

Leadership

Inside the Wise Leader's Brain

The Neuroscience of
Leadership

Part 1

Opening the Box

By
Dr. Peter Verhezen
With the
Amrop Editorial
Board



Amrop

Leaders For What's Next

Inside the Wise Leader's Brain

The Neuroscience of Leadership

Chapter 1 - Opening the box

These days, you're probably used to being challenged by online platforms to prove you're 'not a robot'. As you click on squares of 'car parks', have you ever thought that your brain might indeed be an algorithm? Because, to a certain extent, it is. As you read this, your algorithm is hoovering up data, running an astonishing series of unconscious protocols, ordering and structuring the information in 'conscious reflective mode'. You may now form a sentence — a linguistic, meaningful communication. This may be with yourself, the online platform that after five years still doesn't know who you are, or your cat who has picked this precise moment to attack your keyboard.

In this series, we take a journey into the neuroscience of leadership, drawing on some of the latest findings in the domain. We'll explore what makes us tick, what we have in common with AI machines, and what makes us different. We'll look at how wise leaders use their brains differently, and conclude with some practical ways to 'wise up our brains.' In this first instalment, we open the box, with a glimpse into the future. Is homo sapiens on the road to obsolescence?

Our emotions and rationality are closer co-workers than we may admit. What is going on in our brains when we make a decision? To shed light on this intriguing subject, we're going to dive into our neural processes and gain a deeper understanding of the brain's workings. We'll look at the navigation between two modes: our unconscious intuitive and its conscious, rational and reflective equivalent. Our exploration will also help us understand how wise leaders 'think' differently from their peers and how we can train ourselves to become expert wise decision-makers.

Looking at AI in this respect is fascinating for several reasons. Firstly, advances in AI are teaching us a great deal about how our brains work (and vice versa). Secondly, it is in understanding the power (and limits) of machines that we are truly beginning to understand what makes us so extraordinary. Thirdly, these insights enable us to understand how we can collaborate better with AI, with ourselves and each other. And finally, how we are uniquely equipped to make decisions that are not only smart, but wise; *ethical, responsible and sustainable*.



AI scientists are getting ever better at mimicking how the ‘layered neural network’ of our brain constructs ideas — how we see, hear and think. Machine learning algorithms use building blocks to create ‘*convolutional neural networks*’. These enable self-driving cars, translation bots, and the interventions of personal assistants such as Siri and Alexa (however annoying). In short, to a certain but still limited extent, algorithms and their basic architecture are trying to *copy human intelligence*. When we read about a machine learning breakthrough in the news, we’re witnessing a successful leap in the way big data and the huge processing power of the cloud are rising to the challenge.

Despite the astounding achievements of AI engineers, humans remain superior decision-makers. Why? For one thing, we’re better learners than even the smartest, big-data-guzzling AI. If you are anything like most business leaders, you’ll be happily aware of the intellectual superiority of *homo sapiens* over *machina sapiens*. You’ll be equally aware that digitization and AI carry not only enormous potential, but considerable challenges — not least in the Industry 4.0 context.

Wise leaders operate differently to their peers, however smart or accomplished. Take, for example, the digital environment. Wise leaders combine two modes of operation. On the one hand, they use AI to augment their rational decision-making processes. On the other, they draw on intuitive, gut feelings (most often based on experience and expertise). Especially when little data or information is available, they deploy *heuristic thinking* (or mental shortcuts). They are also able to better manage the biases that mental shortcuts may involve, via self-awareness. They involve carefully selected stakeholders in decision-making and deploy a range of bias-checking measures, such as forcing themselves to imagine alternative scenarios, or asking themselves what they would do if they were not involved in the decision.

And there’s good news. We can change. Thanks to the brain’s neuroplasticity, executives can learn, through *mentalizing* and *mindfulness meditation*, to tune into the more holistic perspective that is a key feature of wise decision-making. These practices have actually been observed to stimulate a key part of the brain — the dorsal part of the lateral prefrontal cortex. Activating this zone allows us to pay attention to our “wise advocate”. In so doing, we are directing ourselves away from the easier ‘*Low Road*’ of tactics (Kahneman’s System 1), to the reflective ‘*High Road*’ of strategy (System 2). This high road is also loftily known as ‘*moral deliberative reflection*’. Taking it is no miracle practice. But executives who do will likely strengthen their capacity to make wise decisions.

And this means decisions that are ethical, responsible and sustainable.

About Dr. Peter Verhezen

Peter is Visiting Professor for Business in Emerging Markets and Strategy and Sustainability at the University of Antwerp and Antwerp Management School (Belgium). He is Principal of Verhezen & Associates (www.verhezen.net) and Senior Consultant in Governance at the International Finance Corporation (World Bank) in Asia Pacific. In this capacity, he advises boards and top executives on governance, risk management and responsible leadership. Peter has authored a number of articles and books in the domain, and collaborated closely with Amrop in the development of the wise leadership concept.



Inside the Wise Leader's Brain

The Neuroscience of Leadership

Could Homo Deus Replace You?

Our brain is an organ of extraordinary resilience and plasticity. Its ability to change itself and adapt allows it to overcome massive difficulties. Could AI scientists draw inspiration from human brainpower to build more efficient machines?

Professor Yuval Harari goes further. He foresees that organic algorithms (*homo sapiens*) will gradually melt together with digital platforms. In Davos (2018), he asked the unnerving question: “*Will the future be human?*” For Harari, the even more unnerving answer is a mechanistic *no*.

He and fellow AI enthusiasts such as Ray Kurzweil at MIT believe that a new “transhuman” is poised to emerge, rooted in data-, bio- and brain engineering. *Homo deus* may well rule markets, and even the world. This cyborg will be more effective and efficient than *homo sapiens*. We may end up serving it.

Really? Well, organisms don't necessarily work purely as algorithms. Wise leaders will always be able to conceive a better future and do so in a way that is not completely dependent on patterns found in historical data, patterns which are often mere coincidences.

Organisms don't necessarily function purely as algorithms, and wise leaders will always be able to conceive a better future. They'll do this in a way that is not completely dependent on the patterns found in historical data.

Many scientists also think that homo deus may be a little premature.

Nature and nurture seem to have found an incredible form of ‘collaboration’ in the evolutionary sense. Natural selection is a remarkably efficient algorithm, adapting an organism to its ecological niche. Even if it does this at a painfully slow rate.

However, animals and humans have an ‘innate’ ability to learn *rapidly*. To swiftly adapt to unpredictable conditions.

Similarly, corporate leaders and their organizations (an artificial organism where group collaboration is crucial) need to strategically and tactically adapt to an ever-changing business context.

In our next chapter, we'll take a look at how machines learn.

Series References

- Barrett, L. F., (2017), How emotions are made. The secrets of the brain, New York, Pan Books
- Churchland, P.S., (2019), Conscience. The Origins of Moral Intuition, New York; London, Norton & Company
- Dehaene, S. (2014), Consciousness and the Brain. Deciphering how the brain codes our thoughts, New York, Viking-Penguin
- Dehaene, S. (2020), How we learn. Why brains learn better than any machine...for now, London, PenguinRandom-Viking
- Dehaene, S.; Le Cun, Y. & J. Girardon, (2018), La plus belle histoire de l'intelligence. Des origines au neurones artificiels: vers une nouvelle étape de l'évolution, Paris, Robert Laffont
- Dunbar, R.I.M., 1993, Coevolution of neocortical size, group size and language in humans, Behavioral and Brain Science, 16(4): 681-735
- Forbes, R.L., (2015), "Inside the CEO's Brain: Leadership, Management and Neuroscience", SSRG International Journal of Economics and Management Studies, Vol.2(6): 11-17
- Gazzaniga, M. (2005), The Ethical Brain, New York, Dana Press
- Johnson, M., (2014), Morality for Humans. Ethical Understanding from the Perspective of Cognitive Science, Chicago; London, Chicago University Press
- Iansiti, M. K.R. Lakhani, (2020), Competing in the Age of AI. Strategy and Leadership when Algorithms and Networks run the world, Cambridge MA, Harvard Business Review Press
- Robson, D., (2019), The Intelligence Trap. Revolutionise your thinking and make wiser decisions, London, Hodder & Stoughton
- Satel, S. & S.Q. Lilienfeld, (2013), Brainwashed. The seductive appeal of mindless Neuroscience, New York, Basic Books
- Schwartz, J.; Thompson, J. & A. Kleiner, (2016), "Neuroscience of Strategic Leadership. Research shows how leaders can take the high road less traveled", PWC-Strategy&Business, December
- Waldman, D.; Ward, M. & W.J. Becker, (2017), "Neuroscience in Organizational Behavior", Annu. Rev. Organ. Psychol. Organ. Behav., Vol. 4): 425-444

Further Reading

- Badaracco, J.L., (2013), The Good Struggle. Responsible Leadership in an Unforgiving World, Cambridge MA, Harvard Bus School Press
- Badaracco, J.L., (2016), Managing in the Gray. Timeless questions for resolving your toughest problems at work, Cambridge MA, Harvard Business School Press
- Bergstrom, C.T. & J.D. West, (2020), Calling Bullshit. The Art of Scepticism in a Data-Driven World, London, Allen Lane-Penguin
- Caruso, G. & O. Flanagan, (2018), Neuroexistentialism: Meaning, Morals and Purpose in the age of Neuroscience, Oxford, Oxford University Press



Changeux, J.-P. (translated by M. DeBevoise), (2004), *The physiology of Truth: Neuroscience and Human Knowledge*, The Belknap Press

Chomsky, N., (1966), *Cartesian Linguistics*. A chapter in the history of rational thought, Cambridge MA, Cambridge University Press

Churchland, P.S., (2011), *Braintrust*. What Neuroscience tells us about Morality, Princeton & Oxford, Princeton University Press

Damasio, A. (2006), *Descartes' Error*, New York, Vantage Books

Dweck, C.S., (2006), *Mindset: the new psychology of success*, New York, Random House.

Harari, Y.N., (2017), *Homo Deus*. A brief history of tomorrow, London, Vintage

Heffernan, M., (2020), *Uncharted*. How to Map the Future Together, London, Simon & Schuster

Hinton, G. & T. Sejnowski, (1999), *Unsupervised Learning: Foundations of Neural Computation*, Cambridge MA, MIT Press

Gazzaniga, M. (2011), *Who's in charge? Free will and the science of the brain*, New York. HarperCollins

Gazzaniga, M. (2015), *Tales from both sides of the Brain*. A life of neuroscience, New York, HarperCollins

Goleman, D., (2009), *EcoLogical Intelligence*. How knowing the hidden impacts of what we buy can change everything, New York, Broadway Books

Goleman, D., (2013), *Aandacht*, Het fundament van emotionele intelligentie, Masterdam, Uitg Contact

Goleman, D. & R.J. Davidson, (2017), *Altered Traits*. Science reveals how Meditation changes your Mind, Brain and Body, New York, Avery-Penguin

Johnson, S., (2018), *Farsighted*. How we make the decisions that matter most, London, John Murray

Lieberman, M.D., (2007), "Social Cognitive Neuroscience: a Review of Core Processes", *Annual Rev. Psychol*, Vol. 58: 259-289

Pott, H., (1992), *De Liefde van Alciabiades*. Over de rationaliteit van emoties, Amsterdam, Boom

Simon, H.A., (1987), "Making management decisions: the role of intuition and emotion", *Academy of Management Executive*, Vol. 1(1)

Sinek, Simon (2009), *Start with Why*. How great leaders inspire everyone to take action, New York, Penguin-Portfolio

Sinek, Simon (2013), *Leaders eat last*. Why some teams pull together and others don't, New York; London, Portfolio Penguin

Sinek, Simon (2019), *The Infinite Game*. We can't choose the Game. We can't choose the Rules. We can only choose how we play, Portfolio Penguin

Shook, J. & T. Solymosi, (2014), "Neuropragmatism and Reconstruction of Scientific and Humanistic Worldviews" in Solymosi, T. & J. Shook, *Neuroscience, Neurophilosophy and Pragmatism*, New York, MacMillan

Webb, A., (2016), *The Signals are Talking*. Why Today's Fringe is Tomorrow's Mainstream, New York, PublicAffairs

Williams, P.B. & H.C. Nusbaum, (2016), "Toward a Neuroscience of Wisdom", *Neuroimaging Personality, Social Cognition, and Character*, Chapter 21: 383-395



About Amrop

With offices in all world regions, Amrop is a trusted advisor in Executive Search, Board and Leadership Services. Amrop advises the world's most dynamic organizations on finding and positioning Leaders For What's Next: top talent, adept at working across borders in markets around the world.

Amrop's mission: shaping sustainable success through inspiring leaders.

www.amrop.com/offices

About Dr. Peter Verhezen

Peter is Visiting Professor for Business in Emerging Markets and Strategy and Sustainability at the University of Antwerp and Antwerp Management School (Belgium). As Principal of Verhezen & Associates and Senior Consultant in Governance at the International Finance Corporation (World Bank) in Asia Pacific, Peter advises boards and top executives on governance, risk management and responsible leadership. He has authored a number of articles and books in the domain.

www.verhezen.net

About the Amrop Digital Practice

Amrop's global Digital Practice combines deep sectoral knowledge with local market expertise, backed by global resources and integrated cross border key account management. We have long term partnerships with our clients on the digital transformation journey. Not only in delivering critical assets — the Leaders For What's Next — but in assessing boards and management teams, implementing succession planning and talent management solutions.

- AI/Machine Learning & Big Data Analytics
- Chief Digital Officers (CDO), Chief Information Officers (CIO) and Digital NEDs
- Cyber Information Security Officers (CISO)
- E-Commerce, Sales Executives
- Scale-up, Venture Capital
- Media & Entertainment
- Fintech
- Telco

©2020 The Amrop Partnership SCRL. All rights reserved.

Photography by Unsplash: Tyler Lillico and Jonathan Borba