

# REACHING TOWARD SUCCESS: USING BRAIN SCIENCE TO HELP WOMEN THRIVE

Over the past few decades, doctors, neuroscientists, psychologists, and anthropologists have produced a remarkable body of work identifying real brain differences between the genders; differences that influence our thoughts, behaviors, even our very perceptions of the world. They've also discovered what fuels these differences: our biochemistry and the interplay of hormones with brain structures that are pre-wired to react with those hormones in unique and specific ways.

To us, one real breakthrough is in recognizing how these differences influence the ways in which men and women operate in business. In fact, every facet of the workday is shaped by our biology, affecting how we communicate, deal with stress, handle conflict, tackle issues and challenges, and make decisions.

Of course, it's not all nature. Family, education, and culture also shape each of us from birth. Sometimes that "nurturing" side reinforces our natural tendencies and sometimes, due to changing social norms, it encourages us to challenge what might feel most comfortable. For example, parents might encourage their sons to be more nurturing or collaborative. They might inspire their daughters to be more outspoken or daring.

Yet the fact of our biochemistry remains. And in a male-oriented business environment, not acknowledging and understanding these natural differences can work to stall a women's career. Judged by rules that often clash with how women intuitively think and act, women can struggle to rise to the proper levels of leadership. And everyone suffers when their gifts and talents aren't used to their full advantage.

A study sponsored by The Guardian Life Insurance Company of America identified some common areas where women often feel stuck or held back. In order to see through to solutions, we applied a gender-intelligent lens in defining each area of challenge. In this article, we investigate what brain science has to tell us about the biology behind these common issues. We outline the differences between men and women's thinking and behavior patterns and reveal when a traditional business model preferences the male response. This background is illuminating for leadership in analyzing how the business environment rewards certain gendered tendencies. We also provide concrete strategies for women to use their unique thinking and emotional responses to their best advantage and navigate the business world with greater understanding of themselves and others.

The brain is a complicated organism full of interconnected, interdependent structures and regions that process information through the magic of biochemistry. No one part acts alone. Nevertheless, we can associate each of the five common areas of challenge identified in the Guardian study to a specific area of the brain, and in doing so, reveal some of the most meaningful areas of difference between women and men.

## PERFECTION = PRESSURE

“I feel I always have to come through—both personally and professionally.  
There is no room for error.”

It's not just Type-A's who feel the pressure to perform perfectly all of the time. Women in general tend to be harder on themselves compared to men, with self-scrutiny literally wired into their brains. When faced with problems in the workplace, men tend to externalize and depersonalize the situation. Women often react in the opposite way by assuming blame—what did I do to cause this situation? How could I have done better? While depersonalizing is not the answer, neither is internalizing the problem and unnecessarily personalizing the issue—especially if this leads to avoidance of the issue or to uncertainty. When missteps or mistakes arise, it's helpful to remember how differently men and women will approach the situation. Men more easily focus on singular issues. They also have an easier time letting go and moving past failure. While they may not be plagued by self-doubt, they are also less inclined to engage in self-examination. For women, their strong sense of personal responsibility is a good thing. When problems arise, however, they might do an internal scan to see whether they're taking too much responsibility for a team issue or over-personalizing failure. This will help them focus on problem solving without the distraction of excess worry.

### The biology

The insula, found in both hemispheres of the brain, influences our emotional response to our surroundings and governs both our consciousness and our sense of self. With respect to our physical environment, the insula regulates our experience of pain, warmth, and cold. Emotionally, it guides how we respond to the events and the world around us, producing feelings such as disgust and empathy, pride and humiliation, guilt and apology.<sup>1</sup>

In order to do its job, the insula acts in conjunction with another part of our brains, the hippocampus, which is the center for memory and emotion. While this is true for everyone, the role these areas of the brain play is not equal in men and in women. In women, the hippocampus is on average larger and far more active than in men and the insula is twice as large in the female brain. The interplay of these two systems enables women to draw on past memories, identify patterns, and make instantaneous connections.

How does this play out? Because women are able to recall past experiences much more easily and in more vivid detail, they often comb through their past reactions and responses in order to learn from those events, gathering emotional data to inform future action. Revisiting the past in this way can work to prevent women from acting too hastily to form responses and keep them from taking unnecessary risks. The larger insula also tends to heighten women's perception and intuition, making them far more sensitive than men to the feelings of individuals and able to “read” a room more easily.<sup>2</sup>

## Effects in the workplace

The effect of these differences is that women are intimately connected to their sense of self. They are always “on” in that they are constantly tuned in to their feelings as well as to the emotions of others and to the details of their environment. This depth of perception enables women to readily connect the dots to their storehouse of memories and call back the emotions felt from past mistakes or failure. As they face new challenges or situations and decide how to move forward, women’s brains are running old tape in the background: processing, replaying, and drawing from those experiences.

The male brain does something else entirely. Because they don’t have the capacity that women do to retain memories and draw from past experiences, men connect less to the past, especially in emotional terms. Men may recall an event and sense the associated feeling for a moment, but they then tune out of the emotion in order to insulate themselves against distress or anxiety. Closing off that connection to the past allows men to brush off past mistakes or failures and sometimes to forget them completely; therefore they are able to calm their own emotional response, which produces more testosterone and leads to that singular focus we discussed above. Firmly in the present, the entirety of men’s scope is the task at hand, whether that’s to solve a problem, give a presentation, or ask for a promotion. Without the fresh comparison to past actions and outcomes, it also makes them more willing to take risks, a behavior often rewarded in the business environment.

The innate capacity and strength of women to connect to the past can cause women to become stuck, unable to let go. When issues arise, they may become so preoccupied with the problem that they’re unable to push past the loop of negative thought. Instead of learning and moving ahead, some women might over-think or obsess about situations or life events, such as work or relationships. In retracing past mistakes, women often set the bar very high—sometimes too high—for themselves, in order to avoid repeating past failure. Women’s own standards for themselves might be so high that they end up preventing themselves from taking action. Revisiting past mistakes can also prompt women to seek external validation, constantly working to prove themselves and striving for perfection in their performance.

## Moving forward

This isn’t about changing yourself; it’s about changing the internal conversation. Get off the memory merry-go-round by doing the following:

- Engage in activities that foster positive thoughts. By distracting yourself with something altogether different and positive, you’ll be able to return fresh to the task you need to accomplish.
- Identify two doable next steps you can take to overcome the problem you can’t stop thinking about. Start with the first and take action.
- Complex problems can be overwhelming. Tame the beast by focusing on one specific part of a situation. Then target one improvement that can be made to remedy that aspect of the problem. This gives you a box to check and makes it so that at least that particular issue can be resolved.

## WOMEN STIFLE THEIR INNER SWAGGER

*“I know I can guide my team to success, but I don’t know if I’d call myself a leader. Come to think of it, I don’t know if my boss would either.”*

Interestingly, even women with proven track records and high confidence levels don’t often pick “leader” as one of their top traits. An underlying reason why is because they’re measuring themselves—and others are measuring them—against the prevailing paradigm of what leadership means and how a leader is expected to behave.

Most organizations look for specific types of behavior from those in charge—behaviors that just happen to align more closely with the nature of men and their style of leadership. We still think of leaders as being independent, risk-takers, results driven, quick to take credit, and unemotional. Yet it’s important to note that the outcomes are often the same whether men or women are in charge, it’s only in the how that it differs. Whether in decision-making, managing projects, closing deals, or leading teams, women will often get the same or better results, just via a different path. However, even today traditionally masculine leadership traits continue to be valued and rewarded. The workplace has yet to recognize the benefits of understanding and blending the natural leadership styles of both women and men.

### The biology

Also known as the social-attachment hormone, oxytocin is produced in great quantities in women during childbirth and in both women and men during orgasm. The hormone affects social recognition and bonding as well as the formation of trust between people.<sup>3</sup> While oxytocin works to lower stress levels in women, in men, too much oxytocin can actually reduce testosterone levels thereby increasing their stress. Alternately, too much testosterone in women can reduce the effectiveness with which oxytocin functions in their bodies. Women have an instinctual capability and drive to lead and develop others. Their higher oxytocin levels and ease in verbalizing emotions make women more likely than men to focus on others instead of on themselves. They also intuitively understand that details matter. In their leadership, they are often skilled in determining the exact talents and needs of each person on their team. They are better equipped than men at sensing how morale impacts engagement and affects daily productivity.

Their hormone mix means female leaders are more likely than male leaders to adapt their schedule to concentrate on a team member’s immediate needs. In general, women tend more toward participative teams and try to find ways in which team members and their contributions are complementary. Higher oxytocin levels tend to influence this leadership quality—the more support women build around them, the lower their stress levels, and the more effective they can be as leaders.

## Effects in the workplace

That all sounds positive, what is the issue? Problems arise when the female leadership model meets the old paradigm. The conflict between the two turns the strengths of women's leadership into barriers as subordinates, peers, and superiors experience a style that doesn't match perceptions. We see the effect of this throughout talent management from recruitment to advancement.

For example, recruiters and interviewers of both genders often look for male-oriented skills and talents in their candidates. They seek out potential leaders who are transactional, results driven, and work independently, those who take credit for achievements, promote more risk taking, and who conceal emotional vulnerability. Their female candidates may exhibit natural leadership strengths of women and be interactive, collaborative, developmental, participative, credit sharing, more calculating when taking risk, and emotionally revealing. However, when measured solely against the historical standard, they are less likely to be put forward for leadership positions.

## Moving forward

As leaders, we should all recognize that leadership deserves a high ranking among women's top ten traits. As we move toward understanding, women must trust in their leadership abilities. As you confidently and authentically lead from your natural strengths, others will then see your leadership in action.

In fact, women may prove natural leaders for diverse teams where engagement starts with listening. Women leaders tend to be more interested in hearing all points of view, read situations accurately, and know strategically how to engage those around them. Through collaboration, women leaders tend to implement plans that incorporate the best of everyone's ideas and make the most informed decisions possible.

Women's inclusive and collaborative style of leadership, that draws together information and viewpoints from many sources, ideally positions women as leaders in the global economy and for an evolving information age.

## WOMEN CHOOSE HUMILITY OVER HUBRIS

**"I know I'm smart. But I hold back because I don't want people to think I'm arrogant."**

Professional women often feel confident in their knowledge, talents, and skills yet are uncomfortable with the self-promotion that can lead to advancement or reward. Women often defer, choosing modesty and understatement over any show of egotism.

For men, bold requests and even exaggeration of their contributions are secondhand. Research shows that men will apply for a position with 60 percent of a required skill set while women will apply only if they have 100% of the required skills.<sup>4</sup> This added to women's tendency to comb through past events while men focus on the present and we should be unsurprised by a common pattern: while men are clarifying their position or speaking to their capability, women are silent—scrutinizing, examining, and assessing their own abilities and readiness.

### The biology

The prefrontal cortex, which controls our executive function, is not only larger in women than in men but also develops earlier in girls than in boys.<sup>5</sup> This results in differences in how men and women come to judgments, approach decision-making, and apply consequential thinking.

In psychology, executive function relates to our ability to differentiate among conflicting thoughts and make determinations between same and different, good and bad, and better and best. A larger prefrontal cortex is also the source of women's enhanced ability to predict outcomes and to form appropriate expectations. Functioning as the judgment center of the brain, the prefrontal cortex moderates and controls social behavior by acting as the brake on the more reflexive amygdala, which controls our fear response.

The underlying differences between the structure and size of the prefrontal cortex and the amygdala (almost twice as large in men) can be seen early on, well before they play out in a business environment. These differences are one of the reasons young boys tend to be more exploratory, more mischievous, and often more careless than young girls. Even at a young age, boys are more likely to spontaneously declare their knowledge, talents, or abilities. This tendency continues on into their adult lives. Men tend to react and respond faster and are less restrained in their thinking.

### Effects in the workplace

Because they are not natural self-promoters and may even downplay their abilities, women are often promoted based on past and proven experience rather than on their potential. The net effect is that there are fewer advancement opportunities for women who are not outspoken and explicit about what they have achieved and what they are capable of or willing to take on.

Brain differences can also affect the way men and women respond to career opportunities as they come along. Naturally both more perceptive and cautious, women also have less testosterone and more oxytocin flowing through their brains. This particular hormone mix, combined with brain structure, sets up a biological structure that encourages women to look for agreement and protect the needs of others, oftentimes at their own expense. This is one of the reasons why women tend to negotiate more effectively and passionately on behalf of others than they do for themselves. Men, on the other hand, tend to look for ways to come out on top. Their competitive drive can surface in relationships with their peers, superiors, or clients.<sup>6</sup>

## Moving forward

If you work in an environment where self-advocacy and healthy competition get you noticed, be explicit about what you've achieved. After all, your accomplishments only speak for you if you make sure people hear about them. Shift the lens through which you view self-promotion. Instead of seeing it as lying about your potential or being conceited, recast speaking with the boss about your wins and about your potential as nothing more than being your own best advocate. Let your path toward leadership feel authentic. It's not necessary for you to diminish others as you negotiate for your place at the leadership table; remember and be confident about the value you bring.

Advancement comes to those who:

- Speak to what you know you can do, not only to what you've done. Experience alone doesn't always land the position.
- Engage in greater self-promotion and think through all the possible ramifications. You are not only creating opportunities for yourself; in doing so, you are in a better position to create opportunities for others.

## INERTIA FEELS SAFER THAN RISK

*"I tend to play it safe with my career moves, but I'm balancing a lot of needs when I make those decisions. It's not just about me."*

As we covered in the first section on perfection, women often feel overly responsible for outcomes and believe they can always do better. Maybe I should have gone for the promotion, but how would that have affected everyone who counts on me outside of work? I already get the message I'm at the office too much. Also, my team member might have taken it as a betrayal. He didn't seem pleased when I floated the idea . . .

Never quite hitting the mark is exhausting. Too much ambivalence can cause many women to hang back, opting out of stretch assignments and new opportunities because they're tired or got turned off by "the daily grind". Far too readily and far too often, the effect is that women will lose passion for the challenge and thus decide it isn't worth it.

## The biology

Women typically have a larger anterior cortex than do men, a difference to which many scientists attribute women's superior ability to integrate and arrange memories and emotions into more complex patterns of thought. As a result, women tend to weigh more variables, consider more options, and visualize a wider array of solutions and outcomes than men.

The anterior cortex also acts as an important interface between emotion and cognition, working to convert feelings into intentions and actions and helping us control our emotional reactions. This part of our brains helps us concentrate on solving problems, recognize our own mistakes, and make adaptive responses to changing conditions, all functions that are closely linked with our emotions.<sup>7</sup>

Brain scan studies indicate that the larger anterior cortex of the female brain provides greater sensitivity to instinct or gut feelings. For this reason, many scientists have concluded that “women’s intuition” is very real and actually grounded in biology. By possessing a larger anterior cortex, the female brain is designed to quickly assess the thoughts, beliefs, and intentions of others based on even the smallest hints and hunches.

### Effects in the workplace

While a larger anterior cortex can help women play their hunches more accurately than men, it can also translate into increased anxiety. The anterior cortex is also known as the “worrywart” center of the brain, and research bears out that anxiety is experienced more commonly in women. From an evolutionary standpoint, female brains may have evolved this way to help women instinctively care for their young, alert to even potential risk to their babies. The tendency toward collaboration also helps in this regard. Yet in today’s business environment, these same traits are often interpreted as a lack of confidence or an inability to take risks.

The fairer evaluation is that risk-taking is simply more calculated in women than in men, who worry less about potentially negative outcomes from risk-taking behavior. As with all these differences, there are trade-offs. While men may be more apt to just go for it, they sometimes jump in blind. Women may hang back and be slow to green light a riskier proposition, but their more cautious approach might also consider crucial variables as well as different possible outcomes, improving upon the initial proposition.

### Moving forward

In terms of their own career advancement, this default caution can hold women back. Overthinking all the possibilities prevents women from creating their own opportunities and can even make them talk themselves out of stretch assignments or advancement opportunities offered to them. While some risks certainly don't pay off, it's important to remember that some do. Here are some ways to say yes to riskier propositions that test your comfort zone:

- Reframe risk as an opportunity to succeed rather than a path to failure. Draw from successes in the past and plan your path to success.
- Leverage your unique abilities, expect success, and take the plunge. The only way to make it easier is through learning. The more chances you take on yourself, the more new paths and new opportunities will emerge. Draw strength from the fact that you have the capacity to think and execute your way through to the desired outcome.

## THE ROAD TO THE TOP SEEMS DAUNTING

“I don’t want to choose between money and meaning. I want a career, not a job. I want to feel proud of what I do.”

Just as the different divisions of a company contribute to the overall good of the company, the different structures and chemicals in the brain work together as well. Adding up some of the natural tendencies they produce in women, from harsh self-scrutiny to getting stuck in the past to avoiding risk, can make the path to the C-suite a daunting proposition for many women.

### The biology

The brain is divided into two hemispheres: the left brain, which is the source of linear, logical, and serial thinking; and the right brain, the basis of intuitive, holistic, and creative thought. The corpus callosum is a thick bundle of nerves connecting the right and left hemispheres of our brains and plays a significant role in how we process information.

The corpus callosum is on average twenty-five percent larger in women’s brains than in men’s and also contains more nerve fibers. This enables women to travel back and forth between the left and right sides of their brains more easily. Though men also go back and forth between the different hemispheres of their brains, women can engage in right-brained and left-brained activities at the same time.<sup>8</sup>

The result is that women do more contextual, web-like thinking than men. They often take in a broader, more inclusive perspective of situations and typically see the different elements of a problem or task as interconnected.

When a man is working through an issue, he is more likely to concentrate on one line of reasoning and is more comfortable seeing one idea through to its end without interruption. He’s not likely to try tackling the problem from different angles, as that would require a mental shift to the non-linear, creative mindset housed in the right side of his brain.

A woman, due to her larger corpus callosum, is more capable of approaching problems using both logical and creative thinking at the same time. Her logic flow doesn’t necessarily impede her intuitive and emotional thoughts.

### Effects in the workplace

Though cerebral multitasking may seem like a tremendous innate capability to possess, almost a super power, there are ways in which having both hemispheres connected so effectively can become a barrier for women in the business world.

Because they are able, within the confines of a single conversation or meeting, women might jump back and forth between parallel lines of reasoning. Rather than going off-topic, women feel they are simply incorporating information of a more creative or intuitive nature. To them, it's all relevant. For men, naturally inclined to get down to brass tacks, the inclusion of more creative or emotional content into the conversation feels like a distraction. The additional topics or directions surfaced by their female colleagues' approach might seem outside the scope of the conversation and their approach unfocused. Women's divergent thinking isn't always an asset, either. The dual-brain approach can also make it more difficult to locate the central point of a problem or conversation. Men, more convergent by nature, are more likely to hone in and latch on to a singular issue. Another way this function might affect women in business has to do with emotional processing, internalizing, and the personalizing of experiences. The corpus callosum is like an intersecting superhighway for thoughts and emotions, and the simultaneous access to a complex matrix of priorities and conditions can prove overwhelming. As we've seen before, this can contribute to women not seizing opportunity or in overanalyzing the possibilities.

### Moving forward

With the information you know now, channel and promote your strengths while being mindful of the potential pitfalls of most women's go-to thinking and behavior patterns. In order to advance your career, make the most of opportunity, and showcase your strong leadership, remember to:

- Approach problems by breaking them down into component parts. Identify one real thing you can do to overcome the problem you keep going over in your mind. Then identify the step to take after that.
- Tell others about your accomplishments and claim other projects or positions you could take on, especially if they offer growth for your skills and abilities. Create more opportunities for others by creating opportunities for yourself.
- Draw strength from your capacity to think and execute your way through to a desired outcome. Expect success.
- Execute an inclusive and collaborative style of leadership, drawing together information and viewpoints from as many sources as possible. You are the face of leadership in today's diverse business landscape.

*Material discussed is meant for general informational purposes only and is not to be construed as tax, legal, or investment advice. Although the information has been gathered from sources believed to be reliable, please note that individual situations can vary. Therefore, the information should be relied upon only when coordinated with individual professional advice. This material was prepared by an independent third party.*

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