

# **A New Neuroscience of Leadership:** *Bringing Out More of the Best in People*

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***We know that leaders at all levels of an organization need vision, strategic focus, and a bias toward action. But to shine in today's complex and changing world, leaders also need new insights and skills that upend conventional thinking about human potential, trust, energy, initiative, and commitment.***

**C**enturies ago, when hardly anything was known of neuroscience, the mysteries of the brain and the heart's internal workings enthralled most people. It seemed amazing, an outright miracle, this lively ability to sense, think, feel, imagine, and take action. And great leaders some-how knew, at a gut level, they had to mobilize those qualities in themselves and others.

As scientific investigations began, a handful of business thinkers and leaders were using newly discovered fundamentals of neuroscience to help them build enduring organizations. However, most managers and supervisors found it easier to erect walls of distance, calculation, committees, and paperwork between the people who did jobs and the need to understand how these same people, under the right circumstances, could be inspired to contribute far more of their discretionary – and largely untapped – capacity to learn, invent, deliver results, and grow.

In the Industrial Age and through the early decades of the Knowledge Age, management assumed it was getting the job done despite this dehumanization. But no longer. Today, the growth of technology and pace of life have joined to make many people – perhaps most people – feel increasingly invisible and devalued through much of every workday. In many organizations, people are holding on by their fingertips while hearing

bosses calling for more commitment, innovation, and effort. It won't happen unless we change what we're doing and how we're doing it. The latest wave of discoveries in neuroscience and data on successful management hold some of the keys for accomplishing that.

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### **Use Your Brains: All Three of Them**

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"The brain is a wonderful thing," wrote the poet Robert Frost. "It starts working the moment you get up in the morning and does not stop until you get to work." He was more right than he knew.

The dinosaurs of the future will be those who keep trying to live and work from their heads alone. Human brilliance, commitment, and creativity may be driven far less by the brain in the head than by newly discovered intelligence centers – now called "brain two and brain three" – in the gut and in the heart. We each have our own personality and peculiarities, but in some way every one of us is has distinctive intelligence and even genius.

The highest reasoning involves all three brains working together. Calling on all three brains, you can ask better questions sooner and make better, clearer choices. Up to 96 percent of success in life and work depends on the brains in the gut and heart, not just the head.

The old view of how "brain one" – the brain in your head – influenced human behavior can be summed up this way: Whenever you have a direct experience – such as interacting with a person or facing a challenge, problem, or opportunity - It comes to you through the five primary senses and enters the nervous system. In this traditional model, each experience goes right to the

brain and you think about it, responding with behavior. Everything happens in your head.

Reality, as we will see in a moment, is nothing like that. In fact, whenever too much brain activity is drawn off into thinking and remembering, not enough neural activation is left for feeling and experiencing the scope and depth of what's new right now. As a result, performance that could be ingenious and practical becomes clumsy and irrelevant.

There are times when reliance on the thinking brain is not only insignificant to the acquisition and expression of caring or expertise; it actually seriously interferes.

We now know that intelligence is distributed throughout the body. Whenever you have a direct experience it does not go directly to the brain to be thought about. The first place it goes is to the neurological networks of the intestinal tract and heart.

**The Brain in the Gut.** Every contact point with life creates a gut feeling: you may notice it as "butterflies in your stomach" or a "knot" of intestinal tension or excitement. Or, depending on how intensely you have been trained to always stay in your head alone, you may not notice it at all.

But it is there. And it is asking a lot of questions, whether you know it or not. Not just asking them – answering them, too, in ways that will affect your actions. How important is this meeting or this challenge or this person? Is there an opportunity here? Is there a threat? Is my happiness or advancement at risk?

Known as the enteric nervous system, this "second brain" inside the intestines is independent of but also interconnected with the brain in the cranium. Scientists who study the elaborate systems of nerve cells and neurochemicals found in the intestinal tract now tell us that there are more neurons in the intestinal tract than in the entire spinal column. About 100 million of them. That complex circuitry that enables it to act independently, learn, remember, and influence our perceptions and behaviors.

Whether or not you acknowledge your "gut reactions," they are shaping everything you

do, just as they shape everything that everyone around you does, all the time.

**The Brain in the Heart.** After each experience has been digested by the enteric nervous system, it's the heart's turn to ponder it. In the 1990s, scientists in the emerging field of neurocardiology discovered the true brain in the heart, which acts independently of the head. Comprised of a distinctive set of more than 40,000 nerve cells called baroreceptors, along with a complex network of neurotransmitters, proteins, and support cells, this heart brain is as large as many key areas of the brain in your head. It has powerful, highly sophisticated computational abilities. Just as the brain in the gut uses its neural circuitry to act independently, learn, remember, and respond to life, so does the brain in the heart.

In the fetus, the human heart develops before the nervous system and thinking brain have developed. The electrical energy in every heartbeat, and the information contained therein, is pulsed to every cell of the body.

With every beat of the heart there is another form of instantaneous whole-body communication – a wave that travels through the arteries many times faster than the actual flow of blood. This creates another language of interior communication as pressure wave patterns vary with each intricate, rhythmic pattern of the heart. Each of your trillions of cells feels this pressure wave and is dependent on it in a number of ways.

Still another route the heart uses to communicate is through messenger chemicals in the hormonal system. One such chemical in the heart is atrial peptide, a primary driver of motivated behavior.

The sages of history were right: If we don't feel our values and goals, we can't live them. The heart plays a dominant role in moving us to excel.

And there's more: the heart's electromagnetic field is by far the most powerful produced by the body. The electrical changes in feelings transmitted by the human

heart can be felt and measured at least five feet away and even ten feet away or more.

Just as your gut processes far more than your food, your heart circulates far more than your blood. Every single heartbeat speaks an intelligent language to your whole body, a language that deeply influences how you perceive your world and how you react to it.

It's no wonder that when people don't feel cared about and uniquely valued, they do not put their hearts into their life or work. After an extensive three-year study of the critical variables for leadership success, the prestigious Center for Creative Leadership recently concluded that the only statistically significant factor differentiating the very best leaders from the mediocre ones is caring.

**The Brain in the Head.** Third stop for nerve impulses is an area at the base of the brain known as the medulla. Several key things happen there. Inside the medulla is a vital link to what is known as the reticular activating system, or RAS. The RAS connects with major nerves in the spinal column and brain. It sorts the 100 million impulses that assail the brain each second, deflecting the trivial, letting the vital through to alert the mind.

This part of the brain has evolved over millennia with an inherent tendency to magnify negative incoming messages and minimize positive ones. Although human beings today live in a technology-driven world of galactic voyages and virtual realities, we still face everyday life with deeply embedded traits of Stone Age hunter-gatherers.

Eons ago, amid almost constant life-threatening dangers, it doubtless served the human species well to amplify negative messages. In today's world that ingrained reaction tends to complicate things. A few well-intended words of criticism – not a life-threatening communiqué, to be sure – are nonetheless amplified by the RAS into a simple message: Danger! Danger! We bristle up and get anxious and defensive. Conversely, a genuine compliment is usually deflated by the RAS to not much more than a whisper. Which is why, at the end of a

typical workday when a hundred things have gone quite well and one has gone slightly wrong, nearly all of us become preoccupied with the one thing that went slightly wrong. That's the hard-wired instinct of the RAS, and if we don't learn to guide and manage its influence, it can dominate our perceptions and paralyze progress.

Given the choice, the RAS always interprets things negatively. "Better safe than sorry" are the words it lives by. So, for example, when a manager or a team member behaves ambiguously – sending vague or mixed messages, avoiding people, or appearing to pursue a hidden agenda – the RAS almost invariably conveys this to the higher brain centers as a threat – to our status, role, reputation, integrity, or relationship. If I have no clear understanding of where you or others stand on an issue or challenge, or what is rumor or fact – "There may be a few more people laid off for cost-cutting reasons, but don't worry," says the boss – the natural tendency in my nervous system is to assume the worst. As a result, there is mistrust, second-guessing, gossip, and cynicism...Withholding...No stretching to learn or grow...Avoidance of initiative...Waiting and watching...All the killers of human genius and effectiveness. And the irony is that the more we hear exhortations to change those behaviors, the louder the RAS shouts its message: Danger! Danger!

In contrast, consider what happens when we take into account – and make an effort to actively manage – the RAS response. Let's assume this is a particularly challenging day. Work is piling up around you, dozens of things have been going awry, you feel a headache coming on. (Or maybe this is an all-too-typical day!) Your boss walks up to you. You look at her a bit anxiously, wondering to yourself, "Uh oh, what now?" Your gut is wondering that same thing, and – whether you're aware of it or not – those butterflies are holding a convention. Your heart has started sending some very distressing Morse Code to your cells. Dot dot dot; dash dash dash; dot dot dot. SOS.

Then your boss says, "I'm just stopping by to tell you that the effort you made last week to change the focus of the engineering and marketing teams was right on target. While

everyone else was getting defensive and arguing, you were the one who spoke up on behalf of the team member who raised a tough question and came up with a new idea."

"I know both of you got blasted," she continues, "but you handled the heat well and stretched everyone's thinking. I came in late to the meeting and talked with some of the managers after the meeting. I can tell you that you've already saved us a bunch of problems down the line and won the gratitude of the new team member, who has some other good ideas to give us. The whole unit has a better focus and is making some solid progress this week. You are a real asset around here. Thank you."

Imagine how you would feel. Despite the rough day up to the point when your boss appeared, and despite the usual power of the RAS to muffle most positive comments, what would be the impact of such a genuine, specific message? In this case, whether by plan or chance, someone – In this example a boss or supervisor, but it could just as well have been a family member, friend, colleague, client, customer, supplier, or employee – Interacted with you about some specific idea you raised or action you had taken. On the commute home, my guess is that although you might still dwell on some of the negatives of the day you would remember, perhaps most of all, the genuine, specific message that you received from this other human being. And your whole body would feel much more at ease.

Leaving the RAS, in split seconds the neural communication travels to the limbic system, where we perceive the world and shape our response to it. The limbic system is also the seat of emotions in the brain. There is evidence that the limbic system functions 80,000 times faster than the thinking brain's cerebral cortex.

At last the neural cascade of impressions from your current experience reaches the thinking area of the brain known as the cerebral cortex. Prior to this, each experience has been sensed and interpreted by the gut, heart, and other brain regions. In other words, we think last, not first and foremost.

Whenever you over-rely on the brain in the head, needless extra struggles appear. One reason is that whenever it operates without being balanced by the brains in the gut and heart, the intellect exists primarily as an act of convenience. It can conjure up all kinds of ideologies, philosophies, theories, admonitions, principles, and beliefs, but even if these are eloquent and well-intentioned, they don't amount to much by themselves. We have to feel what matters in order to live or lead in ways that matter.

It turns out that the oft-heard call to "keep emotions out of it" ends up being a sure track to poor decision-making. Yes, of course we must think – as clearly and insightfully as we can. Yet without the active involvement of the brains in the gut and the heart, if you try to think your way to a decision or solution, within moments the brain in the head bogs down in analysis paralysis.

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**If You Set Aside Your Title and Authority,  
Who Would Want to Work With You or  
Follow Your Lead?**

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Human greatness cannot be bought or controlled. It can only be invited. By example and through genuine inspiration and compelling influence, exceptional leaders help ordinary people accomplish extraordinary results. To do this, they must develop and apply an energizing, authentic level of intelligence and bring it to everything they do, combining the perceptions and impressions of the gut, heart, and mind. Here are several practical places to start:

**Keep tapping all of your sources of wisdom and insight, not just one.** Each time you face an important moment during the day, ask, What does my gut say about this? My heart? My head? Then listen more clearly to each of those three streams of intelligence as you decide how to act or interact. With practice, this will not slow your ability to make on-the-spot decisions; rather, it will deepen and improve such decisions. Many of us have learned to ignore the butterflies in the gut and feelings in the heart because doing so makes it easier to just charge ahead with the head, bulldozing right past potentially superior choices that take

into account your collective intuitive intelligence.

**Make sure your words are consistent with what you feel inside.** From up to ten feet away, and sometimes from halfway around the world via telephone, others can sense what you are feeling. Yet, according to popular thinking, it's smart to downplay the difficult stretches of life or work by trying to put a good face on things, pretending that you have an answer or everything's just fine. Similarly, there are those who would have you believe it's also wise to downplay the highs, by projecting that you're "doing OK" when you're actually extremely excited or doing great. In both cases, conventional wisdom is wrong. When people hear something that seems to be at odds with what the speaker is really feeling, nearly everyone instantly bets on the feelings, not the words. When you say, "Things are fine, don't worry. I have it all figured out and under control," there are two likely reactions by others. First, you're being dishonest: their heart and gut can sense that you don't have everything figured out or under control (who does?). Second, they tend to assume things may be even worse than they actually are. They tell others, "He/she said things are fine here, but they're not; we're in trouble." Rumors and gossip get amplified and spread. Then people may mock your façade and withhold their help, thinking, "If you're so smart and have such a good plan, go ahead and impress me with it." They watch and wait, never trusting you. In essence, you've lost twice: you're not believed and no help is offered. To say, "Things are fine here" when you're in turmoil inside doesn't fool anyone. That kind of "happy talk" theatrics undermines collaboration and stifles growth.

On the other hand, if the words you say are aligned with what you feel inside, there is often a very different outcome. By the way, I'm not advocating ruthless, tactless honesty here. Expressing a truthful sense of uncertainty or stress or inner turmoil is one thing. However, cruel or hurtful feelings are often best left unsaid, or at least modified in a constructive way. And sometimes when we feel really upset, it's more a factor of tension or tiredness than it is about the other person. If you're really upset about something or distracted by a sudden setback or dilemma,

there are times when the best thing to do may be not to talk to anyone at first. Instead, go off to regain your bearings. Then talk to others.

When faced with a new dilemma, you might say, "I know you might think because I am in a leadership position that I should have this all figured out. The truth is, with this latest challenge, I don't. It will probably take every bit of ingenuity from each of us to be successful here." Watch what happens next. Instead of pulling away, many people will step forward, offering their own initiative and commitment. "You can count on me to help with this. It won't be easy but I have ideas. We can do this together."

**Recognize others for each effort genuinely, specifically, and individually.** It was Mark Twain who said, "I can live for a month on a good compliment." Research shows that performance is higher when people are given frequent, sincere encouragement. According to long-term studies involving more than 250,000 Americans, seventy percent of people quit their bosses, not their jobs. Many of us have come to tolerate the absence of respect and to expect poor recognition or none at all, every time we make an effort or contribution. Without it, however, no one will give their best, at least not for long.

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**Before giving recognition, here are some important things to consider:**

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Personalize your comments. Be specific. "Here's why I believe in you..." When people listen to comments from another person, they weigh how well this person knows who they really are and what they're capable of. Consequently, whenever you value or recognize another person, make it as individualized and specific as you can. Don't make assumptions. Ask and observe. Margaret Mead once said, "Always remember you are absolutely unique. Just like everyone else."

Individualize your remarks for members of a group. Whenever you thank more than one person, single out each individual. Most people give praise to the whole group. Yet no matter how sincere they may be, they

inadvertently make every one of these individuals feel devalued and invisible. Take an example of ten people who contributed time and energy over several weekends to finish something that mattered. Conventional wisdom says thank them sincerely. The problem is, each individual knows that he or she contributed something that the other nine did not. And you missed it. Watch how much less initiative and commitment they give the next time you ask them to do something extra.

Before thanking a group, learn at least one specific contribution that each individual has made to the project's success. Assemble and thank the entire team. Then say, for example, "We couldn't have accomplished this without each of you. I wasn't there for the entire effort but I have learned at least one specific thing that each of you contributed to make this project a breakthrough." And then, one by one, you mention something specific and distinctive about the contribution of each individual. Watch people's eyes. It's amazing the difference this can make.

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**"It's the small choices that bear us irresistibly toward our destiny"**

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To develop and apply an exceptional level of intelligence in life and work, we must combine the perceptions and impressions of the human gut, heart, and mind. If we operate with old mindsets, assuming that the old "facts" about human motivation and work relationships are still correct, then we are wasting large amounts of energy, time, and money – and falling far short of the results we could achieve.

William James, a pioneer in philosophy and psychology, said, "All of life is but a mass of small choices – practical, emotional and intellectual – systematically organized for our greatness or grief." When asked if these choices could be altered, he replied, "Yes, one at a time. But we must never forget that it's not only our big dreams that shape reality. Whether changed or ignored, it's the small choices that bear us irresistibly toward our destiny."

What small, practical choices can you put into action today to begin bringing out more of the best in yourself and others?

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*Dr. Robert Cooper has been called a "national treasure" by Stanford Business School Professor Michael Ray and named "the ultimate business guru for the new millennium" by USA Today. An acclaimed educator on how exceptional leaders and teams liberate untapped human capacities and excel under pressure, Dr. Cooper is also recognized for his pioneering work on the practical application of emotional intelligence and the neuroscience of trust, initiative, and leadership. A former U.S. Marine and All-American swimmer, his articles have been published in Strategy & Leadership Journal. His books — including "Executive EQ: Emotional Intelligence in Leadership & Organizations", "The Performance Edge" and "The Other 90%: How to Unlock Your Vast Untapped Potential for Leadership and Life" — have been on the Wall Street Journal and Business Week bestseller lists and have sold more than four million copies. In a recent survey of managers and professionals from more than 90 organizations, his work was compared to twenty widely recognized leadership authorities. Dr. Cooper rated highest on every scale, including inherent value, usefulness, applicability, delivery, and overall results.*