

Michael L. Platt

DIRECTOR, WHARTON NEUROSCIENCE INITIATIVE

the
leader's
brain

*ENHANCE YOUR LEADERSHIP,
BUILD STRONGER TEAMS,
MAKE BETTER DECISIONS, AND
INSPIRE GREATER INNOVATION
WITH NEUROSCIENCE*



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WHARTON
SCHOOL
PRESS

Philadelphia

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Published by Wharton School Press
The Wharton School
University of Pennsylvania
3620 Locust Walk
300 Steinberg Hall-Dietrich Hall
Philadelphia, PA 19104
Email: whartonschoolpress@wharton.upenn.edu
Website: wsp.wharton.upenn.edu

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Ebook ISBN: 978-1-61363-098-3
Paperback ISBN: 978-1-61363-099-0

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Introduction

When Hurricane Maria, a deadly Category 4 storm, ravaged Puerto Rico in 2017, news coverage focused on the catastrophic human toll. More than 3,000 people lost their lives, and the 3 million who survived dealt with physical devastation of their communities, job loss, lack of clean water and food, and the worst blackout in US history.

But Maria also ravaged another population. I have been studying the inhabitants of Cayo Santiago, also known as Monkey Island, for the past 13 years. The island is home to about 1,700 rhesus macaque monkeys, and it also took a direct hit from the hurricane. The devastation included severe flooding and damage to most of the vegetation. All the infrastructure was destroyed, including the rainwater-collecting cisterns that provided fresh water and the feeding corrals where researchers provisioned food that supplemented what the monkeys foraged from the island.

Since the hurricane, my team here at Wharton and the University of Pennsylvania School of Medicine, as well as our many collaborators at other institutions, have been studying the impact of both immediate and lingering stress on the brain and on the body. We're learning not just what stress does to us but how we can fight its effects. The monkeys—all of which survived the storm but exhibit classic signs of exposure to stress—are showing us how we can better protect ourselves. The insights we're gaining could help leaders decide how to invest in solutions that support their teams and employees and, in the process, reduce the estimated \$300 billion that US companies currently spend on the health costs, absenteeism, and poor performance that result from workplace stress.



The author is pictured with rhesus macaque monkeys on the island of Cayo Santiago.

Perhaps the most important lesson the Cayo monkeys have taught us is that social support is critical to successfully navigating disasters. In the aftermath of Hurricane Maria, monkeys not only became more tolerant of each other but actively reached out and made new friends. This behavioral response echoes what people often do after disasters like tornadoes and earthquakes or terrorist events like 9/11.¹ Amazingly, it's been three years since the hurricane, and the monkeys continue to seek out and provide social support. Unfortunately, "all for one and one for all" solidarity in humans often fades as people try to put the memory of terrible experiences behind them.

As I write, we're currently living through what are likely the early stages of the COVID-19 pandemic, which may last for many months or years. COVID-19 has led to the implementation of social distancing across the world, causing an abrupt and unprecedented impact on our behavior and our economies. The consequences of these severe disruptions to our social lives are keenly felt in our longing to be together and get back to work. Given what we've dis-

covered about the importance of social support for mitigating extreme stress, the impact of social distancing on our ability to weather this “storm” is profound. As we navigate the COVID-19 “new normal,” there is an enormous opportunity, and real imperative, to be better leaders—at the office, in our homes, and in our communities. As we’ll discuss, neuroscience can help illuminate this new, enlightened path forward.

How Neuroscience Can Provide the Answers

Two years ago, Wharton neuroscience postdoctoral fellow Feng Sheng and I gathered groups of smartphone users to see if they had an emotional and social connection with their brand. We focused particularly on two of the behemoths that seem to inspire at times fierce battles between their loyalists—Apple and Samsung.

In the case of these two phone giants and many other brands, people talk about them as if they were other people: They love or hate them, and they imbue them with human traits such as creativity, practicality, sexiness, or smartness.

We know how our brains respond to the people we’re closely connected to, and we wondered if our brains respond similarly to brands and companies. Because smartphones are such a personal item, we decided to focus on them, recruiting groups of Apple and Samsung users who didn’t own products of the other brand.

Participants had their brains scanned with functional magnetic resonance imaging (fMRI) while seeing positive, negative, and neutral messages about both brands. This technique takes snapshots of blood flow in the brain, allowing us to visualize brain activity. Apple users showed empathy for their own brand: The reward-related areas of the brain were activated by good news about Apple, and the pain and negative feeling parts of the brain were activated by bad news. They were neutral about any kind of Samsung news. This is exactly what we see when people empathize with other people—particularly their family and friends—but don’t feel the joy and pain of people they don’t know.

Samsung users, on the other hand, showed no increased activity in either area when they were shown positive and negative news about their brand. Interestingly, though, the pain areas were activated by good news about Apple, and the reward areas were activated by bad news about the rival company—some serious *schadenfreude*, or “reverse empathy.”

If I were the Chief Marketing Officer of Samsung, I would be worried. Samsung customers’ brains tell us they’re just not that socially and emotionally connected to the brand, and that makes the company much more vulnerable to a potential competitor (just as a weak workplace culture can lead to higher turnover). Apple, of course, has been building the connection with its customers for years. Its customer experience is consistent across products, the app and retail stores, marketing messages, and website. The experience has deepened over time as new functions and apps allow users to, for example, pay for every purchase, navigate to physical locations, control their home electronics, identify the health value of potential food purchases, and more. It’s even indispensable when you’re not awake: There are apps that measure your sleep cycle.

What we’ve learned about how people form connections with brands could be helpful for leaders seeking to improve connections with and among their workforces. And beyond that, neuroscience is helping us discover how different people react to aspects of everyday business. Perhaps most importantly, these studies reveal that traditional methods in business that rely on surveys and self-reporting sometimes fail to capture what’s really going on in the minds of our employees and our customers. Neuroscience provides powerful tools and insights that can help leaders bridge this gap to make better decisions.

What Are You Thinking?

Back to the monkeys. Believe it or not, they’re the reason I got into the field of neuroscience in the first place. In 1994, I was finishing my PhD in biological anthropology at Penn, conducting research

into the foraging skills of monkeys. It was interesting work, but a question kept nagging at me—one that would take me to New York University for the next five years to complete a postdoctoral fellowship in neuroscience. I couldn't stop asking myself, "What are they thinking?" Measuring monkey behavior was one thing. Figuring out what's going on in their brains, and by extension our own brains, became my life's work.

In 2015, after 15 years as a professor and four years as director of the Institute for Brain Sciences at Duke University, I returned to Philadelphia as a University of Pennsylvania Penn Integrates Knowledge professor. I have full appointments in the Perelman School of Medicine's Neuroscience Department, the School of Arts and Sciences' Psychology Department, and Wharton's Marketing Department. I'm also the founding faculty director of the Wharton Neuroscience Initiative, where our goal is to build better business through brain science. The wide array of my appointments shows how deeply pervasive the importance of neuroscience is becoming across disciplines, as more and more industries look for optimal leadership and employee engagement.

Indeed, neuroscience is much more than simply understanding how our brains work. We're forging a new discipline drawing on neuroscience, behavioral science, data science, psychology, economics, marketing, management, evolutionary biology, and anthropology. As director of the initiative, I hope to move neuroscience out of the lab and into the hands of people so they can unlock its full potential at work and in their daily lives. Our goal is to translate our research into direct applications—tools that people can use to reach their peak performance and enhance their well-being and that organizations can use to improve just about everything, from marketing to management to decision-making.

Ten years ago, I didn't think what we're now doing every day was even possible. I never imagined we'd have high-quality brain-monitoring devices that could collect data from people engaged in real-world activities. But today we're using devices of our own design to learn about performance in teams working together in the

gym, on the playing field, and in the boardroom. Neuroscience is now making it possible to predict sales across the country by measuring the brain activity of a small number of people watching the same commercial. We can even measure a customer's shopping experience without interrupting them to ask them what they're thinking and feeling. These advances—and many others—give me great confidence that we will continue to see breakthroughs in other domains. We'll better understand how to achieve greater performance, whether in the boardroom or on the playing field, and we'll be able to apply what we learn to create more value for people, for companies, and for society.

Neuroscience is providing answers to many business challenges, such as why two managers, when presented with the same set of information, make very different decisions. We're learning why an idea for a new product generates excitement in a focus group but falls flat when it reaches the market, and why seemingly similar teams produce drastically different work outcomes. We're even learning how some companies build strong social and emotional connections with their customers and why others do not, and our findings suggest neuroscience can account for differences in brand loyalty and ultimately help predict the lifetime value to the company of all the ad spend used to acquire a customer.

How to Read This Book

What does a leader's brain look like? The leader's brain is energized yet taxed. It is focused yet flexible. It is finding insights that can solve seemingly impossible problems. It is making the right decisions. It is finding ways to collaborate with others and foster team chemistry. It is constantly providing feedback and helping people to learn and change their behavior for the better.

The "leader's brain" is a mindset. It is a leadership approach that seeks to use neuroscience insights to develop our skills as managers and leaders. It is my goal that you will be able to use these insights and apply them to your own work, whether it's in how you approach day-to-day

management tasks or the broad scope of your vision as a leader. And I hope you will also be able to use these insights to be a leader in your community and to live a happier and healthier life at home.

Today, our pioneering research has already deepened our understanding of how key areas of the brain work and how that understanding can be applied in business settings. I provide an overview of this in chapter 1. We're learning more about the social brain network—an interconnected set of brain areas that manages our interactions with other people—and how it can be strengthened, which I also cover in chapter 1. As our collaborators at the University of Oxford have found, our ability to connect with others is like a muscle: The more you use it, the more it grows.² This is a powerful and important message, especially in business, where relationships are so critically important. You don't have to be gregarious, but you can improve social ties by working on them. Talking to people you don't know will physically change your social brain network. As a bonus, you'll not only improve your results but also be healthier and happier.

Findings on the social brain network also provide important insights on key leadership skills such as effective team building and communication, which I cover in chapters 2 and 3. You'll learn what's going on in your brain when your team is working in sync with each other, and how you can tweak *how* you deliver a message to make sure others hear it.

In chapter 4, you'll learn how to encourage greater creativity and innovation, not by hiring new talent but by better motivating your existing team. You'll even learn how to get your customers to love your brand in the same way they love their families. In chapter 5, you'll find out how to make more effective decisions crucial to the future of your company, and in chapter 6, you'll discover how to drive better performance through learning. Finally, in chapter 7, we'll explore a still-untapped potential and where brain science might take leaders to even bigger heights in the future.

This book is all about building a leader's brain to help you enhance your leadership. It's my hope that by exploring cutting-edge

neuroscience and its practical applications for business, you'll be able to make important new improvements in your leadership capabilities, the performance and job satisfaction of your team, and work outcomes.

And you might have some fun doing it.

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