

# The Male and Female Brain – We ARE Different!

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Steven Campbell, Intelligent Heart

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Men and women ARE wired differently.

So let's look at both the research...and the debate...as to how we are different.

First...the male brain is about 10 percent larger on average, **but size doesn't matter here**. After all, elephants have brains that are three times larger and have more neurons than humans, but we don't see them doing brain surgery, and it's not just because they don't have fingers.

And the male brain is wired from front to back, with few connections across the two hemispheres (thoughts and feelings). Women, on the other hand, are wired from left to right, so the two thoughts and feelings are more inter-connected.

Researchers propose that these differences result in men and women having different strengths. So, while we mentioned that one sex is not “better” than the other, each *is* better, on average, in certain respects. Here are some of the findings:

- Men are better at performing single tasks; women at multi-tasking.
- Women are better at attention, word memory and social cognition, and verbal abilities.
- Men are better at spatial processing (maps) and sensorimotor speed
- Women are better at fine-motor coordination and retrieving information from long-term memory
- Women are more oriented toward and have better memories of faces; men of things.
- Men are better at visualizing a two- or three-dimensional shape rotated in space, at correctly determining angles from the horizontal, at tracking moving objects, and at aiming projectiles.

- In finding their way, men rely more on dead reckoning – that is, they determine their position from the direction and distance traveled. Women tend to rely more on landmarks.

There are also gender-specific tendencies that are not so advantageous.

- Women are more prone to experience depression, and post-traumatic stress disorder.
- Men are more likely to suffer from schizophrenia, dyslexia, and autism, and to become alcoholic or drug-dependent.

We also know that men and women react differently from an emotional perspective, and that, researchers argue, may also have to do with brain issues. The female brain has greater blood flow in the cingulate gyrus, the part of the brain that's involved in processing emotions, resulting in more intense emotional reactions and stronger emotional memories.

There are also some sex-specific behaviors are NOT learned...they are wired.

- Female mice have a trait not found in males of protecting their nests from invaders.
- In monkeys, males prefer toys with wheels while females prefer plush toys.
- Human toddlers show a preference for sex-specific toys, before they know they're a gender.

The female brain also has more wiring in the areas that play a role in social cognition and verbal communication. That may be why they're better at empathizing with others, have a better sense of what is happening around them, and are richer in their verbal descriptions.

Because there's less connectivity in the male brain between their verbal centers, and their emotions and memories, they're not as effective as communicators, and tend to have less interest in conversations.

During activities, the male brain uses far more gray matter while the female brain uses more white matter. This difference may account for the greater ability of males to focus on a specific task to the exclusion of what's happening around them, while women are better at switching between tasks.

## **But here's the debate!**

This sounds pretty convincing, right? Well, not to everyone. There are researchers who argue the other side. They argue that even if we are wired differently, it's a huge leap to say that these differences are programmed in at birth. **There are socio-cultural factors at work.**

In fact, brain connections change as a result of experience and learning. When the same signals are processed over and over, those neural networks get stronger, just as muscles or skills develop with usage and practice. Male and female brains may start out similar but become different over time as boys and girls are treated differently. There are also different expectations. In other words, how we are raised plays a major role in how we act, think, and believe and our brains may adapt accordingly.

## **So the conclusion is....**

A reasonable conclusion is that it's both—there may be neurological differences, but there are also cultural influences. The percent of differences that are neurological vs. societal/cultural (i.e. nature vs. nurture) **is anybody's guess at this point in time.**

This debate is likely to continue for quite some time. At least that gives researchers something to do.

And what is the application here? **Enjoy the difference!**

For example, Mary and I are becoming more and more different as we grow older. However, we are learning to enjoy it, and even taking advantage of it. We do give each other a lot of time and space, and we thank each other all day for the small stuff (making the bed or washing the dishes), but we're also learning to like each other even more.

**Wow!**