

13 Business Brain Boosters

Motivation, engagement, decision making, money, burnout and more in the brain



13 Business Brain Boosters

Business scenarios and the underlying brain science. From engagement to change.

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The leading brains academy where you can learn how to tap into the brain to increase your competitiveness.

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Happy 2013!

The 6th of January is the date, supposedly, that the three kings, magi, reached the baby Jesus to present him with their presents.

This is my present to you. This year I have taken the lucky number of 13 because it is 2013 and have given you 13 business scenarios where brain science can help you understand and achieve more.

As many of you know brain science can point to interesting and novel ways of approaching problems – more than that we know enough now to be able to design more effective and successful interventions that can support long-term success of individuals and corporations. The good news is it is sometimes easier than you may think. Brain science can be easy to understand and easy to implement. The following pages will show you how.

Happy New Year and a successful 2013.

Andy Habermacher

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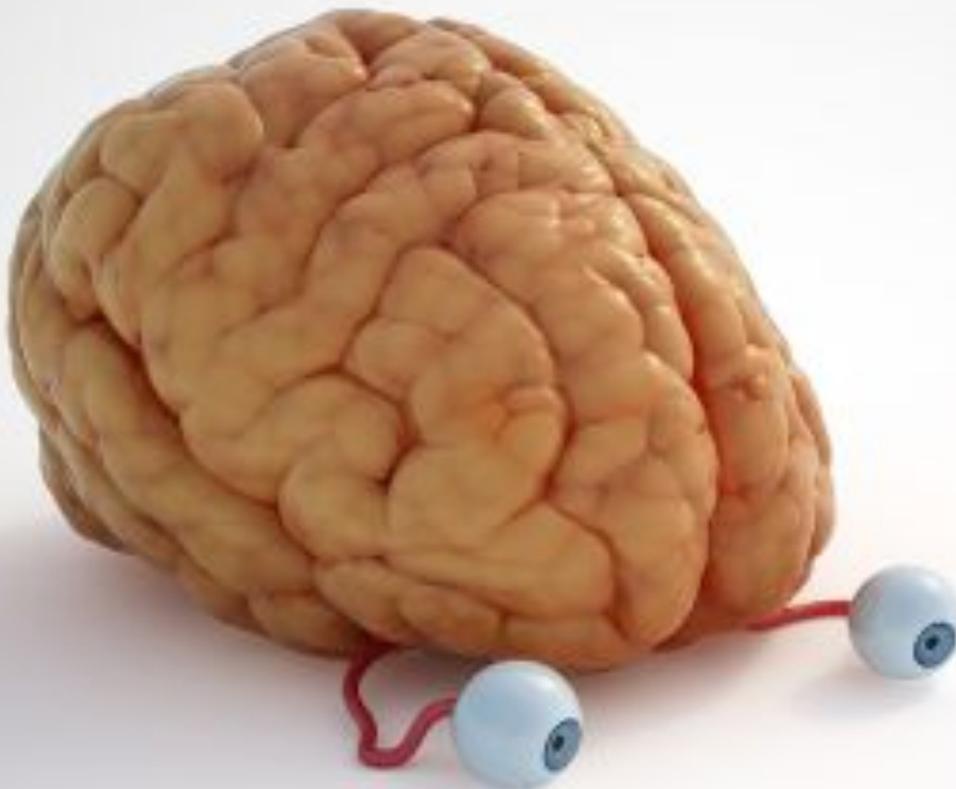
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1. The Brain

More connections than atoms in the universe (in theory only)

We all know the brain is a fascinating organ. The news is ever more replete with reports on how to grow the brain and reports of research that have found the single point of, for example, creativity, or religion, or sports success. These should be treated with caution – our brain's ability to simplify and over simplify is after all as much a danger as it is a gift. What is sure is that the research is still mushrooming and the fascination is not waning but ever increasing.

The brain is the seat of our actions, our behaviour, our habits, our personality, our foibles and our talents and skills. The biggest single fault in our perception of the brain is that we tend to think of it as static. You have a good brain or not. The brain is ever changing – it is after all a massive collection of brains cells, neurons, which respond and grow to the stimulus they receive constantly. We also have more knowledge than we can imagine as to how to tap into the brain. Please read on.

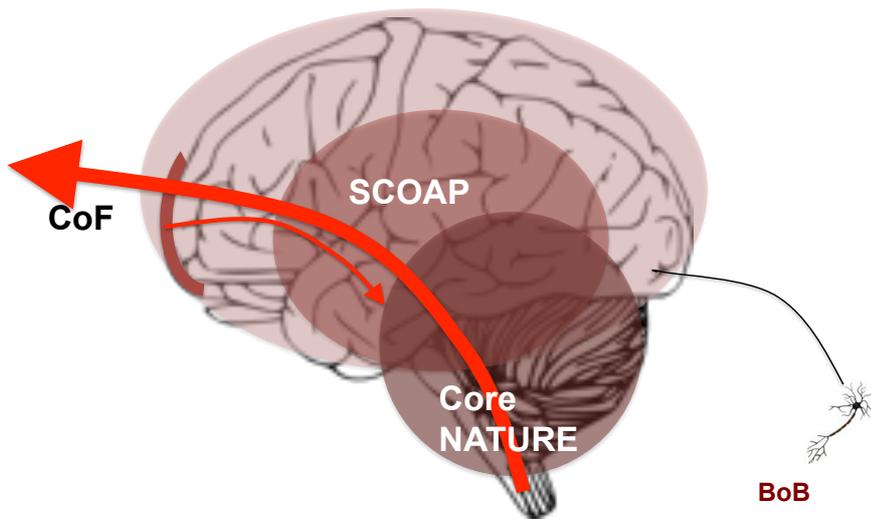


- The brain actually has closer to 85 billion neurons and not 100 billion as almost universally reported.
- The brain also has around another 85 billion “glial cells”. These are cells that support the neurons.
- The genetic make up of the human brain has been mapped by the Allen Institute: <http://www.alleninstitute.org>
- Gigantic virtual simulations of the human brain have recently been successfully tested: SpauN (University of Waterloo, Canada) <http://nengo.ca/build-a-brain/spaunvideos> Blue Brain Project (EPFL, Switzerland) <http://bluebrain.epfl.ch>
- The heart also has a neuronal network calculated at 10 000 neurons.
- The digestive tract also has a neuronal network and produces most of the body’s serotonin – a neurotransmitter.
- The bacteria in your gut affect your thinking processes.

2. Basic Human Emotional Needs

The heart and brain of human nature

We human beings have so many emotions. The brain on top of this seems to be so complex - so how can we reduce this to a simplicity that is understandable and represents closely the truth? Many researchers have done extensive work on this over the centuries and particularly in recent decades we have come to a point whereby looking at the underlying neuronal structures we can see clear patterns and these can be put into a simplistic models. Again we need to understand that the brain never operates in single units, it is incredibly interconnected. We can think of it something like making a videoconference. It may seem simple and easy to set up with easy to buy hardware but behind this simplicity there are servers and networks and programming and protocols. So it is with the brain. The diagram on the next page illustrates how the brain can be split into three broad regions all lying on the laws of BoB (the Biology of



needs that *all* human beings have and without fulfilment will cause a disruption of well being and potentially mental health. These basic needs are:

- Self-esteem**
- Control**
- Orientation**
- Attachment**
- Pleasure**

- **CoF**

CoF stands for "Cognitive Functional" – this is the part of the brain that is conscious

and that we consciously use to think, plan and decide. This is represented as the cerebral cortex the outermost layer of the brain. Though we have most admired this, the higher functional part, our conscious processing, in reality only consists of a small part at the front of the brain and is subserved by all other regions.

These regions operate from the bottom up. Survival, logically take highest priority, (thick arrow on the diagram). The frontal, our conscious areas, can and does exert control over the rest of the brain but only to a limited extent (small red arrow).

Brain).

- **Core NATURE**

This is the "primitive" part of the brain. MacLean the illustrious neuroscientist called this, famously, the reptilian brain. This part of the brain is what keeps us alive. It sits at the bottom of the brain and at the top of the spinal cord and holds all those functions and primitive instincts. Heartbeat, body temperature, etc. are all controlled from here.

NATURE stands for: **N**utrition, **A**bode (living and shelter), **T**ribe & Territory, **U**ndertaking (moving and doing things), **R**eproduction, **E**motional expression (yes this is an inbuilt primitive reaction – think of a scream of pain or joy).

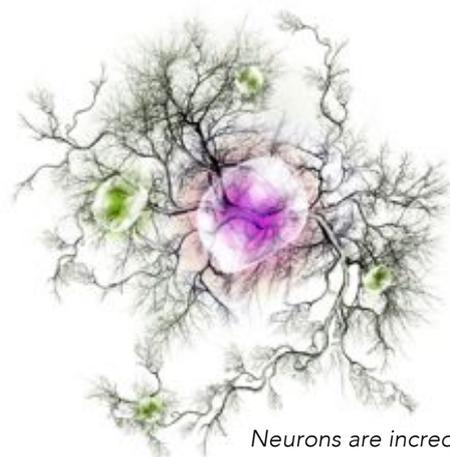
- **SCOAP**

These are our basic human emotional needs. This is represented in the brain as the second layer. What is often called the limbic system. Though many scientists will place different structures in this area we can think of this as the inner cortex and where many of our emotional centres sit. This is a simplified and representative picture only. There are many functional areas in here that coordinate with many parts of the brain. Hordes of scientists have proposed human emotional needs but of significance for us is Seymour Epstein who came to define four basic human emotional needs. This was drawn on by Klaus Grawe, a leading research in psychotherapy and one of the founding fathers of neuropsychotherapy. Drawing on the most recent brain research he came to see these needs at the heart of all human motivation and

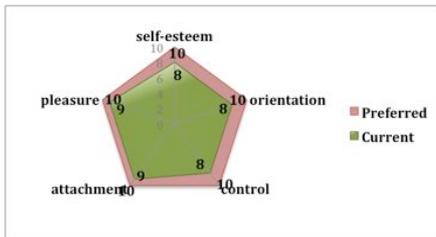
3. Motivation & Engagement

Understanding unconscious motivation

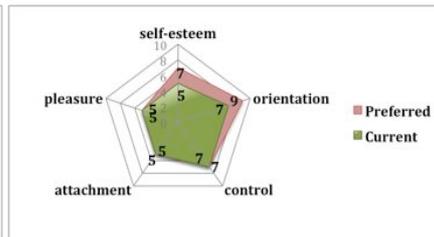
An ever-present question for leaders and HR executives the world over: How do you measure motivation and engagement and how do we tap into individual's intrinsic motivation? We all know intrinsic motivation is much more powerful than extrinsic motivation. What does the brain show us?



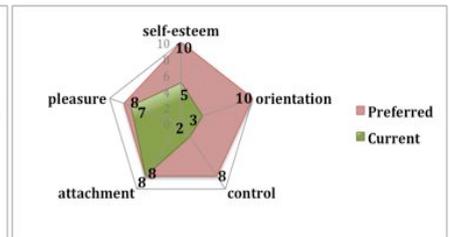
Neurons are incredibly complex 4



A healthy profile



A distorted profile with NO-Type tendencies



A distorted profile with large deficits

Dopamine is what many consider the brain’s reward and motivation chemical. Dopamine is also considered the brain’s pleasure “drug” – it is what pleasurable activities stimulate. It is directly stimulated by taking cocaine, for example. But when we look at dopamine more closely we can see that it is more than reward – we know this because it is stimulated by anticipation of reward. This is particularly important because this shows that it is very important for motivation. More than that the concept of delayed reward – working hard now for a future reward is essential for many businesses.

However, we know many people seem not to work for reward or seem to sabotage themselves and others – the unconscious gets in the way. What is unconscious motivation then?

This I have already answered – the basic human emotional needs (SCOAP, see previous section) are what the brain and human beings need to function successfully. Indeed our whole goal as a human being is to increase and fulfil these basic human needs. Consciously and unconsciously. This means we need to develop environments in which employees can build their SCOAP:

Build self-esteem: Appreciation and gratitude - feeling valued. Are your employees valued?

Build control: Freedom, choice and ability to control their environment. How much control do your employees have?

Build orientation: Understanding where they are going and where the business is going. How much orientation do your employees have?

Build attachment: Build close and strong relationships built on trust, honesty and closeness. How strong are the relationships in your organisation?

Build pleasure: Pleasurable experiences which include doing a good job and friendly relationships. How much pleasure do your employees get from their job?

If you are not able to tap into SCOAP you will not have a deep level of intrinsic motivation in your company. It’s that easy.

Doing a profile of your employees will give the clues as to where their motivation levels stand and on what dimensions (see diagrams above). These can also highlight deficit and areas of conflict. Klaus Grawe in his work defined two general schema with various incongruences in these. These we have called Go-Types and NO-Types – there are those will actively try to fulfil their basic human needs (GO) and those that will protect them (NO - these people will block change and resist uncertain situations). See “Neuroleadership” (Ghadiri / Habermacher / Peters, Springer, 2012) for more detailed information.

Our preliminary work with leadership teams has shown this to be a very effective way of measuring motivation and engagement and creating high-speed interventions.

4. Decision Making

The brain distorts decisions

Decision making is obviously a key function of leaders but not just leaders - all of us need to make decisions on a daily basis. Our brain makes this easy for us by building high-speed pathways often called heuristics. These operate unconsciously and at high speed. This first came into economics with Kahneman and Tversky’s work on prospect theory for which Daniel Kahneman received the Nobel Prize.

What Tversky and Kahneman first showed is that we are not rational agents. His subsequent work has further researched these mechanics and heuristical systems. His book “Thinking fast and slow” gives a readable and comprehensive overview of many of these faults of the mind. Here a number of constructs for you:



Synapses (junctions) connect neurons

Loss aversion: is our tendency to rate losses or threats much higher than gains or profit. Simply we are more afraid of losing than we are of our expectation to win. If you were to gamble on the toss of a coin would you accept a bet of "tails lose \$500 and heads win \$500". Unlikely. How high would the win have to be for you to accept the bet? In utility theory it should be \$501 but most of us would be very unlikely to accept that bet. But we would almost certainly accept the bet tails you lose \$200 and heads you win \$20 000. This means in business we will tend to be risk averse in all our decisions.

Availability. Refers to how we draw on the most available information. We do not balance this with statistical averages. This is particularly relevant for highly emotional and recent events. These are available in the mind and hence will have a much-increased importance. Your opinion of your chance of dying when flying will be increased decreased after a high profile air accident. The availability of the tragic event will massively increase your perception of the dangers of flying. In business it means we will place greater importance on recent or available information

and we will not balance this with other information.

Kahneman has focused his research on the mechanics of the mind the way the mind wires which causes automatic faults in decision making. Other constructs may focus on how emotions can distort our decision making for this we need to look at hot and cold cognition:

Hot and cold cognition. Hot and cold cognition refers to how we balance information that is emotional or particularly emotional for each of us individually. Research, for example, on political partisans (those with strong preference for a political party) has shown that when rating information on their candidate of choice they would ignore contradictions. While they were doing this emotional not rational parts of the brain were more active than in control situations. As soon as a situation has emotional salience, relevance that is, our brain will start to distort our decision making ability. This leads to the classic confirming evidence cycle when we seek and find the evidence we want because it suits our needs. This is not done consciously obviously but is an unconscious instinctive process. But with the power to send our decision making haywire. See also section on Fear.

5. Creativity & Innovation

Connected brains are creative brains

Popularly reported, more than 70% of business people rate themselves as above average in creativity. Obviously an impossibility. Yet we all crave to be creative and particularly innovative (which is not the same as being creative) companies like to think of themselves as creative and innovative and the clichés are well used in brochures and annual reviews. But where does creativity sit in the brain?

The answer is obvious: it sits everywhere. As so many things in the brain creativity is a function of many parts of the brain. Many have claimed it is the right hemisphere but this is untrue - certain creativity functions do sit in the right hemisphere but others sit in the left and the key to creativity and particularly of innovation is the connecting of ideas and concepts and forming these into something useful. There couldn't be anything that is more whole-brained than this. More than that creativity is also a very collaborative process (see Keith Sawyers book "Group Genius" for more on this). Interestingly research has also shown that constraints increase creativity and that

brainstorming is not the best way to get good ideas. But we also we do know f that the brain can work unconsciously towards solutions.

To be creative we need:

- To hold opposing ideas in the mind
- To have low stress
- To sleep enough
- To allow incubation
- To create constraints
- To discuss
- To collaborate
- To create diversity

What will counteract creativity and innovation?

- Strong hierarchies
- Fear
- Stress
- Individualistic corporations
- Corporations that reward individual performance
- Judgmental collaborators
- Lack of diversity

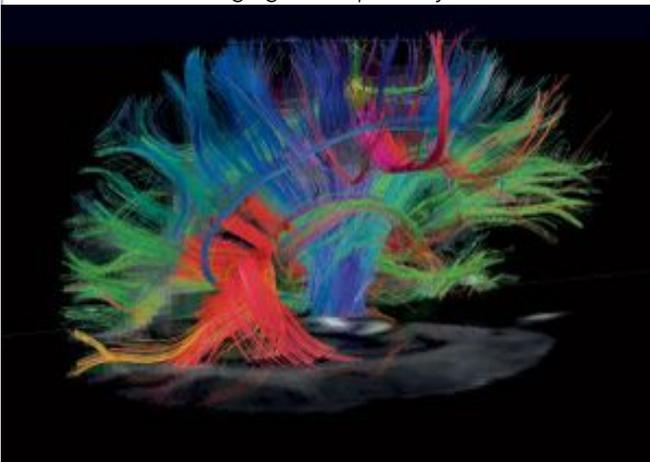
6. Money in the Brain

Money drives unethical behaviour

Money can't buy you love – or so they say. So what does the research show? (I did write an extensive blog post on this here:

<http://andyhabermacher.blogspot.ch>) Though money does activate reward it is also an incentive – as I mentioned in section 3 on motivation - it also operates as a delayed incentive. But there are many downsides. One potentially disturbing finding is that money can make us feel less pain – this is interesting

Diffusion tensor imaging shows pathways in the brain



but what is more interesting is that love has the same effect meaning that money can impact the same areas as love and hence become a substitute for it. Money can replace love - this explains some aspects of greed. But there is also the fact that having money makes you behave less socially more egocentrically, more unethically and less focused on team effort. All of which can influence the vicious circle of the complex animal we call greed. More than that and interesting for businesses is the so-called undermining effect meaning that if you have been paid to do something you may be unwilling to do this without pay. Meaning money can erode intrinsic motivation.

To sum up for business a single minded focus on money can:

- Weaken team effort
- Make people more egoistic
- Make people less social
- Make people behave less ethically

This is a bit of a dilemma for many businesses but one worth keeping an eye on. How can we counteract this? Here we must come back again to the SCOAP (Basic Human Emotional Needs) model as this shows us what the brain wants. In addition it means engaging the workforce through visions and a deeper sense of purpose and value. Social constructs are what define our happiness and our satisfaction with life. It will make sense to keep your eye on this and not in excessive period of cost cutting to solely focus on money and non-social constructs.

7. Stress & Burnout

Lack of appreciation at the heart of burnout

Burnout has been a hot topic in the press in recent years. Burnout figures still seem to be rising. Statistics often revolve around professions such as physicians, teachers and nurses. A report in the Netherlands reported in 2011 that up to 13% of people have burnout. This is very worrying.

We assume this is tightly linked to workload but not only: Some constructs in the SCOAP give us some powerful pointers to the underlying causes. Obviously there is an issue with workload but it is not only workload that gives people stress. The consistency theory model developed by Klaus Grawe that



Imaging technologies are ever more refined

highlights the issues here (Theo Peters and Argang Ghadiri first put this into a model for the workplace). It is important because Klaus Grawe was specifically focusing on mental disorders such as burnout (though does not speak about burnout specifically). There is a close relationship to various other disorders. Depression, for example, correlates very strongly to burn out. As Klaus Grawe states it is this inability, or inconsistency, to fulfil basic needs which drives mental sickness.

We also know that control and orientation are particularly powerful in these disorders as is lack of recognition and appreciation. So targeting SCOAP will provide a healthy environment where burnout is unlikely to develop. Yet another component of stress and burnout is that of goal achievement – achieving goals is inherently satisfying and creates consistency with what you do.

Interestingly many senior managers have a stronger feeling of control according to recent research making them less susceptible to burnout.

Having an environment that targets the following will help reduce chances of burnout:

- Employees receive recognition
- Employees have clear orientation
- Employees have clear tasks and goals
- Employees have freedom to control their own environment
- Employees have enjoyable experiences
- Employees have low fear (see next section)

8. Fear in the Brain

Inhibiting cognitive performance

Fear is probably the most important primitive emotion. It is essential for survival after all. Hence fear has a huge impact on the brain and on the whole body releasing a whole cascade of hormones preparing the body for action. There are many misinterpretations of fear – fear is a motivator for

example. This is woefully wrong. Fear can get people to action and fear can highlight priorities but this should not be misunderstood and termed as motivation.

Fear comes in many guises in the corporate world. Fear of failure, fear of losing a job, fear of the recession, but also fear of losing, for example, self-esteem.

Fear specifically impacts the following areas of the brain:

Amygdala: fear is processed strongly in the amygdala (two small almond-shaped centres sitting deeply in the limbic system) which also operate as general emotional processing units. As fear increases so does emotionality in all dimensions.

Prefrontal Cortex (the front of the brain): this is what we consider our executive centre. Here many of our higher cognitive functions are coordinated and balanced. This is where planning and short-term memory sit. As working memory is processed primarily here we can see this as a key centre of conscious thought. Fear is directly connected to the prefrontal cortex in a number of different ways and will heavily disrupt prefrontal processing. This translates into less rationality, decreased ability to plan and balance ideas and decreased ability to deal with complexity.

Fear will also stimulate the classic fight, flight or freeze reactions – preparing the body for action and releasing adrenaline into the system or freezing. These are represented in corporate environments with aggressiveness or headless chicken syndrome when people run around without getting anywhere (flight) and “freeze” when decisions are not made.

Furthermore the amygdala will also influence the **Anterior Cingulate Cortex (ACC)** which sits over the limbic system: it is an area that helps to monitor the environment and detect conflicts in information. This is the area that will detect mistakes in a balance sheet, etc. This area switches to a negative bias – this means our attention will then be drawn to what is negative and wrong and we will fail to see what is good or positive.

In short fear:

- Increases emotionality
- Reduces rationality
- Reduces ability to deal with complexity

- Stimulates aggression or mindless action
- Inhibits decision making
- Creates negativity

More than that we know that fear is infectious and can be processed unconsciously.

Companies and executive should take fear very seriously, for themselves and for their employees. The impacts on cognitive functioning are huge and a very real threat to any business.

9. Time Management

Do less to become more efficient

We are now in the 21st century where multi-tasking is on the rise. We have telephones, mobile phones, email, chat, facebook, video conferencing, and so much more. Budgets are being cut and many employees feel themselves being squeezed having to do more with less. How can brain science help here?

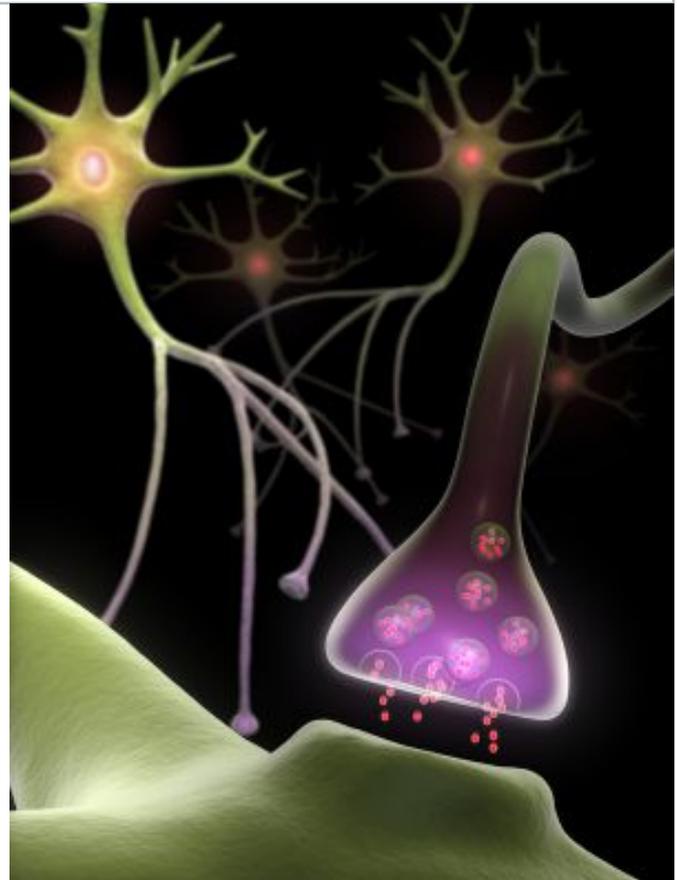
Well first the low down on multi tasking – many corporations have implemented all sorts of communication tools to increase communication – with many feeling they still don't have enough information. Multitasking ironically, research shows, will slow you down, increase your chances of mistakes and lower your ability to concentrate. This is the result of study after study. The brain is simply not really designed to multitask – multitasking is generally rapid sequential tasking. Interruptions are a bad deal from the standpoint of the brain. More than that, interruptions in the business world can cost up to 15 minutes a time before an individual can get back on task. If you imagine the sheer number of distractions, genuine or not, that there could be you will understand that it is unlikely that an employee is really working at anywhere near to maximum capacity (but each employee is genuinely busy).

Companies should:

- Enable employees to work without distractions
- Use communication tools effectively
- Lower potential sources of distractions
- Actively control email and other communication usage

10. Genetics, High Performance and Learning

Mental consistency is more important



Synapses release chemicals to transfer activation

than genetics

We also live in the age of genetics. The brain has recently been genetically mapped (Allen Institute) and with the vision of genetic engineering and genetically modified medicines many hope we have the answers to all our problems. So is talent genetic? Yes and no. A fault of the thinking in the general public is that there are single genes for intelligence, muscular strength and so on and so forth.

Gene expression affects amino acid and protein growth only – obviously this can have massive impact on the body but a single gene may only mean a single amino acid is produced or not of the. Yes genes will make a difference - with something as complex as the brain with as I mentioned 85 billion neurons and 85 billion global cells a single gene may have limited impact but that all depends on where. For example dopamine that I mentioned in the section on motivation has 6 different types of receptors (docking stations of rate neurotransmitter at the joints of the neurons, the synapse – see diagram here). Reduction in dopamine D4 receptors can lead to an increased propensity for drug addiction (researched among cocaine addicts). However this is only a propensity?



The cerebrum houses most of our neurons

and with many other factors affecting addiction including social constructs it is hard to say.

Research with primates has shown that certain disruption in genes can lead to unfavourable genetic disposition for some monkeys. However, if these monkeys with unfavourable genes are placed with so called super mothers they outperform normal monkeys but also monkeys with superior genetics with less caring mothers (showing the power of nurture over nature). This is not conclusive but simply highlights that genes have an impact - but nurture is just as important.

Specifically we need to be thinking more of learning and progressive learning than genes and talent. Talent attracts attention but the key focus of any company is to learn and "be a little bit better tomorrow than today". If companies can tap into learning they will become better and better and better. Many fail to do so. Why? First we know that the SCOAP we talked about at the start is essential for the learning process – these need to be in place. Learning needs to be proactively approached – punishment and fear of retribution will hinder learning. Learning and habit is reinforced with the reward centre. Fear and stress also inhibit learning. Many corporations are ironically screaming out for talent yet incorporate bad learning environments for the majority of employees.

11. Change Management

Change basic needs, change motivation

Change management is a well-researched field full of change consultants. Nevertheless change is always a major hurdle for any organisation. This now falls under the name of transformation. An unanswered question by many is how to tackle the power of the

unconscious in change. How the unconscious influences our motivation to change and blocks many of us - unconsciously of course. Which simply means we have no direct access to it and are unaware it is happening. Obviously a challenge. How can we tackle this?

We must again draw back to the SCOAP model if we know that SCOAP lies at the very heart of human motivation then we can look to this to find the potential blocks. SCOAP profiling will help us identify individuals or parts of organisation that are likely to block to change. As important is the fact that change that reduces all aspects of SCOAP is destined to fail or massively underdeliver. This is exactly what many change and transformation programmes do - they fail to build self-esteem of those affected. Decrease control of those affected. Decrease orientation of those affected. Decrease attachment and relationships of those affected. Decrease pleasure of those affected. No surprise then that so many change and transformation programmes fail to live up to expectations. Many change theories do a reasonable job of targeting the rights points of leverage. What brain science is showing us is that the underlying motivational levels that need to be targeted and allows us to reformulate this process in terms of what the brain needs to have. Therefore hard thought needs to be given to how the transformation will affect SCOAP - short, mid- and long-term.

The "Clear Vision" crises intervention that I talk about in my free eBook "Leading 100 Billion Neurons" also targets these well.

12. Trust

Friend or foe?

Where would we be without trust? This is the core of relationships, friendships, relationships, marriages and partnerships. It is also the core of business. We after all need to trust a person or a company to do what they promise, to deliver what they say. Trust lies at the heart of all business transactions.

Yet the statistics on trust are rather worrying. They consistently show low levels of trust for big corporations, for politicians, for senior executives and even between managers and their leaders.

Trust in the brain can be considered a part of the oxytocin system. This has been much publicised in the

news and popular press with various reports of oxytocin and trust and romance and sexuality all at the same time. Some are oversimplified for sure. We know for example that oxytocin operates with dopamine and other hormones (hence the importance again of dopamine and also trust for motivation). Nevertheless we do know that oxytocin increases trusting behaviours, is released in large quantities in mating relationships and is released in huge doses by mother and child at the first suckling of breast milk.

Looking further into the brain we can see that trust is not just oxytocin but also that trust stimulates the reward centre and mistrust stimulates the amygdala. The amygdala you will remember are key in processing emotions but specifically fear, threat and anxiety. In an evolutionary sense we have developed these from the simple friend and foe concept. Trust stands for friendship and is an essential element of friendship. Mistrust stands for enemy. This is important for many reasons friendship, trust, oxytocin and reward centre activation are not only friendly constructs they are emotional constructs and they promote learning and strong memory formation and higher stress resistance. Amygdala and threat activation inhibits much of mental functioning as described under the section on fear. Trust is indeed essential.

13. Diversity

Is really about increasing performance

Diversity programmes in organisations tend to be seen as a political necessity. My experience is that organisations vary in their true commitment to these programmes – what many miss is that the brain is wired to ignore diversity and that diversity is ultimately about increasing performance. There is a vast body of research to support this. But first what about the brain? The Implicit Association Test originally developed at Harvard and now run under the title of Project Implicit (<https://implicit.harvard.edu/implicit/>) highlights our unconscious and implicit preferences whether it be political, gender, race or others. It shows show that we have a preference for our own skin colour. It also shows that most of us are mildly sexist and racist – even though we may believe we are not. The brain is a great builder of associations and if there are a greater

number of associations and reference points, for example, of women at home and men in the office, we will have a preference for men in offices and women at home.

Because we are unaware of these mental processes we tend to then justify them (see also hot and cold cognition). Our brain is very good at finding reasons and post rationalising – this effect was first discovered in 1931.

But the real impact of diversity is in performance. Diversity in all respects that is – multi-disciplined groups of scientists find solutions to specific problems in a specific scientific domain quicker than groups of specialists in that domain. Diversity and collaboration are essential for creativity and innovation and companies with higher numbers of women in leadership positions are more profitable.

It would be stupid to not take diversity very seriously. Alas the unconscious mind often has its grips on decision makers and hence diversity still has a long path ahead – a sign of just how irrational the business world and business leaders really are!

You can learn more about the above elements on the following workshops and webinars:

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leading brains Academy

leading brains 1: Understanding the human brain and business (lb1)

leading brains 2: The science behind reward, motivation and trust in the brain (lb2)

leading brains 3: The science behind change, habit and transformation in the brain (lb3)

leading brains 4: The science behind creativity, innovation and inspiration in the brain (lb4)

leading brains 5: The science behind decision making in the brain (lb5)

leading brains 6: The science of diversity and biased opinions in the brain (lb6)

Webinars

The leading brains series repackaged as a webinar series. Learn from your computer.

lb1: 14th January 2013

lb2: 15th January 2013-01-07

lb3: 16th January 2013

lb 4: 17th January 2013

lb5: 18th January 2013

The above webinars are run at:

PDT (Los Angeles): 11 am / EST (New York): 2 pm

GMT (London): 7 pm / CEST (Berlin): 8 pm

lb6: 19th January 2013

The above webinars are run at:

PDT (Los Angeles): 6 am / EST (New York): 9 am

GMT (London): 2 pm / CEST (Berlin): 3 pm

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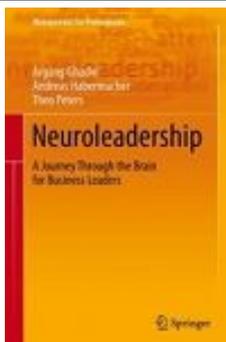


Andy Habermacher, brain leader, uses his love of neuroscience to give powerful and inspirational insights into human behaviour and the workings of business.

His British humour combined with his Swiss upbringing give him a warm and open manner possessing the stage with confidence and taking you on a journey through the brain and human decision making.

His stage presence will have your audience engaged and he will provide knowledge and insights and tie this to practical applications that will have the audience leaving with more knowledge than they can use.

Books



New Release:

***Neuroleadership, Ghadiri, Habermacher, Peters
Springer 2012***

Order at: amazon / Springer

The Fox Factor, Andy Habermacher

Order at: amazon / itunes / kindle

Leading 100 Billion Neurons, free ebook, Andy Habermacher

Download at: itunes / smashwords

German:

Neuroleadership, Theo Peters, Argang Ghadiri

Order at: amazon

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"The garden of neurology holds out to the investigator captivating spectacles and incomparable artistic emotions. In it, my aesthetic instincts found full satisfaction at last. Like the entomologist in the pursuit of brightly colored butterflies, my attention hunted, in the flower garden of the grey matter, cells with delicate and elegant forms, the mysterious butterflies of the soul, the beating of whose wings may some day – who knows? – clarify the secret of mental life."

Santiago Ramón y Cajal, from his autobiography "Recollections of my Life"

Selection of Sources

Books

- Carey, J., 2006. **Brain Facts: A Primer on the Brain and Nervous System.** *Society for Neuroscience*,
- Ghadiri, A., Habermacher, A. & Peters, T., 2012. **Neuroleadership - A Journey Through The Brain for Business Leaders**, Springer.
- Grawe, K., 2006. **Neuropsychotherapy: How the Neurosciences Inform Effective Psychotherapy**, Lawrence Erlbaum Associates.
- Habermacher, A., 2011. **Leading 100 Billion Neurons**, smashwords.
- Kahneman, D., 2011. **Thinking, Fast and Slow**, Farrar, Straus and Giroux.
- Kandel, E.R., 2006. **In Search of Memory**, W. W. Norton & Company.
- Peters, T. & Gadiri, A., 2011. **Neuroleadership - Grundlagen, Konzepte, Beispiele: Erkenntnisse der Neurowissenschaften für die Mitarbeiterführung**, Wiesbaden: Gabler Verlag.
- Pillay, S.S., 2010. **Life Unlocked**, New York: Rodale Books.
- Pillay, S.S., 2011. **Your Brain and Business**, New Jersey: FT Press.
- Sawyer, R.K., 2007. **Group Genius: The Creative Power of Collaboration**,
- Westen, D., 2007. **The Political Brain: The Role of Emotion in Deciding the Fate of the Nation**, PublicAffairs..

Papers

- Adolphs, R. et al., 1995. Fear and the human amygdala. *Journal of Neuroscience*, 15(9), pp.5879–5891.
- Alvarez, R.P. et al., 2008. Contextual Fear Conditioning in Humans : Cortical- Hippocampal and Amygdala Contributions. *Neuroscience*, 28(24), pp.6211– 6219.
- Azevedo, F.A.C. et al., 2009. Equal numbers of neuronal and nonneuronal cells make the human brain an isometrically scaled-up primate brain. *Journal of Comparative Neurology*, 513(5), pp.532–541.
- Baumgartner, T. et al., 2008. Oxytocin shapes the neural circuitry of trust and trust adaptation in humans. *Neuron*, 58(4), pp.639–650. Kosfeld, M. et al., 2005. *Oxytocin increases trust in humans.*, Nature Publishing Group.
- Bowlby, J., Ainsworth, M. & Bretherton, I., 1992. The Origins of Attachment Theory. *Developmental Psychology*, (5), pp.759–775.
- Bromberg-Martin, E.S., Matsumoto, M. & Hikosaka, O., 2010. Dopamine in Motivational Control: Rewarding, Aversive, and Alerting. *Neuron*, 68(5), pp.815–834.
- Carroll, J.S. et al., 2011. Materialism and Marriage: Couple Profiles of Congruent and Incongruent Spouses. *Journal of Couple & Relationship Therapy*, 10(4), pp.287–308.
- Chavez, R.A. et al., 2004. Neurobiology of creativity: preliminary results from a brain activation study. *Salud Mental*, 27(3), pp.38–46.
- Eisenberger, N.I. et al., 2011. The Neural Sociometer: Brain Mechanisms Underlying State Self-esteem. *Journal of cognitive neuroscience*, 23(11), pp.3448–55.
- Epstein, S. & Weiner, I.B., 2003. Cognitive-experiential self-theory of personality. In M. J. Lerner, ed. *Comprehensive Handbook of Psychology Volume 5 Personality and Social Psychology*. John Wiley & Sons, Inc., pp. 159–184.
- Feinstein, J.S. et al., 2010. The Human Amygdala and the Induction and Experience of Fear. *Current Biology*, 21(1), pp.1–5.
- Greenwald, A.G., McGhee, D.E. & Schwartz, J.L.K., 1998. Measuring Individual Difference in Implicit Cognition: The Implicit Association Test. *Journal of Personality and Social Psychology*, 74(6), pp.1464–1480.
- Gyurak, A. et al., 2011. Individual differences in neural responses to social rejection: the joint effect of self-esteem and attentional control. *Social cognitive and affective neuroscience*, 19(3), pp.279–280.
- Horan, R., 2009. The Neuropsychological Connection Between Creativity and Meditation. *Creativity Research Journal*, 21(2), pp.199–222.
- Ikemoto, S. & Panksepp, J., 1999. The role of nucleus accumbens dopamine in motivated behavior. *Brain Research Reviews*, 31, pp.6–41.
- Koob, G.F., 1992. Dopamine, addiction and reward. *Seminars in Neuroscience*, 4(2), pp.139–148.
- Lamy, M., 2007. For juice or money: the neural response to intertemporal choice of primary and secondary rewards. *Journal of Neuroscience*, 27(45), pp.12121–12122.
- Mark, G., Gudith, D. & Klocke, U., 2008. The Cost of Interrupted Work : More Speed and Stress. *Methods*, (107), pp.8–11.
- Rosen, C., 2008. The Myth of Multitasking. *Public Policy*, Spring(20), pp.105–110.
- Matthiesen, A.S. et al., 2001. Postpartum maternal oxytocin release by newborns: effects of infant hand massage and sucking. *Birth Berkeley Calif*, 28(1), pp.13–19.
- Murayama, K. et al., 2010. From the Cover: Neural basis of the undermining effect of monetary reward on intrinsic motivation. *Proceedings of the National Academy of Sciences*, 107(49), pp.20911–20916.
- Palmer, L.F., 2002. Bonding Matters: The Chemistry of Attachment. *Attachment Parenting International News*, 5(2). Eisenberger, N.I. et al., 2011. The Neural Sociometer: Brain Mechanisms Underlying State Self-esteem. *Journal of cognitive neuroscience*, 23(11), pp.3448–55.
- Piff, P.K. et al., 2012. Higher social class predicts increased unethical behavior. *Proceedings of the National Academy of Sciences*, 109(11), pp.1–6.
- Redlawsk, D., 2008. Hot cognition or cool consideration? Testing the effects of motivated reasoning on political decision. *The Journal of Politics*.
- Sawyer, K., 2011. The Cognitive Neuroscience of Creativity: A Critical Review. *Creativity Research Journal*, 23(2), pp.137–154.
- Zhou, X., Vohs, K.D. & Baumeister, R.F., 2009. The Symbolic Power of Money. *Psychological Science*, 20(6), pp.700–706.

Online

- Allen Brain Atlas. *Allen Institute for Brain Science*. Available at: <http://www.brain-map.org> [Accessed September 16, 2012].
- Blue Brain Project. Available at: <http://bluebrain.epfl.ch/>