COMPASSIONATE LEADERSHIP

The Neurobiology of Compassionate Leadership

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Abstract

The success or failure of a leader is deeply rooted in human nature, as the capacity to unite the human spirit in favor of transformation and consciousness evolution is a collective endeavor. To co-create a different future, people need to feel cared for and psychologically safe. Compassion, the capacity to acknowledge another person’s suffering and have the desire to alleviate it, connects human beings at a deep and primal level. Recent discoveries in modern neuroscience and mind-body research indicate we are wired for compassion and without it engaging groups of people in a change process may not be possible, as the physiology of the human nervous system is not conducive to effective leadership when compassion is missing from human interactions. This discussion shares some of the challenges leaders face in the 21st century workplace, along with insights from contemporary neuroscience and mind-body science that support compassion as a potential solution to navigating these issues and upgrading the current leadership paradigm. A recommendation to incorporate loving kindness meditation (LKM) into leadership development programs is discussed.

Keywords: compassion, neuroscience, leadership effectiveness, compassionate leadership
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Leadership is about relationship; it is a social construct. The success or failure of a leader is deeply rooted in human nature, as the capacity to unite the human spirit in favor of transformation and consciousness evolution is a group endeavor. There is no leadership without collective leadership. Humans are mammals, and mammals work cooperatively toward a common goal through interconnectedness facilitated by an emotional bond. Effective leaders mobilize the energy of people to co-create, which involves shifting the way a community thinks, feels, and behaves in the world. This involves high levels of engagement. However, for well over a decade engagement levels have been alarmingly low - 70% of the American workforce is disengaged (Gallup, 2017). Leaders play such a critical role in engagement, as they have primary responsibility for cultivating an atmosphere of trust, confidence, and commitment to achieving the vision and mission of an organization. Gallup (2009) states “the lifeblood of employee engagement is caring,” highlighting that leaders, particularly managers, account for 70% of the variance in engagement scores within organizations. Unfortunately, strategies from the behaviorist movement and industrialized age worldview dominate leaders’ toolbox for getting people engaged and enhancing their performance; the popular incentive and threat approach to performance improvement in the workforce is outdated and may be giving organizations more of what they do not want (Rock, 2009; Rock & Schwartz, 2006). Ensuring compliance with rules rather than deep thinking was effective in the industrialized work setting over 100 years ago, but not in the 21st century workplace, which may be why the track record for moving change initiatives forward in organizations is not a positive one. Connection, meaning and purpose are biological imperatives and need to be honored to gain access to human potential (Lieberman, 2013; Lieberman & Eisenberger, 2008; Phelan, Link, & Tehranifar, 2010).
With the challenges faced by today’s leaders, it is time to reflect on the assumptions held about human nature. We need leaders who can generate ways for people to organize, unify, and create something extraordinary together in a time where there is great uncertainty, particularly in organizations where the stakes are high, such as healthcare and human services. Researchers and practitioners in the field of organizational learning and development have embraced the term “VUCA,” which stands for “Volatile, Unpredictable, Complex, and Ambiguous” to describe the present organizational climate (Brendel, Hankerson, Byun, & Cunningham, 2016). There is more pressure than ever for leaders to be able to harness the collective intelligence, attention, and heart of human communities for the greater good of our species.

Compassion, a sensitivity to the suffering of someone else and a desire to alleviate that suffering, has been one of the most revered, honored, practiced, and pursued of human emotions for thousands of years, and a leading component of almost every religion and spiritual quest (Stevens & Woodruff, 2018). It may hold answers for this challenge. Compassionate leadership involves selflessness that seems distinct from the traditional more autocratic view of leadership; it has been described as an act of love that fosters meaning and purpose in people’s lives (Grant, 2008). Is there evidence to suggest that moving from self-centered to other centered and having the desire to relieve other people’s suffering holds a key to the mysteries of transformative leadership that scholars and practitioners have been trying to unlock for hundreds, if not thousands, of years? This discussion explores this question by sharing the hard science that underlies compassion and how it might connect to effective, perhaps even extraordinary, leadership. Findings from the fields of modern neuroscience and mind-body research will be shared, along with reflections on how to use the insights to facilitate a richer discourse on what it
takes to embody leadership that makes a positive difference in the trajectory of the human experience.

**Wired for Compassion**

Deep-seated in our physiology, compassion is threaded throughout the quilt of our survival. Interestingly, it is often perceived as being ‘soft’ and putting oneself at risk for looking weak or vulnerable. However, a deeper look at the definition of compassion and what it takes to exercise it in the face of human suffering, as well as what the research has unearthed, elicits a shift in perspective. Furthermore, it is a profound shaper of the teachings we pass down to our children to construct the blueprint and trajectory of our society. Compassion may be the fiercest human skill of all to cultivate. The concept of suffering holds an emotional gravitational pull—the word itself is heavy. This may be why organizations steer away from it. As Worlene and Dutton (2017) explain, at least one hundred thousand hours of our lives are spent at work, and to think something as fundamental to human existence as suffering is separate from this experience is either foolish or wishful thinking. Workplace suffering is an invisible cost to human capability (Frost, 1991). Compassion is linked to resilience and emotional well-being in the workplace (Kemper, Mo, & Khayat, 2015. Moreover, psychological, intellectual, physical, and social resources are dependent on emotional well-being (Fredrickson, Cohn, Coffey, Pek, & Finkl, 2008). Poulin, Brown, Dillard, and Smith (2013) illustrated compassion buffered the association between stress and mortality; helping others appears to increase life span even when faced with levels of psychosocial stress that has been linked to detrimental health consequences. These findings indicate compassion has a physiological basis. Indeed, compassion is a biologically based skill, virtue, or trait that we can develop (Keltner, 2010). Director at the Center for Compassion and Altruism Research and Education at Stanford University, James Doty (2016),
asserts that we are neurobiologically wired to care for others—it is our default mode in the brain; however, high levels of stress on our physiology can shut down the natural tendency to engage in this inherent state.

**A Brain That is Designed to Care**

Being cared for and connected to other human beings is as powerful a need to survival as food; when this need is not met, it activates the physical pain networks in our brain (Lieberman & Eisenberger, 2008) and triggers the primitive fight or flight response, which in turn shuts down the higher order thinking regions associated with self-awareness, regulation, and social cooperation (Arnsten, 2009). This fear response signals a threat to survival, which inhibits circuitry of the brain needed for engagement (Rock & Tang, 2009). Giving and receiving nurturance appears to be a biological imperative, as research by Christov-Moore, Sugiyama, Grigaityte, & Iacoboni (2016) showed that our primary drive is to act prosocially, and that it takes more effort for the brain to act selfishly than selflessly. When we act compassionately to others, oxytocin, the pleasure hormone associated with eating our favorite food or feeling love toward someone, is released, which then stimulates dopamine and serotonin, activating reward circuitry in the brain and decreasing anxiety (Kukk, 2017). Rilling, Gutman, Zeh, Pagnoni, Berns, and Kilts (2002) found that two distinct areas of the brain—the caudate nucleus and anterior cingulate—involved with receiving or giving pleasure are activated when experiencing compassion. What stood out in this investigation is that helping others was discovered to feel the same as gratifying a personal desire, further indicating how interconnected human beings are. Compassion seems to be a significant contributor to happiness and optimism, two qualities important for cognitive and social intelligence and organizational success. This association with specific networks in the brain, along with the triggering of reward pathways suggests compassion
may be part of our basic operating system. It is important to note that the neuronal footprint associated with compassion looks different than empathy, which can sometimes be considered as the same experience as compassion. Although, there are some overlaps with compassion and empathy, empathy is less associated with the activation of brain regions linked to pleasure. Empathy is typically involved with the experience of pain (Fehse, Silveira, Elvers, & Blautzik, 2014). Whereas empathy is the sharing of feelings with others, compassion does not replicate a state of pain; it is a feeling of warmth, caring, and concern that results in the motivation to help the person who is suffering (Singer & Lamm, 2009). Compassion is also different in that it involves three subprocesses: noticing, feeling, and responding, suggesting compassion is not only an emotion, but a multi-faceted process (Wei, Zhu, & Li, 2016). Organizational leaders are the primary influencers of the emotional climate in an organization, which is why compassion can be a powerful tool for leading, motivating, and healing people (Dutton & Workman, 2011). Unlike the experience of empathy, compassion involves maintaining objectivity, emotion regulation and resilience. The executive functions and attention networks of the brain are crucial players in a person’s capacity to focus on someone else’s experience of suffering, while responding to the motivation to provide relief for the suffering. As Hougaard and Carter (2018) note, a well-developed prefrontal cortex (PFC), where executive functioning and attention networks reside, allows us to better lead ourselves and others toward shared goals. The PFC has been shown to be activated in the experience of compassion, as not only is this region of the brain associated with cognitive intelligence, it is linked to other kinds of intelligence important for effective leadership, including emotional and social intelligence (Goleman, 2015).
The Body on Compassion

Not only are there neural substrates of compassion in the brain, compassion appears to embed its signature in the body as well. Feeling another person’s suffering contains a visceral element, and is often associated with changes in facial expressions, posture, and tone. This initial affective response is sourced by the parasympathetic branch of the autonomic nervous system (ANS), specifically the ventral vagal system (Porges, 2018). As demonstrated by Ochsner et al. (2009), the somatically oriented physiological response to another person’s pain and suffering registers first, triggering a bottom up trajectory that is processed later for cognitive appraisal (top down). Essentially, subjective feelings such as compassion result from the assessment of physiological sensations and changes. A key pathway for the transmission of this information from the body up to the brain is the vagus nerve, the 10th cranial nerve that extends throughout the body, connecting communication systems such as the muscles of the face and vocal area with the heart, lungs, and gut (Kain, Terrel, & Levine, 2018). Physiological psychologist, Stephen Porges (2018), refers to the vagus nerve the ‘nerve of compassion,’ as it regulates communication associated with caregiving in mammals, such as maintaining a soothing and calm voice, as well as listening, all of which contribute to acting with compassion. Referred to as the social engagement system, when the heart rate is lower and we are safe, the vagus nerve is activated (high vagal tone), and when the heart rate elevates and there is fear and anger, the vagus nerve is less activate (low vagal tone), which is associated with decreased trust, safety, and connection. Piferi and Hopkins (2006) found that people who showed compassion toward others had lower blood pressure, as well as higher self-esteem and less depression as compared to people who were less likely to show compassion to others. Perhaps findings like these are associated with the self-regulatory capacity offered by way of the vagus nerve. Translate this into
an organizational context, in addition to the potential negative impacts on their own wellness, leaders with low vagal tone could evoke mistrust and anxiety in the workplace, thus impairing performance.

There are other effects on physiological processes, such as the immune system, when experiencing care and compassion associated with high vagal tone as compared to anger and frustration that accompanies low vagal tone. For instance, Rein, Atkinson, & McCraty (1995) found that five minutes of experiencing care and compassion immediately produced a significant increase in a primary immune system antibody involved in preventing disease and infection, salivary immunoglobulin A (S-IgA), while anger and frustration did not. Moreover, experiencing emotions such as compassion activates a body-wide shift to a measurable psychophysiological phenomenon called coherence, a state of optimal functioning where there is harmony and synchronization within the ANS (McCraty, 2015). Coherence can be measured by a change in heart rhythm patterns, also known as heart rate variability, which is increased when the body enters this optimal state of functioning (Shaffer, McCraty, & Zerr, 2014). This state is not a state of relaxation. Rather, it is a state of being alert and calm at the same time, which is why it elevates focus, awareness, problem solving, and decision making- all qualities conducive to effective leadership, cooperative teamwork, and human performance in workplace settings.

**Extending beyond the body.** When someone experiences compassion, not only are there internal shifts to an optimal state of functioning, these changes extend beyond the body to impact the physiological state of other people. The human heart produces energy, which can be measured on an electrocardiogram. The energy produced by the heart has been measured to expand several feet beyond our skin creating an electromagnetic toric shaped field that surrounds the human body; this field holds the frequency of what we are thinking and feeling, and interacts
with other people’s electromagnetic fields, influencing their psychophysiological responses (McCraty, 2004). Therefore, it makes sense that compassion levels of an individual leader can ignite shifts on a collective level. For instance, we have all experienced the change in energy of a workplace meeting where the leader altered the mood and trajectory of the experience, either creating a climate of resonance or dissonance. We are interconnected beings impacting each other on many invisible levels, underscoring the importance for people holding positions of power and influence to regulate their mind and physiology to foster an environment where people feel psychologically safe, connected, and able to show up as their highest selves.

**Rewiring the Nervous System for Human-Centered Leadership**

Someone who is concerned for others, and who intends to help, is seen as more likely to be a leader; compassionate leaders are viewed as better and stronger than leaders who are not compassionate (Melwani, 2012). Compassionate organizations and leaders cultivate greater interpersonal connections, improved collaboration, enhanced commitment, and more trust - people feel more valued and have a greater sense of dignity (Hougaard & Carter, 2018). Furthermore, companies with compassionate cultures foster employee behavior that is in alignment with the common good (Worlene & Dutton, 2017). This may be why leaders of fortune 500 companies are incorporating compassion into their leadership. For example, Jeff Weiner, former Chief Executive Officer of LinkedIn, describes compassion as his core leadership principle, highlighting how it empowers skillful action to mindfully address challenges and make better decisions that positively impact the greater good (Hougaard & Carter, 2018). Fortunately, evidence suggests compassion can be trained, indicating that, much like any other skill, the ability to feel care, connection, and a desire to relieve the suffering of others is something we can learn or enhance with practice (Salzberg, 2018). Because of the
plasticity in the human brain, a few minutes of daily compassion training has been shown to alter neural networks in a way that, not only leads to spontaneous compassionate responses to other people’s suffering without the feelings of distress and despair, but increases happiness and self-esteem as well (Klimecki, Leiberg, Lamm, & Singer, 2012).

To unlock human potential and performance, we need to move to a more people-centered culture, where there is a connection on a human level rather than seeing employees as machines to use for a return on investment. I suggest an intervention strategy that includes practicing the skill of compassion daily, which means education on compassion as well as an introduction to repeatable practices to be included as a standard and necessary component of leadership development programs. One of the more popular compassion practices is loving kindness meditation (LKM), a meditation technique that emphasizes sending well wishes to oneself as well as the other people, including those who we feel distress toward. LKM has been shown to reduce stress, including lowered inflammation levels in the body (Pace et al. 2008). Fredrickson et al. (2008) illustrated LKM to have a powerful effect on people’s emotional lives, showing that practicing LKM changed participant’s daily experiences of a broad range of positive emotions, including love, joy, gratitude, contentment, hope, pride, interest, amusement, and awe, which were linked to increases in an array of personal resources, including self-acceptance, positive relationships, mindful attention, and good physical health over the course of a nine week period. Lutz, Brefoiczynski-Lewis, Johnstone, and Davidson (2008) conducted a pivotal investigation into the impacts LKM had on the brain, illustrating changes in several brain regions, including the insula, which is responsible for our capacity to empathize, and the temporal parietal juncture (TPJ), which is critical for awareness of emotional and physical present-moment experiences. Additionally, with information in the body triggering sensations and an emotional response prior
to top down cognitive regulation, it seems important to teach leaders how to attune to their somatic experiences, as this might assist in creating a space between stimulus and response, creating greater opportunity to respond reflectively rather than reflexively. LKM could be a starting point for this work. Moreover, LKM has been shown to increase vagal tone, suggesting it could increase trust, engagement, and collaboration within organizations if practiced by leaders (Kok et al., 2013).

With the current VUCA climate in today’s workplace, persistence of an outdated leadership paradigm, and the research unfolding in the arena of compassion as it connects to health, mental well-being, and human performance in the workplace, it appears awakening compassion in our organizations may be a worthy pursuit. Examining how structures, policies, and processes within organizations either create pathways or roadblocks to expressing compassion is essential in this endeavor. It is not just about the individual or interpersonal level, but the systemic level as well. This entails purposefully, deliberately, and mindfully evaluating cultural assumptions, beliefs, values, and routine practices, as these may need to be challenged to create a space and infrastructure for compassionate leadership to emerge and develop as a core element of a new leadership paradigm, as well as an organization’s story.

Conclusion

Leadership development is deeply rooted in human nature, and so is compassion. The ability to witness and appreciate another person’s suffering and have the desire to alleviate it is fundamental to adaptive human development. Compassionate leadership moves us beyond the self-interest-oriented leadership paradigm to one that opens access to the heart of humanity, where energy is directed at flourishing rather than just trying to survive. This paper endeavored to examine the interdisciplinary space between compassion and leadership, exploring the
neurobiological underpinnings of the desire to alleviate someone else’s suffering and how these insights might support the integration of compassion into leadership development. Findings from contemporary neuroscience and mind-body research were explored and a recommendation for incorporating LKM into leadership development and organizational settings was discussed. Leadership begins with compassion, the master key to becoming a transformational force. It may be one of the most important business ideas becoming alive today.
References


