THE NEUROSCIENCE OF TALENT MANAGEMENT
PAGEUP WHITE PAPER
Insights into Unleashing Workplace Potential
CONTENTS

The Neuroscience of Talent Management
Insights into unleashing workplace potential

Three insights that are changing our world
1. Neuroplasticity
2. The Social brain
3. Balancing threat and reward

SCARF model and the neuroscience of talent management
The Neuroscience of Talent Management

Insights into unleashing workplace potential

Progress is constant, and every now and then, it leapfrogs. When it does, everything changes. On July 3rd, 1977 in a small laboratory in Brooklyn, New York, Dr Raymond Damadian conducted the first MRI scan in a machine he and his team had invented. He could see the living brain at work, without radiation or toxic chemicals. Modern neuroscience was born.

Today, neuroscience is providing powerful insights into cognitive and behavioural processes, how the mind and body interrelate, and is changing the way we think about thinking. This is now being extended to draw implications for how we tap into and nurture workplace talent. There’s a new game in town, and even though we’re only just learning the rules, leaders that adopt the new science will quickly benefit from these new insights into what really drives employee motivation, satisfaction and performance.

PageUp supports and promotes thought leadership in the sciences supporting talent management.

What is neuroscience?

The study of brain functioning, from its basic unit, the single neuron, to the complex neural networks or maps that represent every concept, thought and action we initiate and experience. The explosion of knowledge in this field can be largely attributed to very recent scientific and technological advances, particularly functional magnetic resonance imaging, or fMRI, which allows researchers to literally watch the brain in action. What is physically happening in the brain when you taste a strawberry, add a formula to a spreadsheet, visualise yourself on your next holiday, or step up to a podium to give a presentation? fMRI can see it all – which brain regions are activated, how the connections are made and how new memories are formed. By 1982 there were still only a handful of MRI scanners, and all in the U.S.A. Today there are thousands around the world and their uses have gone far beyond clinical applications.

Why will neuroscience impact talent management?

How we organise ourselves, generate creative thoughts, process complex concepts, regulate our stress reactions, interact with others, learn and develop – are all the subject of neuroscience. Which of these activities would you like to tackle without your brain?

Neuroscience is new to talent management not because it was not previously relevant. It is only now that this science is being interpreted for organisational contexts rather than purely clinical ones. With the brain at the centre of everything we do, it offers a new way to understand how people approach work and respond to everyday workplace situations. The team meeting where no-one contributes, the buzz of winning a big sale, the colleague you always avoid and that customer you can’t seem to please, are all familiar experiences that can be explained by brain science, and therefore managed more effectively.
For more than the last half century, organisational psychology and practices have been dominated by behaviourism: only what is observed in actual behaviour has been validated. Behavioural approaches focus on what people are doing, and how they do it. The problem is, behaviourism doesn’t always work. Neuroscience brings back the balance of cognition: why are people doing what they are doing, and can it be made more effective?

So why would we want to know more about the brain?

For individuals, it helps answer questions like:

• Why can’t I think clearly when I am in a job interview, but remember the perfect answers immediately afterwards?
• Why do I crave feedback, but loathe the idea of a performance review?
• Why am I exhausted after a full day of training, and can’t remember the bulk of the material?
• Why do I feel anxious when I am called in to discuss my future, even though I know I am a high performer?

For talent managers and leaders, it helps address:

• Why are change initiatives met with such scepticism, when they are designed to improve things?
• Why is it so challenging to motivate and engage employees?
• What are high potentials really looking for?

We can learn a lot from the brain about why we are who we are.

Talent managers can learn a lot from the brain about how to design and implement initiatives and programs for maximum effect, recall and learning.

Leaders can learn a lot from the brain about tapping intrinsic motivation and releasing employee potential.

Why wouldn’t we want to know more about the brain?

The Prefrontal Cortex

- Highest evolved part of the brain
- Executive function; analytical problem solving; short term working memory
- Easily overwhelmed, limited capacity

The human prefrontal cortex differentiates us from all other mammals: the seat of complex cognition, abstract thinking, planning and future forecasting, and behavioural inhibition.

Using our prefrontal cortex is a significant energy drain on the body, so despite its impressive capabilities, it’s daily capacity is limited. Some researches estimate a mere 2-3 hours per day of activity depletes the prefrontal cortex.

The prefrontal cortex modulates our limbic instincts and allows us to respond mindfully to emotionally charged situations – to a degree.

The problem is behaviourism doesn’t always work.
Three insights that are changing our world

1. Neuroplasticity
   The brain is a dynamic, growing organ that continues to regenerate cells and changes throughout our lives.

2. The social brain
   We are hardwired for social connectivity and this need is as basic as food and water for our survival.

3. Balancing threat and reward
   Our brains detect the threat and reward content of every experience we encounter, mostly subconsciously, and we behave in accordance with its assessment.

The Limbic System

- Automated, subconscious functioning
- Survival instincts
- Super powerful, immense capacity, long term memory storage

The limbic system comprises numerous structures, including the amygdala (emotions), hippocampus (memory) and basal ganglia (automated actions).

The limbic system operates subconsciously, mostly to pre-recorded hardwired programs that allow us to complete thousands of activities each day without much conscious thought. As such, this vast system is energy efficient, reliable and has almost limitless capacity.

When we are tired, stressed, or influenced by alcohol, the limbic system will take control and prefrontal functions shut down.
1. Neuroplasticity

For the last century, the accepted paradigm has been that the brain grows from birth until late adolescence – and then it pretty much stops, before commencing its steady decline. That was until the 1980’s when groundbreaking experiments showed that the brain not only continues to change, but actually regenerates and grows – throughout our entire lives. You can, in fact, teach an old dog new tricks – it just has to want to learn them.

This finding initially had major implications for the treatment of patients with brain damage. Strokes or accidental injuries destroy vast tracts of neurons and result in serious physical and/or mental impairment. Historically, treatment assumed there was no way to restore or replace these functions, and rehabilitation worked around the problem rather than with it. The discovery that the brain not only generates new cells, but can massively redistribute existing networks, overturned conventional wisdom and changed the focus of treatment.

In the workplace context, neuroplasticity has profound implications for learning and adaptability. The brain is in fact predisposed to change and grow; the challenge then, is not whether people can change or grow, rather whether the conditions within which they do so are conducive or discouraging.

Talent Management & Neuroplasticity

The brain’s plasticity shows that we have the hardware for learning and change. The brain forms new cells and new connections when we are stimulated by novel information, engage in an activity, or undertake physical exercise. Neuroplasticity has profound implications for

- learning & development initiatives and approaches
- change management interventions and programs

Watch this space for:

- more diverse, stimulating and holistic leadership programs
- change led from the inside out

Culture

The concept of “the learning organisation” is about into creating the workplace environments that facilitate, encourage and reward learning. In the absence of these conditions, learning occurs in isolated pockets and individuals, and fails to be leveraged.

Leadership

Tapping potential is, by definition, seeing others for what they can grow to be, rather than what they are. Mindful leaders encourage and support learning in their teams and provide stretch and challenge to create new brain circuitry.

Engagement

Personal growth and learning are among the most engaging elements of work and are key motivators for many employees. Strengthening commitment through learning opportunities is a powerful engagement strategy.
2. The Social Brain

Consider the following two scenarios:

You trip and fall hard on your elbow, grazing the skin raw as you skid across the footpath. First shock, then pain receptors start shooting unmistakeable messages to your brain. Your skin is burning and bloody, the bone bruised and swelling, your heart is racing, you’re breathing hard, almost nauseas. It’s the normal response to acute physical pain.

You arrive at a work function, keen to liaise with senior executives and edge closer to that C level promotion. You wander up to the CEO who is in a friendly conversation with one of your colleagues. Their conversation stops on your approach, you sense their discomfort at your arrival and within moments the CEO excuses himself and moves off to another group, barely making eye contact with you.

Recent research shows that the stinging social pain you experienced in the latter scenario is the same as the physical pain you felt on your fall in the former scenario. In the brain, the same pain regions are activated – pain is pain. So much so, that in studies comparing physical and social pain, pain inhibitors such as Aspirin were shown to have the same easing effect on social pain as physical pain.

What does it mean? When we threaten a colleague’s social standing or social self perception, we inflict pain that, to the brain, feels the same as a painful physical encounter. Ouch!

But there’s more. In 1992, Italian neuroscientists working with monkeys discovered mirror neurons. They noticed that the same neurons were firing in a monkey’s brain when it observed a researcher eating a banana, as when the monkey was eating the banana itself. So they called these mirror neurons, because they mirror the actions of someone else by re-enacting them as though you were doing them - like you were the mirror. This fascinated researchers because of its implications for understanding how we relate and empathise with others, and how we communicate.

This finding shows that our need to understand, connect and engage with others is hard-wired into our makeup - we couldn’t switch it off if we tried. We reflect it in facial gestures: a smile begets a smile, a frown begets a frown. We mirror others’ posture, usually subconsciously, and this builds stronger empathy.

In talent management, our social brain explains a lot about how we interact and the fundamental importance of these interactions for our ability to generate and process thought, interpret non-verbal signals and empathise with others.
Organisational initiatives that promote and reinforce our primary need for social connection and engagement are the place to look to increase performance and productivity. Already being introduced into workplaces are:

- interactive work spaces, adding colour, light and communal areas
- family friendly work arrangements
- community initiatives that allow employees to make a social contribution

Watch this space for:

- social networking tools becoming mainstream to workplace communications
- technology interfaces that look and feel engaging
- employers taking a social rather than corporate approach to initiatives

The social brain connects with the community created by your organisational culture. The values, norms and behaviours that underpin this culture will create the environment that either draws or repels talent. Does your culture attract the type of talent you want?

A pride of lions, a pack of wolves, a tribe of humans – each has a leader and a hierarchy. The tribe looks to its leader for acceptable social standards and rewards. The leader’s style and approach strongly influences the social environment. Do your leaders’ behaviours send the right messages?

Social connections are a primary motivator to work. People connect with people. Strengthening social connections at work creates a sense of belonging, a network of relationships. Engagement is the end result of strong workplace connections.
3. Balancing Threat and Reward

We can thank evolution for equipping us with the best possible adaptive brain circuitry to ensure our survival. We have very sophisticated neural systems designed to identify any threat to our existence, and respond to it instinctively with the well known fight-flight-freeze responses\(^1\). Very good for keeping you alive in the jungle, and also very useful for sensing danger without even being consciously aware of it. It’s why thriller movies work so well at marshalling our innate abilities to sense and respond to dangerous situations. Modern dangers can take more abstract forms, and as we have already seen, may take the shape of psychological interactions with our work colleagues, rather than threats to our physical safety. This ability to very quickly sense and assess danger is one of the primary drivers, and skills, of our brain.

The other is seeking reward. In the absence of any threat of danger, we search for ways to increase rewards. Rewards to the brain are anything that improves our situation, either physically or mentally. Food, water and sex are good ways to tap into physical reward: a bar of Belgian chocolate, iced water after a long run or a passionate kiss will each give you a nice burst of the neurotransmitter dopamine, which is your brain’s way of saying, that’s good, more of that please.

Psychological rewards work in a similar way: a smile from someone important, receiving praise or thanks, your own satisfaction with a task well done, all trigger dopamine release, and you get that warm satisfied feeling.

Both threat and reward are primary motivators: we avoid threats and we approach rewards. This becomes a fundamental premise in understanding what is driving behavior in the workplace. Importantly, the science behind these factors is showing us how we can use them to become better managers, better leaders, better human beings.
Talent Management, Threat & Reward
Throughout the employee lifecycle there are situations and opportunities that challenge the threat/reward balance. Consider the inherent threats and rewards that exist when:
• you attend an interview for a job you desperately want
• you are nominated to attend a global high potential program
• your manager says, “I’d like to give you some feedback”
• you are promoted to an executive management role
Watch this space for:
• organisations that will bring neuroscience principles into their OD functions
• workplace cultures that promote rewarding behaviours and environments
• leaders that get the people equation

Culture
What words would you use to describe your organisation’s culture? Is it fun, supportive, humanistic or performance driven, sink or swim, competitive? Which aspects of your culture are threatening and which offer reward?

Leadership
Leaders are in a crucial position for managing the threat/reward balance in their teams and across the organisation. Employees are highly sensitised to threat and reward signals that emanate from their leaders: what signals are your leaders sending?

Engagement
The neuroscience of engagement clearly points to heightened reward states. In this state, employees are more open-minded and creative. The threat state predisposes employees to limbic driven thinking, which is reactive and protective.
Status is our place in the social pecking order, relative to others. Our brains constantly monitor our status and send signals of threat or reward based on their assessment of changes in our ranking. Much of this happens subconsciously. Our status is easily threatened: any time we feel belittled or subordinated by the words or actions of another, we experience a drop in status – we literally feel smaller and less worthy. Status is also quite easy to build. We experience an increase in status when we are acknowledged for our efforts, recognised for our expertise, or compared favourably with others.

Throughout the employee lifecycle, we are exposed to status threats and rewards. Some examples include:

**Status threats** & **Status rewards**

- being sidelined, demoted or retrenched & being the successful candidate for a role
- changes in organisational structure or roles & getting a sought-after promotion
- public humiliation & receiving public recognition
- needing to learn new systems or processes that make you feel less competent & being called on for subject matter expertise

A change in status, positive or negative, will immediately get noticed by the brain. If a threat is perceived, the stress hormones cortisol and adrenalin are released, and the resulting behaviour may include:

- avoidance or withdrawal
- passive aggression
- active aggression
- cynicism, negativity or sarcasm

**Reflections on Status:**

- When was your personal or professional status last challenged at work? How did you react and manage yourself through the situation?
- When did you last threaten the status of one of your peers or direct reports? What words did you use to create this effect?
Certainty is our way of maintaining control of our lives and our environments. Every new source of information is immediately compared in the brain to all known stored data maps. We use these existing maps to evaluate and interpret new information, and the brain likes familiarity. Uncertainty invokes the limbic system, and predisposes us to evaluate the inherent or perceived threat in every situation. The brain has been described as a prediction machine, and searches for familiar patterns and known associations, in order that we feel comfortable and in control of new information. If no such certainty exists, the default position will be to assess the scenario as a threat: to shoot first and ask questions later.

Have you ever tried to introduce a major change initiative in an organisation? Did you find that you mobilised significant fear and resistance? Looking at change through neuroscience eyes, this is perfectly natural and what’s more, perfectly predictable.

## Certainty threats
- change in any form
- shifting goal posts, priorities, focus
- mixed messages
- negative future expectations (e.g. downsizing, restructures, business stability)
- new technologies or processes

## Certainty rewards
- reassurance
- positive future expectations
- open communication
- balancing the unknown with familiarity
- change in bite-sized chunks

**Reflections on Certainty:**

- If you are introducing change, you will, by definition, threaten certainty: how can you counterbalance its effect?
- Why is it always easier to be the initiator of change, rather than on the receiving end of it: what can this tell you about increasing uptake?

---

**CASE STUDY**

**Amazon**

“Work hard. Have fun. Make history.” You’re invited to a career at Amazon. It claims to be “earth’s most customer-centric company” but you’re on notice: they have a high hiring bar, a bias for action and value frugality. Amongst the usual array of benefits and career development programs, web developers have the opportunity to become a Master of a Code Ninja – just crack the code, become a Master and photograph your Code Ninja in exotic locations around the world. Smart ways to engage talent and build long term connections.
Autonomy

Autonomy is all about choice: the more choice, the more autonomy. The brain likes control and stability: it likes to be in the driver’s seat. Reducing autonomy heightens stress, and this has been found in many experiments. For example, in the clinical world, pain management has provided evidence that the perception of pain decreases significantly if the subject has some control over it. In pain management clinics, medical staff have found that patients require less pain medication if they self administer the dose, than if it is administered by nurses. Organisations are making significant shifts to increase autonomy, seeing the results of higher levels of buy-in and accountability. Taking ownership for a decision, even a difficult decision, significantly decreases the perceived threat and increases the perception of control. Sometimes referred to as empowerment, autonomy is an essential component of overall well-being, it creates a sense of freedom.

Examples in the workplace include:

**Autonomy threats**
- being told what to do and how to do it
- being over-ruled on decisions
- having your authority undermined

**Autonomy rewards**
- delegated decision making
- providing options
- seeking, and acting on, feedback

CASE STUDY

Walt Disney

For more than eight decades, the name Walt Disney has been preeminent in the field of family entertainment, and it is still one of the world’s most sought after employers. What makes Walt Disney such a great place to work – beyond the obvious – it’s fun! Well there’s the values, like optimism, story-telling, community and decency. Then there’s the perks, like sponsored education and leadership training, free theme park passports, scholarships and child care services. Or tapping into a wide variety of community programs and voluntEAring. Walt Disney knows how to connect with people. Whether they are 5 year olds enchanted by the theme park sets or 55 year olds looking to make a difference: Walt Disney creates environments that make us smile.

Reflections on Autonomy:

- Compare an initiative you instigated with another that was forced on you. With what mindset do you approach each scenario?
- What is your inner voice saying when you have limited or no autonomy: how critical, unconvinced or challenging do you become?
Relatedness refers to how well we connect to each other, or don’t. We have evolved as highly social animals and our intuitive skills for assessing others are quite impressive. Without any analysis or evidence whatsoever, we instinctively determine, within seconds of meeting someone new, whether we like them or dislike them, trust them or distrust them, consider them friend or foe. With that hard work complete, we then selectively gather information with our conscious minds in support of our initial assessment, and respond to the newcomer accordingly. Our assessment colours everything we see, hear and feel about that person. Studies have shown that those whom we assess in the negative literally cause us to disconnect: we do not empathise with them, we do not feel their pain, we don’t even engage the same brain structures to hear them. And of course, because of our hardwired threat default mode, new people are always first assessed as a potential threat – guilty until proven innocent, even if that does occur in a fraction of a second.

The social structures in your organisation play an integral role in whether you can achieve high levels of relatedness and connection.

### Relatedness threats
- your values at odds with the organisational culture
- highly political environments
- dysfunctional team behaviours
- individual isolation

### Certainty rewards
- positive, constructive workplace relationships
- practices that encourage interpersonal connections
- team play, social time-out
- management empathy & understanding

---

**CASE STUDY**

**Southwest Airlines**

Ranked #12 on FORTUNE Magazine’s 2010 list of the World’s Most Admired Companies, Southwest airlines is doing something right. With 3,300 flights per day and 35,000 employees, Southwest Airlines has made a name for itself in the cluttered U.S. airline industry – with a definitive focus on its people. Committed to the ongoing personal and professional development of its people, SouthWest Airlines established its University for People for “intentional learners” as one of its many people initiatives. As for corporate sustainability, Southwest Airlines highlights its triple bottom line: our Performance, our People, our Planet to report to shareholders and the market. And of course, they LUV their customers!

---

**Reflections on Relatedness:**

- Are you aiming to increase employee engagement? How can you facilitate the connections between individuals and teams?
- Do your employees relate to each other, their teams, management, the organisation?
**Try this**

**Using SCARF to assess organisational culture**

Conduct a quick assessment of your own organisation’s culture based on the SCARF NeuroLeadership domains. From neutral, at zero, to plus or minus 100, where would you plot your culture? How does this compare to others’ perceptions?

---

**Fairness**

Fairness, or the absence of it, triggers our brain’s primary threat and reward mechanisms. With our strong fairness detection capabilities, the workplace provides ample opportunities to demonstrate or decimate fairness. Both processes and behaviour can be perceived as fair or unfair.

<table>
<thead>
<tr>
<th>Fairness threats</th>
<th>Fairness rewards</th>
</tr>
</thead>
<tbody>
<tr>
<td>inconsistent behaviour</td>
<td>transparency</td>
</tr>
<tr>
<td>policies or procedures applied</td>
<td>involvement</td>
</tr>
<tr>
<td>inequitably</td>
<td></td>
</tr>
<tr>
<td>perception of bias or favouritism</td>
<td>living the values</td>
</tr>
<tr>
<td>workplace bullying</td>
<td>equality</td>
</tr>
<tr>
<td>unearned rewards</td>
<td>merit selection &amp; promotion</td>
</tr>
</tbody>
</table>
Applying neuroscience to the employee lifecycle:

We are all on a journey with our employer organisation that begins at the point of recruitment and follows a road that represents a full life cycle. Along that road are events that shape our experiences and literally change the structure of our brains.

As leaders, here are some suggestions for unleashing potential:

<table>
<thead>
<tr>
<th></th>
<th>Do</th>
<th>Don't</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recruitment</td>
<td>• use objective and equitable processes</td>
<td>• completely ignore your ‘gut instinct’ – just don’t rely solely on it</td>
</tr>
<tr>
<td></td>
<td>• treat applicants with respect throughout the process – whether you shortlist them or not</td>
<td>• focus only on behaviour: cognition is equally important</td>
</tr>
<tr>
<td></td>
<td>• facilitate onboarding with engaging processes to build connections early</td>
<td>• let your biases and comfort zones limit your selection decisions</td>
</tr>
<tr>
<td>Performance Management</td>
<td>• establish transparent &amp; equitable processes</td>
<td>• use feedback as a weapon</td>
</tr>
<tr>
<td></td>
<td>• build managers’ capabilities to hold constructive conversations</td>
<td>• focus mainly on ‘areas for improvement’</td>
</tr>
<tr>
<td></td>
<td>• create a culture of open communication</td>
<td>• compare employees to each other: use objective benchmarks</td>
</tr>
<tr>
<td>Learning &amp; Development</td>
<td>• consider holistic learning experiences that tap into how the brain learns and stores information</td>
<td>• cram more into learning programs than the prefrontal cortex can digest in a day</td>
</tr>
<tr>
<td></td>
<td>• teach employees how to think</td>
<td>• underestimate the importance of reflection &amp; downtime on the learning process</td>
</tr>
<tr>
<td></td>
<td>• use coaching methods that tap autonomy and self-directed learning</td>
<td>• create stressful scenarios that shut down prefrontal cortex functioning</td>
</tr>
<tr>
<td></td>
<td>• stagger learning interventions over time for maximum retention</td>
<td></td>
</tr>
<tr>
<td>Promotion &amp; Succession</td>
<td>• use merit based approaches that are open and transparent</td>
<td>• reward dysfunctional behaviour</td>
</tr>
<tr>
<td></td>
<td>• positively communicate promotions</td>
<td>• allow personal biases or internal politics to impact promotion decisions</td>
</tr>
</tbody>
</table>
A new age for talent management

Scientific advances are allowing us to better understand human talent and how to manage it in new ways. Neuroscience findings will provide insights from which will emerge exciting and powerful strategies to unleash and develop the capabilities of our emerging leaders, and unlock the potential of all our employees.

We are opening the doors to new information, and a promising future.

Suggested reading:

Your Brain at Work – Strategies for overcoming distraction, regaining focus and working smarter all day long.
David Rock, 2009, Harper Collins

The Brain Advantage – become a more effective business leader using the latest brain research.

The Secret Life of the Grown-up Brain – the surprising talents of the middle-aged brain.

The Brain that Changes Itself – stories of personal triumph from the frontiers of brain science.
References

About the Author

Sylvia Vorhauser-Smith is Senior Vice President of Global Research at PageUp. She is responsible for driving thought leadership in the field of human capital management for global organisations facing cross border expansion and growth.

Vorhauser-Smith has more than 25 years of experience in corporate and entrepreneurial business environments, including positions as Head of Selection and Development at Westpac Banking Corporation, Human Resources Manager for Citibank Limited, and General Manager of Integrated Talent Management for PageUp. Prior to joining PageUp, Vorhauser-Smith was Founder and Chief Executive Officer of consulting firm Talent Edge, specialising in bespoke leadership development and talent management solutions.

She is a regular national and international speaker on neuroscience, talent and human capital management, having addressed audiences in Boston, Singapore, Kuala Lumpur and across Australia. Vorhauser-Smith holds a Bachelor of Business and Graduate Diploma of Psychology from Monash University, Post Graduate Certificate in NeuroLeadership and is currently completing her Master of Science in NeuroLeadership at Middlesex University.
Contact us to learn more about how PageUp can help transform your organisation’s multinational talent management initiatives.