

# HOW TO LEAD WITH THE BRAIN IN MIND

5 WAYS TO USE BRAIN SCIENCE TO BOOST  
EMPLOYEE ENGAGEMENT AND PERFORMANCE

A hand in a light blue shirt sleeve points towards a glowing, futuristic circuit board graphic. The circuit board is composed of blue and white lines with glowing blue and white nodes, set against a dark background.

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# LEAD WITH THE BRAIN IN MIND

## *5 WAYS TO USE BRAIN SCIENCE TO BOOST EMPLOYEE ENGAGEMENT AND PERFORMANCE*

The emerging field of neuroscience is giving us a window into how the brain can be optimized to enhance every domain of our lives, including work. Thanks to advanced technologies like the functional magnetic resonance imaging (fMRI) machines, we can understand what part of the brain functions as we think and work. This information gives us great insights into how we can build a stronger, healthier, and more efficient brain that will boost our work satisfaction and performance.

Neuroscience research helps us better understand why a resonant leadership approach will support greater employee engagement and achievement. Neuroscience also identifies why certain workplace behaviors hinder effective social interaction, collaboration, confidence, problem-solving, creativity, and leads to employee disengagement and performance stagnation. Although the field is in its infancy, there are many insights that can help us determine the best ways to interact, lead, and do business.

## NEUROSCIENCE IN THE WORKPLACE

Neuroscience is the study of how the human nervous system develops, functions, and thrives. Although neuroscience studies the structures of the brain, brain stem, and spinal cord, it also includes the chemical mechanisms within our body. Scientists acknowledge that they have only scratched the surface of understanding brain function and capability. Advances in technology and research methods will allow the field to continue to progress, creating practical insights for disciplines such as medicine, psychology, business, politics, and spirituality, among many others.

As the body of research strengthens, applications of neuroscience continue to increase. Some of the most popular applications for leaders include:

- How leaders promote better thinking and problem-solving among their followers.
- How leaders care for and maintain a healthy, high-performing brain.
- How to understand brain malfunctions and their impact on work quality and efficiency (fatigue, multi-tasking, etc.).
- How to structure reward systems in a way that doesn't create entitlement.
- How to structure feedback to manage emotional and biochemical reactions.
- How to lead and manage change and ambiguity.
- How to build and sustain trust.
- How to activate the potential of the people they lead.

This white paper will address five areas that leaders can use the latest neuroscience research to boost employee performance and achievement, while also building a psychologically healthy workplace.

## ENGAGEMENT AND TRUST

Engagement is an employee's willingness to give discretionary effort to help reach the goals of their team or organization. Studies show that engagement can be affected by both internal psychological factors and the external environment.

Studies show that employees in high-trust organizations have higher levels of motivation, energy, and productivity than employees at low-trust organizations. High-trust organizations have employees that collaborate better, have lower turnover rates, and have less chronic stress. A study conducted in 2008 by Paul Zak demonstrated the importance of how a leader interacts with followers and how that interaction affects the brain. Leaders that expressed empathy,

openness, and vulnerability caused an immediate chemical reaction on the part of the follower. The follower's brain released the chemical Oxytocin in response to the interaction. Oxytocin is known as the "bonding" chemical. It helps people feel closer to others and increases a sense of trust.

Other studies from Zak sought to understand what kind of interactions create a sense of trust on the part of employees leading to greater oxytocin levels. These studies pinpoint the following leadership/management behaviors that can lead to greater trust in the work environment.

- **Recognition** - Recognizing someone's efforts and achievements.
- **Autonomy** - Trusting an employee to figure out how to reach work goals.
- **Transparency** - Sharing information as openly as possible with all employees.
- **Relationships** - Managers who continually build relationships with employees and express concern for the employee's well-being can significantly increase quality of work, efficiency or work, and feelings of trust.
- **Vulnerability** - Leaders who extend trust, admit their failures and ask for feedback stimulate oxytocin release, trust, and cooperation on behalf of employees.

Dr. David Rock, the author of *Your Brain at Work*, developed the SCARF model as a tool to help leaders understand and take action to address five social rewards and threats that are important to brain function and potential.

**STATUS** - A person's social need for esteem and respect.

**CERTAINTY** - A person's need to know and predict what will happen next. Familiar situations give the brain comfort, while unpredictable situations produce discomfort and anxiety.

**AUTONOMY** - A person's sense of control over events and situations, as well as the opportunity for choice. Choice is a significant component for creating a sense of control and autonomy.

**RELATEDNESS** - The level of safety and comfort we feel with other humans. We are hardwired to judge people's intentions to either harm us or help us.

**FAIRNESS** - The perception of fair exchange between people and if people are treated justly.

According to Rock, each of these social components activate one of two responses in the brain. The "primary reward" response is triggered when a person perceives an event as supportive of one of the SCARF elements. The "primary threat" response is activated in the brain when a domain is perceived to be negative, adverse, or a threat to current beliefs.

One interesting and very practical example of the primary reward versus threat is fairness in the workplace. Numerous studies reveal the sensitivity people have related to their perception of fairness. Humans are keenly aware of the interaction of the people around them and make comparisons to their interactions with others. When discrepancies are perceived, it can cause a threat response.

The SCARF model helps us understand that a person's perception of how he or she is fulfilling each component of the model is essential. When a person is fulfilling their intrinsic needs, the brain feels safe and secure, making engagement more probable. Engagement is hindered when intrinsic needs aren't met.

Trust and engagement can be impacted by how rewards and incentives are used with employees. Our brains have a reward system that has a complex pathway that runs through many areas of the brain and is regulated by the neurotransmitter dopamine. Dopamine plays a

vital role in a person's feelings of motivation, energy, and focus. While most organizational leaders rely on financial rewards, research shows that non-financial rewards are more likely to release dopamine. The most powerful rewards are those that are connected to an employee's values and have social interaction.

## ENGAGEMENT AND TRUST

### PRACTICAL APPLICATION:

- ✓ Create safety and reduce threats in the environment.
- ✓ Identify potential threats as early as possible.
- ✓ Manage threats and safety concerns.
- ✓ Demonstrate fairness.
- ✓ Implement specific actions in everyday work that will support trust to foster oxytocin release. Actions could include recognizing employees, giving them autonomy, share information openly, get to know people personally, and show vulnerability when appropriate.
- ✓ Find ways to recognize and reward people in non-monetary ways. Leaders can express appreciation, extend more trust, provide new opportunities to continue good behavior, and give time off to take care of personal or family needs.

## MANAGING CHANGE

Change isn't easy. It's not because people want to stand in the way of progress. Instead, it's how our brain processes and interprets the information it receives about the change that often hinders our flexibility and willingness to embrace a different way of doing things.

The brain's primary responsibility is to keep you alive. It is sensitive to any stimuli perceived as a threat. Your brain is "hardwired" to prioritize threats over opportunities. Therefore, people avoid loss at all costs, even if that loss may lead to an opportunity for long-term gain.

This instinct isn't as useful to us in our modern world of work. If we aren't aware of how our brain functions, it can work against us. We can easily label benign events as threats. A prime example is when a change in a work process is announced. The news can create an initial sense of uncertainty. We can perceive the situation as losing something familiar and valuable. We then experience feelings of loss or mistreatment.

When change, disruption, and ambiguity occur, the limbic system is activated, causing a "fight or flight" response. The brain engages the sympathetic nervous system and the adrenal-cortical system. The sympathetic nervous system uses nerve pathways to prepare muscles and organs for an intense physical response. Concurrently, the adrenal-cortical system uses the bloodstream to distribute approximately 30 different hormones throughout the body to prepare for the threatening situation.

The three well-known fight or flight response hormones are adrenaline, norepinephrine, and cortisol. These hormones produce survival behaviors and reduce rational thinking as they "hijack" a person's prefrontal cortex -- the area of the brain responsible for analyzing, planning, and moderating socially appropriate behaviors. Our ability to understand the body's chemical

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reactions to perceived threats helps us understand why people react in a negative way to change, ambiguity, and uncertainty.

The SCARF model can be used to assess and guide a multitude of leadership decisions and practices related to change. By merely evaluating the level of perceived threat and reward that could be experienced by employees for each of the SCARF areas, you can be more intentional about eliminating threats and create a more brain-friendly workplace.

Leaders must be keenly aware of how people will interpret a change. Approaching change from a brain-based standpoint can help a leader think through all the potential perceptions and threats that will be experienced by those it affects. The approach of, "we are changing, so get on board," doesn't help. There is evidence that this approach, which lacks empathy and respect, can do great harm. In such cases, an employee's trust in leadership is often damaged when the leader is perceived as unconcerned and disconnected.

Leaders who choose a brain-friendly approach to change will lead the process in a far better way. Using a method that supports brain health will reduce anxiety, increase flexibility, and acceptance on the part of employees.



## MANAGING CHANGE

### PRACTICAL APPLICATION:

- ✓ Help people feel safe.
- ✓ Be aware of what a “threat-response” looks like in employees and the effects it has on their willingness to trust and support leadership.
- ✓ Determine how you will manage a situation when the “threat-response” is triggered in employees.
- ✓ Plan and execute a communication plan that addresses how perceived threats can be mitigated or handled.
- ✓ Get people, at all levels, involved in the decision-making and feedback process.
- ✓ Prepare managers and supervisors to have one-on-one conversations with employees to address employee questions and concerns.
- ✓ Give all employees the opportunity to provide input and opinion.
- ✓ Provide employees with updates on the progress of the change including successes and setbacks.
- ✓ Show appreciation to employees for working together through the change.

## THINKING AND PROBLEM SOLVING

Leaders can use neuroscience to help their followers to think better and solve problems more effectively. Studies help us better understand the functional work of the brain and how, at times, functions are very different. An exciting and highly applicable finding comes from Waytz and Mason (2013), who discovered two core functions of the brain responsible for processing information and creating ideas -- the "default network" and the "control network."

The default network of the brain leads to creativity and innovation as it activates during times when a person is not focused on one thought. Waytz and Mason describe this function as the ability of our brain to "transcend" the current situation and environment. The default system allows us to daydream, use mental imagery, and see ourselves in a different place. This ability fosters imagination and new ideas.

The "control network," on the other hand, is the brain function that focuses us on the present and the current environment or immediate need at hand. Deep thought, calculations, analysis, and minding detail requires the use of our control network for analysis, abstraction, and focus.

Studies that have analyzed multi-tasking point out that multi-tasking isn't necessarily a bad thing when it's used during a time when the work is unstructured, creative, and doesn't require deep thinking or highly detailed processing. Work that requires the control network (deeper processing) can be significantly hindered by environmental distractors like email, meetings, phone calls, as well as unimportant administrative duties that cause mental distraction or anxiety.

## THINKING AND PROBLEM SOLVING

### PRACTICAL APPLICATION:

- ✓ Structure your day and calendar to use the control and default networks at the appropriate times to support work. There is a place and time for multi-tasking.
- ✓ Make room for intentional “default network” time.
- ✓ Teach people how to use their brain optimally.
- ✓ Teach people how to structure and budget their time (calendars) to allocate dedicated time for both default and control network oriented tasks.
- ✓ Create workplace boundaries or schedules that foster time for default work – collaboration and idea generations -- and time for control work -- encouraging time for focus, quiet, and minimal environmental.

## PERFORMANCE AND POTENTIAL

Neuroscience has made great strides in understanding what areas of the brain are used to perform specific tasks. This research has allowed scientists to map brain function and interaction. While important to medical research, it has excellent application for how we work, think, perform, and move toward being the best of who we can be.

The research of Boyatzis (2011) looked at fMRI scans to study brain function and the differences between manager-employee interactions. When employees were asked to recall experiences with managers who listened well, showed empathy, and asked about personal goals and dreams, fourteen regions of the employee's brains were activated. When employees were asked to recall experiences with managers who displayed controlling and demanding behaviors during the interactions, only six regions of the brain were activated. Even worse, eleven regions of the brain were deactivated.

Leaders who are using the right approach to their work can literally "light up" the brain. Positive and supportive interactions between the leader and the employee activate multiple regions of the brain leading to an increase in motivation, energy, better thinking, processing, creativity, and focus, as well as favorable hormone balances throughout the body. It is easy to understand why this state of brain activation leads to a higher level of satisfaction, engagement, and performance.

Behavior studies and neuroscience are aligned in their outcomes related to leadership style. Leaders who want to help employees create an optimal state of motivation and support high-performance must use a style that activates the brain. In doing so, leaders unleash people to do and be their best.

## PERFORMANCE AND POTENTIAL

### PRACTICAL APPLICATION:

- ✓ Build relationships with employees.
- ✓ Use a one-on-one coaching approach to management that balances driving results with care and concern for the employee.
- ✓ Use questions that get employees to think about their goals, passions, interests, and dreams.
- ✓ Look for ways to help employees to align their personal goals and interests with work tasks and outcomes.
- ✓ Eliminate threats and fear tactics.
- ✓ Facilitate employee interactions that allow them to discuss goals, ideas and possibilities.
- ✓ Allow mistakes and failures reframing them as opportunities to learn and grow.

## COGNITIVE FITNESS AND BRAIN HEALTH

The brain is the control unit of our entire body. While volumes of data have been collected on physical health and fitness, brain health has taken a backseat. Recently, however, neuroscientists have taken an interest in how we can not only care for the brain but also how we can optimize our cognitive abilities.

Recent findings have debunked popular theory about the brain. Contrary to older thinking, the brain can continue to build new neuropathways and connections far into old age. Through brain care, a person's mental capabilities in their 60's can be on par of a person in their 20's. Cognitive fitness has also been found to fight against diseases such as dementia and Alzheimer's.

Brain health begins with basic behaviors such as drinking plenty of water, eating a healthy diet, getting adequate sleep, and refraining from toxic chemicals such as recreational drugs and alcohol.

People who want cognitive fitness can exercise the brain in many ways. Gilkey and Kilts (2007) encourage people to develop both sides of the brain so they work together better. While the left side of the brain is responsible for carrying out routine tasks, identifying patterns, and discerning order, the right side of the brain is responsible for imaginative, image-based, and metaphorical duties.

Anyone can use the suggestions below. Leaders can help employees increase their cognitive fitness by integrating some of these activities into daily work, team meetings, problem-solving processes, and other collaborative activities. Increasing cognitive fitness can lead to greater mental energy and capacity impacting attitude, motivation, resilience, creativity, decision-making, and performance.

## COGNITIVE FITNESS AND BRAIN HEALTH

### PRACTICAL APPLICATION:

- ✓ Get adequate sleep.
- ✓ Drink plenty of water.
- ✓ Eat healthy.
- ✓ Manage by walking - leaders can spend time with their people walking the workplace, experiencing the work taking place, and talking to people about their work.
- ✓ Read funny books - humor promotes insights.
- ✓ Play brain games - Sudoku, crossword puzzles, role-playing games, and team-building activities among many others.
- ✓ Gain new experiences that are out of your comfort zone -- visit museums and exhibits.
- ✓ Try new technologies.
- ✓ Learn a language or an instrument.
- ✓ Exercise your body.

## CONCLUSION

The field of neuroscience will continue to progress. Methods such as “hyperscanning” and “brain genomics” are beginning to produce applicable insights for the workplace.

Hyperscanning methods will allow scientists to study the brains of two people interacting. The findings will provide exceptional data and application for how humans interact with each other and how we can better support or hinder one another’s performance and capacity.

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The field of “brain genomics” is actively investigating genetics and brain function to better understand predisposition traits such as intelligence and impulsivity. Advanced studies like this will help us determine what human characteristics are more flexible and those that are more rigid. It will also help us learn about the traits that can be more easily learned or altered, like social skills, decision-making, and cognitive control.

Neuroscience is an exciting and growing discipline. Much has already been learned, however so much more is yet to be discovered. If you are a leader who wants to grow and increase your effectiveness, you will want to keep current on the findings and applications of neuroscience. The more we learn about the brain, the more we are able to enhance our leadership, help others, work effectively, and improve our lives.

#### **ABOUT THE AUTHOR:**

*Dr. Jason Jones is a Workplace Psychologist, International Keynote Speaker, and Leadership Consultant. He is a noted expert on human motivation, employee performance, and workplace engagement and culture. He is the author of the book "[28 Days to a Motivated Team](#)."*

*Through his keynote presentations, training workshops, and coach, Jason teaches leaders how to activate the natural motivation and potential of the people they lead. Utilizing the latest in neuroscience research and gleaned from more than 100 years of motivation theory, he curates it all into interesting and practical presentations that are engaging, informative, and entertaining.*

*Dr. Jones' client list includes recognized brands including American Airlines, AT&T, Ericsson, McKesson, Sonoco, Seagate Technology, CytoVance Biologics, and the U.S. Postal Service to name just a few.*

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