BRAIN-BASED LEADERSHIP: WHAT’S MISSING?

Ernest Gundling, Ph.D.

September 27, 2018
Approaches to leadership based on neuroscience are alluring. Advances in magnetic resonance imaging (MRI) have provided an exciting new window into the everyday functions of the brain. Consultants and coaches eagerly cite the latest neuroscience research as the basis for their leadership advice, focusing on how it can be applied to vital tasks such as driving a successful change initiative.

And what could be a more common human asset than the brain, with its magnificent synapses and plasticity as well as its flaws? Brain-based leadership development seems sensible, scientific, and compelling, with the potential for global applications that bridge pesky nuances, paradoxes, and differences.

**What could possibly be missing?**

Before jumping on this popular bandwagon, let’s explore other elements that comprise a full human being and contribute to successful leadership. Here’s an example:

Albert Farnsworth was a fast-rising leader from the UK assigned to run a firm in Hong Kong that his company had recently acquired. Confident in his prior leadership track record, primarily from his work in northern Europe, and armed with a UK-based coach informed by neuroscience research, he developed a plan for integrating the new acquisition.

Albert sought to reduce status threats related to the acquisition by demonstrating respect for the status of the firm’s previous leaders. He preserved their titles, assigning to himself the newly-coined title of Managing Director. In his usual egalitarian style, he frequently asked local managers and employees for their input on key decisions, with brainstorming sessions designed to draw out their ideas. He sought to preserve employees’ sense of autonomy and certainty by establishing broad goals for the organization and then giving them room to create their own solutions – this was a leadership style that had worked well for him in the past and had been a key part of his own success story to date. He also began to introduce them to their new matrix counterparts around the world, stressing how the new parent company’s relatively flat hierarchy enabled the best ideas to move quickly between regions.

However, the plan did not generate the results that Albert had anticipated. Both sales and morale began to drop, his team brainstorming sessions seemed to go nowhere, and soon key junior employees began leaving the firm, hired away by local companies. When Albert asked his local HR manager for results from employee exit interviews, he was unpleasantly surprised by the criticisms of his own leadership, expressed in comments such as the following:

“We don’t know who the boss is anymore. Our previous leaders didn’t perform well and that is why they had to sell the company. Now they are stuck in the middle and don’t know what to do.”

“Albert is always asking for our opinion, which makes us think that he doesn’t know what he is doing and is a weak leader.”

“He seems to delegate and disappear. We want someone we can bring problems to and then do problem-solving together.”

“We want more change and faster. The market is moving very rapidly here, and the new boss should fire older managers who can’t keep up.”

Albert’s primary failing and one that almost derailed his career was his attempt to replicate his prior leadership style without considering the differences in his new environment. By attempting to drive change in a new environment without understanding the cultural nuances, Albert demonstrated a lack of cultural self-awareness, a critical element in successful leadership.
Albert's primary failing and one that almost derailed his career was his attempt to replicate his prior success by using the same leadership style in a different cultural environment. In this case, his application of neuroscience to address the importance of status issues during the ownership transition contributed to overconfidence in his plan and actually reinforced his cultural blindness rather than providing him with contextually appropriate leadership strategies.

Brain-Based Leadership: The Missing Hemisphere

There have been various critiques of neuroscience-based leadership approaches and their skillful branding, which includes colorful brain models and MRI images at training events to highlight their scientific aura. Warren Bennis, a well-known pioneer in the field of leadership development, noted that much of this new movement repackages prior insights, especially those of Daniel Goleman on emotional intelligence. He states, "What worries me is people being taken in by the language of it and ending up with stuff we’ve known all along."

While such comments raise concerns, there is arguably a deeper problem with neuroscience-based leadership approaches that has not received sufficient attention: their universal claims and attractive packaging can reinforce a convenient "one size fits all" solution for leadership development across global organizations. Such standardized solutions are usually ethnocentric, reinforcing the impulse to evaluate others based on our own standards and to make “them” more like “us;” this becomes even easier to justify with a seemingly invincible scientific rationale.

The core problem with the current applications of neuroscience to leadership is not that they are wrong, but that they are incomplete, unbalanced, and potentially misleading. It turns out that there is a lot more evidence available, including research from additional branches of neuroscience, that can help provide a fuller picture of humanity with vital implications for leadership.

Nature and Nurture

Anyone who studied Psychology 101 in college during the last fifty years was likely introduced to the nature vs. nurture debate. Simply put, decades of research tell us that human beings are products of both their genetic makeup (nature) and their physical and cultural environments (nurture).

In fact, a key differentiator of humans from other species is that they are less genetically pre-programmed (nature) and more responsive to novel or changing environmental factors (nurture). Humans develop from childhood based on cultural influences such as how they are held, who they live with, where they sleep, what they eat, the sounds they hear, the stories they are told, the ways in which they are praised or scolded, and so on. One definition of culture is that it is a way of addressing common human challenges in a particular environment. Each culture passes on the successful survival methods of its elders that fit a distinctive time and place, and these learnings shape the way that each brain is configured.

To date, neuroscience-based leadership approaches have focused primarily on the “nature” side of nature/nurture equation, highlighting common features of human physiology and cognitive functioning, while generally ignoring the “nurture” or environmental component, which plays an equally powerful role in shaping human development. Culture is too often treated cheerfully as an organizational feature to be “built” or “redefined” based on scientific insights into the brain, rather than as a pervasive developmental influence that shapes the very functioning of the brain itself in different ways, depending upon our upbringing.

Culture and the Brain: Research Examples

There are a number of studies commonly neglected by current neuroscience leadership gurus that provide fascinating and important evidence for how human brains can be wired differently based on cultural influences.

**Study #1: Does Self Refer to “Me” or “We”?**

The prefrontal cortex region of the brain is believed to represent our idea of the self. One research study found that this area became active when U.S. study participants thought of their own personal identity and traits. For Chinese study participants, on the other hand, this region was activated by adjectives describing both themselves and their mothers. In other words, the very definition of self is shaped by culture. Different definitions of “me” or “we” can and do lead to very different leadership styles.

**Study #2: Attention to Objects vs. Context**

Another study revealed distinctly different attentional bias based on culture. This study showed sample images to both Western and East Asian participants. Westerners, whose cultures place a high value on independence and individuality, tended to focus their attention on particular foreground objects, with less regard for context and relationships among items.

In contrast, East Asian participants, whose cultures emphasize interdependent relationships and awareness of context, focused their attention on the context of the image and demonstrated relational processing of information.

So not only our self-definition but also what we pay attention to is culturally influenced. Leaders from different cultural backgrounds may notice very different things, with some focusing on the action items in the foreground, and others examining the broader context.

**Study #3: Valuing “Modesty” or “Assertiveness”**

A third study found that the area of the brain that produces dopamine, or the “feel-good hormone,” responds differently based on cultural conditioning. The study showed volunteers from the U.S. and Japan drawings of people standing in a more submissive pose, with their heads down and shoulder hunched, and of other people standing in a more dominant pose, with their arms crossed and their faces forward.

Respondents interpreted the same pictures differently based on their own cultural values. Japanese participants produced dopamine when viewing the first drawing, as they interpreted the submissive posture positively, seeing it as a demonstration of modesty and respect. U.S. participants produced dopamine when viewing the second drawing, as they saw the dominant pose as an indication of confidence and strength.

---


4Study by Nalini Ambady and Jonathan Freeman originally published in *Neuromage, Vol.47, No. 1, 2009,* also summarized in an article by Beth Azar, "Your Brain on Culture," *American Psychological Association, November 2010, Vol. 41, No. 10,* that cites numerous advances in the field of "cultural neuroscience." Ambady is quoted as stating, "We see that what the brain finds rewarding reflects the values of the dominant culture. People can see the same stimulus but have completely different neural responses." See also, for example, Heejung Kim and Joni Sasaki, "Cultural Neuroscience: Biology of the Mind in Cultural Contexts," *Annual Review of Psychology, Vol. 65, 2014.*
Implications for Leaders

These three studies and others like them from the emerging field of “cultural neuroscience” have enormous implications for developing leaders on a global scale. To avoid becoming the latest form of ethnocentrism, dressed up this time in white lab coats, brain-based leadership approaches must embrace both nature and nurture to help leaders work effectively around the world.

If how we define ourselves, what we perceive, and the judgments we make are all shaped by our cultural environment, leaders from different backgrounds need to understand both what makes them similar to and what makes them different from their global colleagues. They must also cultivate skills for adapting to each other in integrated global workplaces that could involve virtual meetings, travel to distant locations, or working with a diverse mix of colleagues in the same building.

Approaches to leadership informed by neuroscience are incomplete if they fail to take into account not only how the brain functions but also the cultural influences that shape it. What are the implications of a more holistic view of the brain, encompassing both “Nature” and “Nurture,” for leadership development?

Culture & Leadership: The Missing Hemisphere

Consider the SCARF model described by David Rock, head of the NeuroLeadership Institute and author of “Your Brain at Work.” Although the five elements of this model – Status, Certainty, Autonomy, Relatedness, and Fairness – are convincingly linked with research into fundamental brain functions such as our “fight or flight” impulses, all of these elements are also subject to culturally based indoctrination and interpretation. It would be a mistake to assume that each SCARF element manifests itself similarly everywhere, or that the model can applied to promote “culture change” without cultural understanding.

For example, while it is true that Status, the “S” in SCARF, is important everywhere, this aspect of human behavior is expressed and interpreted quite differently based on the particular environmental context. Some cultures are far more hierarchical than others, and hierarchy is also manifested in different ways. In China, for instance, it is relatively common to have a person who is clearly in the role of the “boss,” issuing orders in a directive style, while many U.S. and Northern European organizations attempt to distribute significant authority to other leadership team members and throughout the organization, endorsing “leadership at all levels.”

So in one cultural environment, the greatest perceived threat could be having a leader who is overly directive, violating others’ sense of status, while in another it might be having no boss or unclear lines of authority. In the case of Albert Farnsworth, by attempting to drive change in his new environment using his own culturally conditioned approach to status – delegating most authority to local leaders, engaging in regular brainstorming sessions, and introducing local employees to their global matrix counterparts – the result was confusion and disengagement rather than effective “culture change.”

As generations of expatriates have discovered at great cost, culture change is possible within an organization or team with sustained focus over time, but only based on deep knowledge of the broader national cultural environment – and woe to those who embark on a mission to change the whole country. Through the mental lens of Albert’s more hierarchical, group-oriented local employees in Hong Kong, in contrast to his self-image as a skillful facilitator and change agent, Albert appeared instead to be a weak and uncertain leader who failed to make decisive changes while preferring to “delegate and disappear.”
Status can even take on different, complex forms based on national and organizational cultures that frequently harbor contradictions. Many companies in the U.S. pride themselves on their egalitarian cultures and informal style, while still taking for granted executive compensation that may be as much as 900 times the median employee salary. Major differences can also exist between generations, regions, functions, genders, and socioeconomic classes within the same country.

In Albert’s new Hong Kong-based acquisition, it turned out that generational differences were critically important. The most senior managers whose own parents had known great hardship and social chaos (many were refugees from civil war and the Cultural Revolution) valued the respect for their status offered by an unchanged job title as well as continuity with previous policies. Meanwhile, employees in the same workplace from a younger millennial generation were more accustomed to prosperity, social stability, and constant opportunities for growth. Many of these employees were far less attached to the status quo and more ready to embrace change, expressing impatience at Albert’s slow pace in moving conservative senior leaders out of the way (“After all, they are the ones who failed and had to sell the company”). For these younger employees, his demonstration of respect for the status of senior local managers was misplaced, and quickly became a source of frustration and disengagement.

What is true for Status also holds for any other aspect of the SCARF model – universal human traits are molded by one’s physical environment and cultural upbringing, and are expressed in workplaces around the world in ways that are both similar and different. The SCARF model highlights what we need to pay attention to, but not necessarily how to adapt our approach to fit different global environments. Leaders ignore culture at their peril, including the nuances and differences within cultures as well as between them. Numerous costly failures, including cross-border acquisitions, change initiatives, and rollouts of well-intended inclusion & diversity efforts (“Gender issues are the same everywhere, right?”) can be traced to cultural blindness.

Cultural Differences: Five Dimensions

The cultural dimensions depicted in Figure 1 below overlap with four out of five elements of the SCARF model:

- Status: Egalitarianism/Status
- Certainty: Risk/Certainty
- Autonomy: Independent/Interdependent
- Relatedness: Task/Relationship

Figure 1: Dimensions of National Culture
These dimensions highlight contrasts between national cultures that have been borne out by decades of research, including data from tens of thousands of survey respondents. National cultures may change over time, but the process is generally slow and uneven, and can result in either convergence or divergence in comparison with other national norms. The way in which people actually behave along each of these dimensions is influenced by their own dynamic cultural setting just as it is by the structure of the brain – in fact, these two pervasive influences on human behavior are closely intertwined.

Leadership Development: Implications

So what are the implications of the “Nurture” side of the Nature/Nurture equation for leadership development? There is of course value to current neuroscience-based approaches if they are used wisely, based on the knowledge that they address one part of the leadership development picture and are not a panacea. When used exclusively, however, particularly in a global leadership context, they can be readily classified as fitting either the “Denial” or “Minimization” phases of the intercultural development scale that charts movement from a monocultural, or ethnocentric, mindset, to an intercultural mindset.⁵

Figure 2: The Intercultural Development Continuum⁶

The stages in this scale, themselves derived from extensive research, are Denial, Polarization, Minimization, Acceptance, and Adaptation. Leadership approaches that focus on human similarities while consistently underestimating differences cannot support progress toward the more advanced stages of this intercultural developmental spectrum. Approaches grounded in the brain’s physiology often tell us that our brains perceive “difference” as a potential threat, but give us inadequate guidance for how to adapt. Full understanding of the power of culture requires a pragmatic embrace of both similarities and differences.

⁵The first stage of ethnocentric thought is denial, in which people who are isolated from other cultures consciously ignore those other cultures’ values. The last stage of ethnocentric orientations is minimization. People in the minimization stage focus only on personal similarities (e.g., physical, biological, philosophical), but do not legitimize other societies’ broad cultural frameworks.” Jingzhu Zhang, “Test Review: The Intercultural Development Inventory Manual,” Journal of Psychosocial Assessment, Sage Publications, February 20, 2014, http://journals.sagepub.com/doi/abs/10.1177/0732289413509759?journalCode=japa

⁶The Intercultural Development Continuum was originally developed by Mitchell Hammer and Milton Bennett. It is now owned by IDI, LLC, which is a division of Hammer Holdings, Inc. See, https://idinventory.com/publications/the-intercultural-development-continuum-idc/
More complete approaches to neuroscience and leadership development will incorporate both Nature and Nurture, or brain physiology and culture. Current and future global leaders need to cultivate knowledge and skills that include:

- Personality and Cultural Self-Awareness – personal characteristics as well as culturally based assumptions
- Psychological and Cultural Neuroscience – common features of the human brain as well as the developmental impacts of different cultural contexts that also influence how humans behave
- Culture Change and Cultural Influence – how to change culture in more “micro” settings (particularly organizational and team cultures) while at the same time recognizing the pervasive influence of national cultures (transmitted in families, schools, and workplaces) on our behavior.

A balanced approach to leadership development includes deliberately paradoxical terms such as “adaptive authenticity,” acknowledging the need to work with both what we are given and who we can become. Leaders must draw upon their own upbringing and core values while being deliberately open to “mind-blowing” experiences with colleagues from other parts of the world that could change them forever. This approach is flexible and open-ended, acknowledging that successful leaders can and do accomplish their tasks very differently, and that there are various ways to inspire colleagues and to solve problems effectively in different environments.

One-size-fits-all approaches to leadership development in any form are alluring but ultimately bound to run squarely into their own limitations. Even attractive and modern-sounding packages such as neuroscience-based leadership can prove lopsided and therefore circumscribed in their usefulness unless they embrace how human beings are both fundamentally similar and profoundly different.

For more information about Aperian Global’s approach to leadership, see: https://www.aperianglobal.com/solutions/develop-global-leaders/

Sign up to receive a free copy of our forthcoming ebook called, Inclusive Leadership: https://www.aperianglobal.com/inclusive-leadership-ebook-interest/

---