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A brainwave in the study of leadership

By Debbi Gardiner McCullough

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What makes a good leader? Which attributes guarantee a chief executive's ability to be sensitive, compassionate and still lead through tough or stressful times? And if these skills could be honed in the minds of MBA students, corporate managers or military officers, is this something that should be pursued? Such questions have long been pondered by Pierre Balthazard, an associate professor at the Carey School of Business at Arizona State University. Now, after a decade of work, not only has his research taken off but he has found a captive audience.

Modern science has looked at the sources of electricity in the brain and how this is used. Professors of psychology have expanded on this research. But Prof Balthazard has teamed brain mapping with leadership development.

Leadership research has focused on finding which skills inspire individuals and groups to function most efficiently. But recently, researchers have explored more complex issues: how to develop traits such as authenticity, charisma and visionary and inspirational leadership in less talented leaders. With business schools now rethinking their approaches, many are incorporating leadership, ethics and responsibility as core topics along with the traditional subjects such as economics and finance.

"Neuroscience offers a powerful yet different microscope for the human dimension of business," says Prof Balthazard. "It helps us understand what makes humans do what they do."

His work suggests that the behavioural and emotional qualities of leadership can be traced to neurological activity in identified regions of the brain. He is working on linking this activity with the qualities that best benefit those at the top of a company to create training techniques that develop effective leadership abilities.

Prof Balthazard was drawn to the work of neuroscientist Jeffrey Fannin, a psychologist and executive director of the Center for Cognitive Enhancement, a clinic near ASU's campus. Dr Fannin scanned patients' brains and found that signature patterns existed for dysfunctional behaviours. Through exercises and scanning, he was able to help patients train their brains to change their behaviour.

The two men collected data from 55 business and community leaders with a variety of leadership skills, including entrepreneurs, bankers, lawyers, doctors, a land developer, a retired business school dean, a senior diplomat and a mountaineer. Prof Balthazard measured the electrical activity of their brains and demonstrated what he believes is 100 per cent accuracy in determining who is a strong leader. He has also discovered that leaders with high "psychological capital" (hope, optimism, resilience) display different brain activity.

He says that now the role that different brain areas contribute to leadership is better understood, neuro-feedback training can develop the behaviour individuals want to optimise. Using pictures and sound on a computer, they are taught how to control their brainwaves by consciously managing systems of neurons. After several sessions a new brain map is completed to assess the changes.

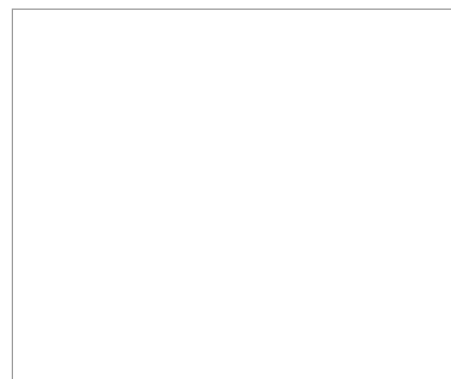
Prof Balthazard believes this data can help organisations assess traits such as vision, a global mindset, charisma and resilience. It can also identify whether clinical problems such as depression or anxiety interfere with performance.

Prof Balthazard is already finding business applications for the methodology. With researchers at the US Military Academy at West Point he is developing a leadership norm and exercises that improve and develop the brain profile of a leader.

The Thunderbird School of Global Management in Arizona also plans to use the research to help determine what constitutes the neuroscience pattern of a global mindset. Mansour Javidan, dean of research and professor of global management at Thunderbird, has devised a psychometric tool that tests how managers think and handle issues in unfamiliar settings. Students complete the survey before starting the programme and after graduating. Prof Javidan sees an advance of at least one point on a five-point scale in intellectual and social capital in most graduates.

Other schools are following suit. Georgetown University's McDonough School of Business plans to use the survey, as does the Smith business school at the University of Maryland.

But brain mapping has its detractors. Some sense shades of a post-1984 Orwellian world. Finding funding has also been difficult. Prof Balthazard estimates that the direct costs of developing the neuroscience of leadership could reach \$500,000 (€355,000, £307,000).



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But he believes in the benefits of the work. "Training the brain to new heights of leadership may represent a very positive development in the human condition," he says.

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