Source](#).

**My late father used to say that the ability to delay gratification was the biggest hallmark of maturity.**

Given those studies, I find it hard to disagree.

Again, this is part of what serotonin does; it helps us delay gratification, which improves nearly every aspect of our lives. Biologically, men produce **far** more of the leadership neurotransmitter (*serotonin*), which increases their ability to delay gratification and resist making impulse decisions.

The proof?

Remember the quote:

As I described [in my last post](#), **serotonin** is the molecule of willpower, **of delaying gratification**. **Decreased serotonin activity can lead to** an inability to create and act on well-formed plans. That can mean having difficulty finishing things, or feeling a little down, or getting annoyed easily, or **being unable to control your impulses**.

[Source](#).

This bears itself out as impulse control in men vs women when shopping. (*And yes, there are plenty of men who impulse buy, but as an overall average women are the worse offenders.*) Several scientific studies bear this out, and I'll quote a few below (*so you know I'm not blowing smoke*).

Males and females were significantly dissimilar in relation to the affective processes (positive buying emotion, and mood management) and cognitive components (cognitive deliberation, and unplanned buying) of impulse buying. Females browse to discover new products since they love shopping while men are guided with a particular purpose in mind. **This depicts that women are thrilled while shopping and tend to purchase more impetuously than men.**

[Source: Gender differences in impulse buying behavior](#)

A research project in the *Journal of Product & Brand Management* found the same thing:

As hypothesized, **women had higher levels of brand commitment** ( $t(254)=2.32, p < 0.05$ , Cohen's  $d=0.31$ ), **hedonic consumption** ( $t(254)=4.19, p < 0.01$ , Cohen's  $d=0.53$ ), **and impulse buying** in comparison to men.

Source: [Gender differences in brand commitment, impulse buying, and hedonic consumption](#).

(*Note: "hedonic consumption" is in contrast to "utilitarian consumption". The former means purchasing products/services which are primarily for personal pleasure. Utilitarian consumption means purchasing products that have an actual use; like food, shelter, etc*)

That women go shopping together just to enjoy shopping has become a cliché stereotype that is nonetheless very accurate. It was women who popularized the saying "*it's not shopping, it's retail therapy*". Men typically go to the store to get something they need and come back.

Women on the other hand...



# TOP 10 REASONS WOMEN GO ON A SHOPPING SPREE

The top ten reasons cited by women for 'going on a spending spree and spending more than I should'

REASONS

% OF WOMEN AGREEING

|           |   |            |
|-----------|---|------------|
| <b>1</b>  | <b>I want to cheer myself up</b>                | <b>79%</b> |
| <b>2</b>  | <b>I want to treat others</b>                   | <b>75%</b> |
| <b>3</b>  | <b>I feel I'm looking good</b>                  | <b>61%</b> |
| <b>4</b>  | <b>I'm feeling a bit low</b>                    | <b>61%</b> |
| <b>5</b>  | <b>I'm feeling happy</b>                        | <b>53%</b> |
| <b>6</b>  | <b>I want to impress others</b>                 | <b>52%</b> |
| <b>7</b>  | <b>I feel depressed</b>                         | <b>40%</b> |
| <b>8</b>  | <b>Things aren't going well with my partner</b> | <b>34%</b> |
| <b>9</b>  | <b>I feel unattractive</b>                      | <b>33%</b> |
| <b>10</b> | <b>I am anxious or worried</b>                  | <b>31%</b> |

Source: Shenomics



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## [Image Source](#)

### Notice that “I needed something” doesn’t make the list.

According to [a study done by Onepoll](#), the average woman spends 399 hours, 45 minutes per year shopping. Food, toiletries, and books combined only accounted for 144 hours. So where do the other 256 hours every year go? (*Hedonistic consumption perhaps?*).

That’s a **LOT** of time shopping.

Plus:

And even after all this spending and hundreds of items of clothing, 3 in 5 women complain on a daily basis that they can’t find anything suitable to wear in their wardrobe.

### [Source.](#)

As a gross generalization, I’ve found the following to be true:

- Women ask: “How **much** can I spend?”
- Men ask: “How **little** can I spend?”

### Other Examples

Women also have more trouble controlling their debt than men, according to [a study from National Debt Relief](#).

Specifically, 63 percent of women aged 18-24 carried some amount of credit card debt. Only 36 percent of men in the same age group had any credit card debt. Likewise, 66 percent of women aged 55-64 carried credit card debt. Just 33 percent of men aged 55-64 were in hock.

Not only do women carry more debt on average, but women also **save less than men too**. [According to an Employee Benefit Research Institute \(EBRI\) study](#):

When looked at on an individual basis, the average Retirement Savings Shortfall for those ages 60–64 ranges from \$12,640 per individual for widowers to \$15,782 for widows. It increases to \$24,905 for single males and \$62,127 for single females.

Single men are only ~\$25k short of recommended savings; single women are ~\$62k short.

This difference in self-control also shows up in dietary habits. According to CDC data: [More Women Than Men Are Obese In America, And Gap Is Widening](#)

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**Women are biologically disadvantaged when it comes to the “leadership neurotransmitter” (serotonin), and one way you can tell is their decreased ability to delay gratification.**

*(Again, don't shoot the messenger; God designed the human body, not I.)*

Does this mean that women can't ever be good leaders?

Not at all.

However, it does mean the average woman is far less likely to be equipped with the serotonin they need to lead. Without it, others won't follow them, they'll have less confidence, and less ability to defer pleasure and thus lead effectively. The ability to delay gratification is crucial to a good leader. While some women can do it, men are far better at it on average.

### **Stress, anxiety, and serotonin**

The lifetime rate of diagnosis of anxiety disorders is higher in women, with 33 percent experiencing an anxiety disorder in their lifetime, as compared with 22 percent of men.

Source: [Scientific American; Anxiety Disorders Are More Common in Women](#)

*(Remember the ~50% difference in serotonin synthesis? There's also an exactly 50% difference in anxiety disorders. Coincidence...?)*

Even without a clinical diagnosis of anxiety, women are more prone to stress than men. [The American Psychology Association published an article](#) that made it clear that not only are women more prone to stress than men, but they are more likely to have physical symptoms than men too.

**Stress is bad by itself, but it also affects your serotonin levels.**

Sustained or chronic stress, in particular, leads to elevated hormones such as cortisol, the “stress hormone,” and reduced serotonin and other neurotransmitters in the brain, including dopamine, which has been linked to depression. When these chemical systems are working normally, they regulate biological processes like sleep, appetite, energy, and sex drive, and permit expression of normal moods and emotions.

Source: [WebMD article on Stress and Depression](#)

So not only do women produce less serotonin, but they are more easily stressed which reduces their serotonin levels even further.

Further, to re-quote again:

As I described [in my last post](#), serotonin is the molecule of willpower, of delaying gratification. **Decreased serotonin activity can lead to an inability to create and act on well-formed plans.** That can mean having difficulty finishing things, or feeling a little down, or getting annoyed easily, or being unable to control your impulses.

[Source.](#)

**A leader needs serotonin to both create and enact a good plan. Again, women are biologically disadvantaged here.**

Women have a reputation as “talkers” while men have a reputation as “doers”. *There’s a biological reason for that difference*, and it allows men to be more decisive than their female counterparts. According to a study on the American Psychological Association’s website:

Indecisiveness can pose a threat to normal daily functioning. In addition, it has been associated with obsessive-compulsive disorder. Undergraduate students (N=135) completed the Indecisiveness Scale (Frost & Shows, 1993) and three other measures. **It was found that women are more indecisive than men. Furthermore, indecisiveness correlated positively with several obsessive-compulsive complaints (e.g., checking and rumination), but negatively with life satisfaction.** Finally, indecisiveness was associated with the number of do-not-know answers on a scale containing political statements that had to be evaluated by participants. The latter finding suggests that indecisive individuals not only need more time to reach a decision, but that they also actually fail to reach decisions.

Source: [To be or not to be... indecisive: Gender differences, correlations with obsessive-compulsive complaints, and behavioral manifestation.](#)

They aren’t the only ones who think that either, as further research out of the UK shows:

The research, commissioned by swimming pool builders Origin Leisure, asked 2,000 men and women to evaluate their decisions in life and found **women are much more likely to consider the opinions of friends and take time on their choices, while men adopt a more immediate process.**

**A quarter of women said their approach was often to spend a long time mulling over the details of a decision before making it – but less than a fifth of men take the same approach.**

Psychologist Cliff Arnall said: ‘There are stark differences between how men and women make decisions. Women’s significant reliance on others plus a reluctance to make a wrong decision points to a measurable lack of confidence compared to men.’

‘Weighing up different outcomes and scenarios may seem like a good strategy but it appears to be accompanied by increasing levels of stress and uncertainty.

**Going round in circles soon becomes counterproductive and leads to decision paralysis and feelings of frustration**

.

Source: [Women agonize over decisions – and STILL regret them afterwards, while men just move on, says new research.](#)

Again, the female tendency towards indecision compared to men is likely caused by a significant difference in serotonin. The ability to make good snap decisions is vital in business, politics, and war. General George Patton (*arguably one of the most brilliant generals of WWII*) once said:

A good plan, violently executed now, is better than a perfect plan next week

**Serotonin is also linked to confidence; another factor in a good leader.**

But that's not all.

To re-quote (*yet again*) a previous quote: “*Decreased serotonin activity can lead to an inability to create **and act on** well-formed plans*“. Again, this is the indecision we've been discussing. A leader needs serotonin to both create and enact a good plan. Again, women are biologically disadvantaged here.

That is not to say women can't make good plans – they can. It's just that the average woman has a harder time both creating and enacting a plan... and that disadvantage is written into *their biology*. It's not psychology, it's not behavioral/cultural conditioning, and it's not bad parenting; it's biology.

**It's a biological difference that we can't change.**

God designed it into our very DNA.

(*And I should mention that women are perfectly wired, just not for leadership. God wired them to be perfectly suited for a different role, and one that's no less important. For more information, see my article: [How Crucial are Women to a Biblical Household? Very!](#)*)

## Biology and Leadership: Testosterone and Success

Hold out your hand flat in front of you. Is your ring finger longer than your index finger? If so, congratulations; you're more likely to be successful in business.

**No, that's not palm reading or anything mystical, [it's 100% based on science.](#)**

Here's how it works:

When you were developing in the womb, the hormones testosterone and estrogen controlled the length of your fingers. Testosterone made them grow, estrogen retarded their growth. Your ring finger has many receptors for both hormones, while your index finger has fewer; thus the relative levels of

those hormones affect the development (*length*) of those fingers differently.

More testosterone (*and less estrogen*) during development makes your ring finger grow longer than your index finger. This is because the ring finger has more testosterone receptors and the index finger has fewer. **Thus, the length of your ring finger relative to your index finger is a reliable gauge of how much testosterone you received during development.**

- Longer ring fingers = more testosterone
- Longer index fingers = less testosterone

Make sense?

It's called the 2D:4D ratio because it uses the second and fourth digits (*fingers*).

**Now, here's why this is problematic for women in leadership.**

Remember we talked about how women were more stressed than men? Well, the stress hormone is called "[cortisol](#)" and the ratio between cortisol and testosterone is a major predictor of business success. According to a [Harvard study on testosterone and success](#):

- Men with high testosterone levels and low cortisol levels had the most employees under them and so were the most profitable businesses.
- Men with high testosterone levels, but with HIGH cortisol had somewhat fewer employees and had somewhat less successful businesses.
- Men with LOW testosterone levels and HIGH cortisol had the LEAST number of employees and the least profitable businesses.

The point here is leadership, not business. However, building a successful business with employees is certainly a hallmark of good leadership because it requires good leadership to do so. This good leadership requires higher testosterone and lower cortisol. (*And we've already seen that women have more stress/cortisol.*)

**And this applies to women also, not just men.**

There is an excellent article (*written by an egalitarian*) entitled "[How To Tell If A Woman Is Going To Be Successful In Business](#)" that deals with this topic. The author wanted to know why some women "break through" in the traditionally male-dominated world of business.

They hired a small army of 200 assistants to go out and interview over two thousand Italian men and women small-business owners and founders. In the middle of the interviews, the entrepreneurs were asked to hold out their right hands, palm up, so a photograph could be taken. Specifically, **the scholars capturing an image to measure the length of their ring fingers relative to their index fingers.**

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Sure enough, their analysis of the photos found that **the more successful the entrepreneur, the longer the ring finger compared to the index finger**. The most successful entrepreneurs had ring fingers 10% to 20% longer than their index finger.

**Normally, men's ring fingers are a tad longer, and women's index fingers are a tiny bit longer. But in the Italian study, the female entrepreneurs actually had more of a male pattern** : their ring fingers were longer. In fact, it was more pronounced in that direction than the men's. And it wasn't just their ring fingers that were bigger: on average, they ran bigger companies, with higher growth rates. They also had greater ability to withstand enormous workloads.

This suggests that entrepreneurs are special, wired that way from the fetal stages of development. **More men might be wired this way than women, but if you are wired this way, it transcends gender.**

It's not about gender; it's about testosterone and cortisol (*the stress hormone*). We'll talk about this more in the next section, but testosterone is vital to a society.

1. Great civilizations are built on the backs of great businesses
2. Great businesses are built on the backs of great entrepreneurs
3. Great entrepreneurs have large amounts of testosterone

Unfortunately for women in business, not only do they have more stress (*which causes the body to release cortisol as we already discussed*) but men have **significantly** more testosterone, on average. [According to Healthline.com, here are the average "normal" ranges for testosterone in men and women:](#)

- Average adult male testosterone level: **270-1,070**
- Average adult female testosterone level: **15-70**

At the most wildly optimistic, the average man has nearly **four times** as much testosterone as the average woman. [Testosterone has also been linked to increased levels of persistence](#), and [it also fuels both competition and protectiveness](#). Those traits are absolutely crucial for the success of any enterprise, whether business, domestic, or political.

**Let me say that again: more testosterone = more persistence, protectiveness, and competitiveness.**

And contrary to popular belief, [more testosterone does NOT make men jerks](#). In fact, one study found that men with more testosterone were nicer to all women, not just their girlfriends/wives. They also said:

"When with women, men with smaller ratios [higher testosterone] were more likely to listen attentively, smile and laugh, compromise or compliment the other person."

**It's the *absence* – not the presence – of testosterone that makes men jerks.** I assume this is where the stereotype of the "gentle giant" came from. It's almost like God designed it so the more capable a man was of hurting women, the more he would desire to protect them...



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**For women to be successful at business, they NEED testosterone, the traditionally male hormone.**

Some women have it.

Some women were born with more testosterone (*and possibly more serotonin*), which enables them to compete against men for leadership positions.

**But they are in the minority.**

(*Proof that men are better at leadership in business: look at the 100 [richest people in the world](#); they are ~90% male. Further, there are no women on the top 10 richest people in the world.*)

Men have traditionally dominated the arenas of business and politics because they are biologically better suited to it. If you don't like that, please take it up with the designer (God). I didn't create the system, I'm just reporting on what He created.

To recap...

Men have more serotonin, and therefore:

- More willpower
- Better impulse control
- Increased ability to delay gratification
- Increased ability to make decisions & execute plans

Men also have more testosterone, and therefore:

- Much greater chance of success in business & politics
- More persistence in difficult tasks

**Wouldn't you agree those are good traits in a leader?**

Again, this is on average. Of course some exceptional women were born with more testosterone or serotonin, and they've risen to success. However, that's simply not the case for the vast majority of women. Most people fall under "average" and thus most women are biologically disadvantaged when it comes to leadership roles.

However, there are intrinsic differences between men and women biologically speaking.

**Biology and Leadership: Tribalism, "Mama Bears", and Conflict Resolution**

One of the main duties of a leader is to deal with those outside the family/tribe/nation. Dealing with people who don't like you and who were probably outright hostile to you in the past is virtually guaranteed. Here again, women have a great disadvantage because of their biology, as this next video shows.

The following video by Jordan Peterson – who incidentally very much believes that women should have equal rights – explains this temperament. (2:40 minutes)

Women are far more agreeable than men and therefore are very nurturing when it comes to friends and family, but then can turn and viciously attack anyone who “hurts” or “threatens” them. They become “unbelievably hostile” to anyone outside their “kin group” and can attack viciously and seemingly without warning.

It's built into feminine biology.

**Further, boys who were raised exclusively by women – like single moms – exhibit this behavior also because it's how they were raised.**

*It could be argued that the maternal/feminine tendency toward treating people like either “protected children” or enemies/predators (with no middle ground) is why America has become so polarized lately.*

Further compounding the problem, **women aren't nearly as good at resolving conflict** when there is disagreement (*which also applies to boys raised by single moms*). They don't even get along with their same-sex peers as well as men do.

From the study [“Males' Greater Tolerance of Same-Sex Peers”](#):

Three studies were conducted to examine the often-cited conclusion that human females are more sociable than males. Using perceptions of roommates, roommate changes at three collegiate institutions, and an experimental manipulation of friendship beliefs, *the studies demonstrated **unequivocally** that males exhibit a higher threshold of tolerance for genetically unrelated same-sex individuals than females do.* Tolerance was defined as acceptance of the stresses and strains within relationships.

And from a BBC article entitled [“Men may have evolved better ‘making up’ skills”](#):

Men are more likely to reconcile after a conflict supports other studies showing that male-male relationships are generally different than female-female relationships ...

A woman's relationship with another woman is often gravely damaged if one woman achieves greater status than the other or somehow outdoes her ...

***Men, by contrast, seem to better tolerate these kinds of ups and downs, which may be why men seem better than women at maintaining large same-sex social networks***

A leader must maintain large social networks with other people, and men are better at it. Again, part of

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this is due to conflict resolution skills, as researchers found in "[Human Males Appear More Prepared Than Females to Resolve Conflicts With Same-Sex Peers](#)", which summed it up as saying:

We interpret the results as indicating that **women are less prepared than men to resolve a conflict with a same-sex peer**.

*(My personal impression: men tend to resolve conflict directly by confrontation. They shout it out or slug it out and then make up. However, women – who are more agreeable and thus less likely to confront anyone on anything – let things fester and then lash back in covert ways, primarily character assassination.)*

If you want to see more about this, Sydney Watson (a woman) has a video entitled "[Toxic femininity is real. And it's gross \(horrible female behavior we ignore\)](#)". According to the well-documented research that she presents, women tend to engage in more covert methods of retaliation like character assassination and social ostracism.

Click the link to the video for more details.

These problems of women not playing nicely with others and the feminine tendency to treat everyone as either "protected children" or "enemies/predators" doesn't make for good leaders. Conversely, when women are in the roles God gave them, this dualistic approach is actually a strength. Likewise, the ability of men to work in large social groups and resolve conflict better is a strength.

**Neither men nor women are "better wired" than the other; they're just wired for different things.**

## Why Men and Women are Wired Differently

I may have given the impression that I think men are "better wired" than women, but nothing could be farther from the truth. True, men and women are wired differently, but there's a very good reason for that. The way women are wired is incredibly important and absolutely vital to the very survival of the human race.

Jordan Peterson – who very much believes in equal rights for women – has a wonderful presentation with the best explanation I've heard for the difference between men and women.

The biologically hard-wired female bias – toward short-term gain at the expense of long-term gain – is vital to the raising of young children, especially infants. The intrinsic bias toward anxiety is very useful when you have infants and young children who are extremely fragile and helpless. Without that anxiety driving the mother to pay attention all the time, infant mortality would surely be much higher over history. This is especially true in ages past without modern medicine.

Women are perfectly wired for raising children (*especially infants*) and [their other crucial role in society](#), but they're not wired well for leadership roles. You can't have someone who's perfectly wired for both, because:

- To be a good leader, you need confidence (*serotonin/testosterone*) and low stress

- To take care of an infant, you need to be slightly neurotic to attend to the helpless child's needs, or the child – especially an infant – could die

BOTH are absolutely vital to building civilization.

(Note: women have another crucial role, which we look at in my article: [How Crucial are Women to a Biblical Household? Very!](#) I plan to eventually expand this article to show how women are perfectly wired for that role too. Hint: the multi-tasking ability and memory for fine/small details are a huge part of it.)

## Conclusion

To recap,

- Serotonin regulates hierarchy in humans
- Higher serotonin means higher status, and the likelihood people will follow you
- Lower serotonin means lower status, and the likelihood you'll follow others (*who have more serotonin*)
- **Men produce ~50% more serotonin than women**
- Women have more serotonin receptors, meaning they use up the serotonin they produce more quickly.
- Women have few serotonin transport proteins

In behavior, men therefore have:

- More willpower
- Better impulse control
- Increased ability to delay gratification
- Increased ability to make decisions and execute plans
- Less stress and anxiety

Men also have more testosterone, which gives them:

- Much greater chance of success in business and politics
- More persistence in difficult tasks

Unsurprisingly, the Bible's teachings are consistent with the facts above.

### 1 Peter 3:7 (ESV)

Likewise, husbands, live with your wives in an understanding way, **showing honor to the woman as the weaker vessel**, since they are heirs with you of the grace of life, so that your prayers may not be hindered.

The word translated "weaker" is the Greek word "???????" ([asthenés](#)) and it means:

**772** *asthen?*s (an adjective, derived from [1](#) /A “without” and *sthenos*, “vigor, strength”) – properly, without vigor, living in a state of *weakness* (depletion). 722 (*arotrió?*) refers to a lack of necessary resources (“insufficient”) – literally, “without adequate strength” and hence “frail, feeble (sickly).”

When it comes to leadership, politics, and business, the average woman is “without adequate strength” compared to the average man. Women do have a very important role – [an absolutely crucial role](#) – to fill though, and Peter makes it clear that women should be treated with honor. Additionally, without their empathy and anxiety about child safety (*especially infants*), the human race would’ve died out long ago.

Conversely, men are biologically better suited to the task of leading. This is because of their higher levels of serotonin (*which regulate hierarchy allowing them to defer pleasure*), *far* higher testosterone (*which fuels competitiveness and persistence*), and ability to get along with their peers.

**Men and women are different, but both are necessary for the human race to flourish.**

For the next article in this series, we’ll look at [the “why” of submission in marriage](#). I’d argue it’s the most important article of this series because without it, the rest won’t make much sense.

## Marriage Series Index:

- a. [How Crucial are Women to a Biblical Household? Very!](#) (*This article was written later, but serves as an excellent, balanced intro to gender roles in marriage. I highly recommend reading this article before the others.*)
1. [How Getting Marriage 'Wrong' Destroyed Every Great Civilization in World History](#)
2. [Gender Differences and the Biology of leadership](#)
3. [The “Why” Behind God Telling Wives to Submit to their Husbands in Marriage](#)
  - a. [Does 1 Corinthians 11 Require Women To Wear "Head Coverings"](#)
4. [The Bible on Authority & Submission in Marriage](#)
5. [Does God View Women as the \(Social/Political\) Equals of Men?](#)
6. [Biblically, What’s the Role of Women in Society and Marriage?](#)
7. [Gender and Attraction: What Men vs Women REALLY Want](#)
8. Biblically, What’s the Role of Men in Society and Marriage? (*still writing it...*)
9. [Is Polygamy \(Polygyny\) Biblical? Does God Allow it?](#)
10. Follow up articles coming...
  - o Appendix A: [Biblical Reasons for Divorce, When Remarriage is Allowed, and How Adultery Figures In](#)